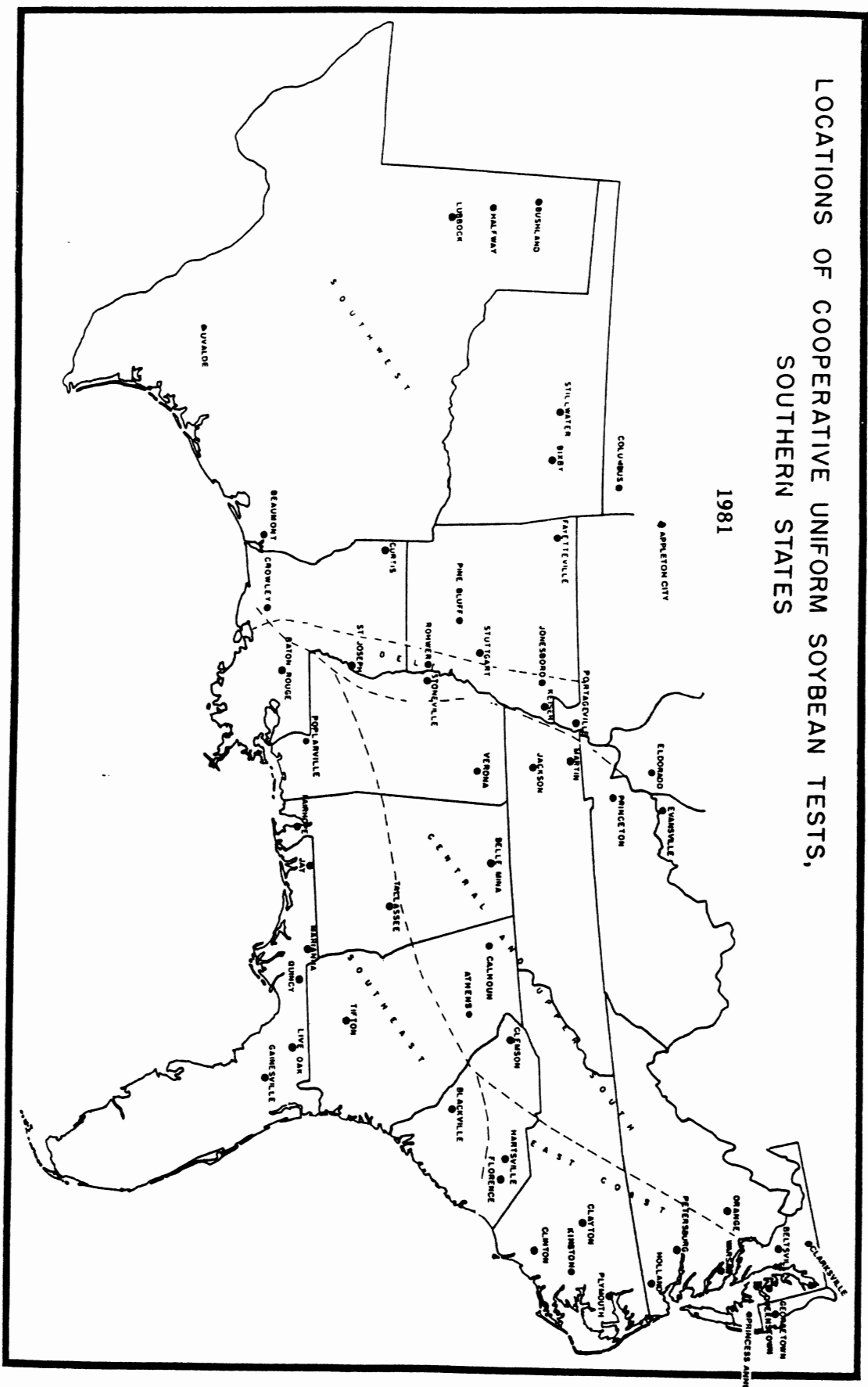


THE UNIFORM SOYBEAN TESTS
SOUTHERN REGION
1981

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

1981



THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

1981

COMPILED BY:

Edgar E. Hartwig and Helen Lappas
P. O. Box 196
Stoneville, Mississippi 38776

From data supplied by:

W. J. Kenworthy, Maryland	B. R. Hathcock, Martin, TN
E. L. Wisk, Georgetown, DE	F. L. Allen, Knoxville, TN
G. D. Jones, Orange, VA	J. R. Overton, Jackson, TN
H. M. Camper, Warsaw, VA	E. E. Hartwig, Stoneville, MS
P. H. Reid, Holland, VA	S. C. Anand, Portageville, MO
C. W. Roane, Blacksburg, VA	C. E. Caviness, Arkansas
J. W. Burton, North Carolina	K. D. Beatty, Keiser, AR
J. B. Pitner, Florence, SC	L. A. Duclos, Jonesboro, AR
H. L. Musen, Blackville, SC	O. A. Porter, Pine Bluff, AR
E. R. Shipe, Clemson, SC	J. E. Board, Baton Rouge, LA
J. J. Stanton, Jr., Hartsville, SC	D. Bouquet, St. Joseph, LA
H. R. Boerma, Athens, GA	J. L. Rabb, Bossier City, LA
S. H. Baker, Tifton, GA	J. L. Griffin, Crowley, LA
D. L. Thurlow, Auburn, AL	K. Kelly, Columbus, KS
F. B. Selman, Fairhope, AL	W. T. Schapaugh, Jr., KS
Kuell Hinson, Gainesville, FL	L. H. Edwards, Oklahoma
D. W. Gorbet, Marianna, FL	S. R. Winter, Bushland, TX
R. D. Barnett, Quincy, FL	R. D. Brigham, Lubbock, TX
H. A. Peacock, Jay, FL	J. P. Craigmiles, Beaumont, TX
J. H. Orf, Kentucky	J. R. Mulkey, Uvalde, TX
C. R. Tutt, Princeton, KY	R. A. Kinloch, Jay, FL
R. L. Bernard, Urbana, IL	V. D. Luedders, Columbia, MO

TABLE OF CONTENTS

	<u>Page</u>
STATE COLLABORATORS-----	3
INTRODUCTION-----	4
LOCATION OF NURSERIES-----	6
METHODS-----	8
GROUP IV-S TESTS:	
Uniform-----	10
Preliminary-----	26
GROUP V TESTS:	
Uniform-----	34
Preliminary-----	50
GROUP VI TESTS:	
Uniform-----	58
Preliminary-----	74
GROUP VII TESTS:	
Uniform-----	82
Preliminary-----	98
GROUP VIII TESTS:	
Uniform-----	106
Preliminary-----	122

ACKNOWLEDGMENT: Oil and protein determinations were made at the
Northern Regional Research Center, Peoria, Illinois,
under the supervision of Dr. James Cavins.

Issued March 1982

STATE COLLABORATORS IN THE SOUTHERN REGION

D. L. Thurlow
Alabama Agricultural Experiment Station
Auburn, Alabama

C. E. Caviness
Arkansas Agricultural Experiment Station
Fayetteville, Arkansas

H. A. Peacock
Agricultural Research Center
Jay, Florida

H. R. Boerma
Agronomy Department
3111 Plant Sciences Building
University of Georgia
Athens, Georgia

J. E. Board
Louisiana Agricultural Experiment Station
Baton Rouge, Louisiana

C. G. Shepherd
Mississippi Agricultural and Forestry Experiment Station
Delta Branch
Stoneville, Mississippi

J. W. Burton
North Carolina Agricultural Experiment Station
Raleigh, North Carolina

H. L. Musen
Edisto Experiment Station
Blackville, South Carolina

L. F. Seatz
Tennessee Agricultural Experiment Station
Knoxville, Tennessee

R. D. Brigham
Texas A&M University
Lubbock, Texas

Glenn Buss
Virginia Agricultural Experiment Station
Blacksburg, Virginia

INTRODUCTION

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

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

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

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

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

STRAIN IDENTIFICATION

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

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

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

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

* * * * *

* 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	Fertilizer	Yield-adapted variety ²
East Coast											
Queenstown, MD	1*	1				Mattapex silt loam	H	M	6.5	0-45-90	50.4 - B
Georgetown, DE	1	1				Norfolk loamy sand	H	M	6.6	0-20-60	47.7 - A
Warsaw, VA	1*	1*	1			Sassafras sandy loam	H	M	6.4	0-0-0	40.5 - B
Holland, VA	1	1*	1*			Othello f. s. loam	H	M	6.3	9-27-54	38.7 - C
Plymouth, NC	1*	1*	1			Bladen f.s. loam	H	H	5.9	0-40-80	52.0 - E
Kinston, NC			1	1		Norfolk sandy loam				0-40-80	39.8 - G
Clinton, NC			1	1	1	Norfolk sandy loam				0-40-80	38.7 - G
Florence, SC			1	1	1	Faceville sandy loam	VH	H	6.0	0-0-0	35.7 - E
Hartsville, SC			1	1	1	Norfolk sandy loam	VH	H	6.2	0-40-80	38.8 - F
Southeast											
Blackville, SC (A)			1	1*	1	Dothan loamy sand	H	H	5.9	0-30-60	46.9 - F
Blackville, SC (B)					1*	Dothan loamy sand	H+	M	5.9	0-37-75	31.5 - I
Tifton, GA			1	1*	1	Tifton sandy loam	M	MH	6.2	0-70-40	50.6 - F
Tallassee, AL				1*	1	Cahaba l.f.s.	H	H	6.2	0-0-0	29.6 - G
Gainesville, FL				1	1*	Arredonda fine sand	VH	H	6.3	0-45-90	42.7 - I
Marianna, FL				1	1	Orangburg f.s.l.	H	M	5.5	15-45-90	0.0 - F
Quincy, FL			1	1	1*	Norfolk l.f.s.	VH	VH	5.9	25-50-75	45.7 - F
Jay, FL			1*	1*	1*	Red bay f.s.l.	H	H	5.6	0-75-38	41.7 - F
Fairhope, AL			1	1	1	Malbis f.s.l.	H	H	6.0	0-50-50	39.6 - E
Poplarville, MS				1	1	Sawyer f. sandy loam					30.3 - G
Baton Rouge, LA			1	1*	1	Olivier silt loam	M	M	6.5	0-72-72	41.7 - F
Upper & Central South											
Orange, VA	1	1				Davidson sandy loam	M	M	5.6	12-72-72	58.3 - C
Calhoun, GA		1	1	1		Tyler gravelly f.s.l.	VH	H	6.3	0-36-108	56.5 - E
Eldorado, IL	1					Harco silt loam					49.5 - A
Knoxville, TN	1	1				Sequatchi loam				0-60-60	61.1 - C
Princeton, KY	1	1				Crider silt loam	M	H		0-0-0	57.5 - B
Martin, TN	1	1				Falaya silt loam	HM-	H	6.1	0-40-40	58.3 - C
Tiptonville, TN		1*				Morganfield s.l.	H	L	7.2	0-0-60	37.2 - D
Jackson, TN		1	1*			Grenada s. loam	H	M	6.0	0-40-40	42.4 - C
Belle Mina, AL		1	1*			Decatur clay loam	H	H	7.0	0-60-0	54.1 - C
Athens, GA		1	1	1	1	Cecil sandy loam	VH	MH-	7.5	0-61-135	27.0 - G
Clemson, SC			1	1	1	Cecil sandy loam	H	M+	6.0	0-84-84	38.4 - F

Location	IV	V	VI	VII	VIII	Soil type	P ₂ O ₅	K ₂ O	pH	Fertilizer	Yield-adapted variety ²
Delta											
Portageville, MO (A)	1	1*	1			Tiptonville silt loam	VH	M	6.0	10-26-84	39.8 - D
Portageville, MO (B)	1*	1	1			Sharkey clay	VH	VH	7.0	10-26-84	24.9 - C
Keiser, AR	1*	1*	1*			Sharkey clay	H	H	6.4	0-0-0	55.8 - C
Jonesboro, AR		1	1			Calloway silt loam	L	H	5.5	0-40-40	25.5 - D
Stoneville, MS (A)		1*	1*	1*		Bosket f.s.l.	VH	H	6.5	0-0-0	58.9 - C
Stoneville, MS (B)	1*	1*	1*	1*	1*	Sharkey clay	VH	H	6.3	0-0-0	45.1 - F
Rohwer, AR		1	1	1		Perry clay	H	H	7.5	0-0-0	32.3 - F
St. Joseph, LA		1	1	1		Commerce silt loam	H	M	6.0	0-0-0	65.1 - C
West											
Manhattan, KS	1	1					M	M		0-0-0	40.6 - A
Ottawa, KS	1	1					H	H		0-0-0	50.1 - A
Columbus, KS	1	1				Cherokee silt loam	L	L	6.5	0-0-0	15.9 - A
Pine Bluff, AR		1	1			Calloway silt loam	H	M	7.5	0-0-90	49.0 - C
Stuttgart, AR		1	1			Crowley silt loam	VL	L	6.3	0-26-78	51.4 - C
Bossier City, LA		1	1			Severn very f.s.l.	H	L	7.4	0-0-0	21.0 - C
Crowley, LA		1	1			Crowley, sl.	L	L	6.0	0-60-60	48.3 - F
Bixby, OK	1	1	1			Reinoch silt loam	H	H	6.5	10-28-80	48.1 - A
Bushland, TX	1					Pullman s.c.l.				0-0-0	74.5 - A
Lubbock, TX	1	1				Amarillo loam	M	VH	7.7	0-0-0	0.0 - F
Beaumont, TX		1	1	1*	1*	Morrey silt loam	H	L	5.4	0-0-60	42.3 - A
Clovis, NM	1					Pullman silty clay loam				0-0-0	41.1 - H
Uvalde, TX				1	1	Uvalde, s.c.l.	H	VH	7.2	0-0-0	41.5 - H

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

²Varieties: A = Douglas; B = Essex; C = Forrest; D = Nathan; E = Tracy-M; F = Centennial; G = Braxton;

H = Wright; I = Cobb; J = Foster.

*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, Douglas; Group V, Essex; Group VI, Centennial; Group VII, Braxton; and Group VIII, Hutton.

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

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

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

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

All strains of V maturity and later are resistant to bacterial pustule. Very little injury was observed from phytophthora rot in 1981.

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 on the basis of late season cyst counts. SCN race 4 ratings were based upon field plantings at Tiptonville or Jackson, Tennessee.

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). Seed from plantings at Warsaw, Virginia were evaluated for percent mottled seed.

Two replications of single hill plantings were made in field cages at Stoneville, and infested with soybean looper. Approximately 10,000 moths were released in a 1/6 A. area. Ratings were made when Davis showed about 90% defoliation.

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

1981

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Douglas	Williams X Calland	F ₅
2. Crawford	Williams X Columbus	F ₄
3. S76-2109	D67-3297 X Essex	F ₄
4. S76-2203	D67-3297 X Essex	F ₄
5. S76-2229	Forrest X V71-480	F ₄
6. V74-315	V66-318 X V68-2331	F ₅
7. D77-18	Tracy X Forrest	F ₅
8. K1044	Tracy X Williams	F ₅
9. Md77-5675	V68-1171 X Columbus	F ₅
10. LS78-124-1	L71L-436 X J74-5	F ₄
11. S77-7992	Forrest X V71-480	F ₄
12. V76-411	Essex X SRF-400	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 17 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.

Douglas has a two-year-mean yield greater than that for Crawford in each of the regions except the Delta. Four strains, S76-2109, S76-2203, S76-2229, and V74-315, have been included in the evaluation program for 3 years. Each of these strains has yielded very well and should have a potential value for use as parent material. The strains D77-18, K1044, and Md77-5675 have been evaluated two years. The strains LS78-124-1, S77-7992, and V76-411 were evaluated for the first year. All entries have yielded reasonably well.

Only one strain, D77-18, was rated as being resistant to soybean cyst nematode race 3. LS78-124-1 appeared to be segregating in reaction to SCN race 3. Strains were evaluated for reaction to soybean mosaic virus, peanut mottle virus, and peanut stunt virus at Blacksburg, Virginia. Md77-5675 was the only strain rated as resistant to all 3 viruses. Strains were also evaluated for degree of feeding by soybean looper in the field cage facilities at Stoneville. There was little difference among strains. All strains were severely defoliated.

Table 1 - General summary of performance for the strains in Uniform Group IV-S, 1981

	No. of locations	Douglas	Crawford	S76-2109	S76-2203	S76-2229
Seed Yield - 1981						
East Coast	2	44.7	39.1	43.4	40.7	40.1
Upper & Central South	4	51.8	47.7	52.2	45.6-	45.3-
Delta	5	41.4	39.4	42.8	42.4	43.4
West	6	45.1	44.3	47.0	41.4	42.6
1980-81						
East Coast		39.8	37.6	43.2	41.3	42.7
Upper & Central South		45.7	41.9	48.9	44.0	43.6
Delta		32.7	34.8	36.8	37.3	39.0
West		42.2	39.9	43.1	37.7	38.9
1979-81						
East Coast		41.6	38.3	43.2	41.0	42.8
Upper & Central South		44.8	42.6	48.3	45.2	43.7
Delta		36.5	37.2	38.6	38.6	40.3
West		43.6	38.5	40.7	36.4	36.5
Oil Content - 1981						
		20.2	19.4-	18.6-	18.8-	19.3-
1980-81		20.5	19.9	19.4	19.3	20.1
1979-81		20.4	19.7	19.3	19.3	20.0
Protein Content - 1981						
		42.1	43.5+	42.5	43.6+	41.8
1980-81		42.8	43.5	42.7	43.5	41.4
1979-81		42.4	43.2	42.2	43.1	40.9
Seed size						
		18.7	16.5-	12.0-	13.0-	14.4-
Maturity index						
		9-26	+4	+12	+13	+16
Height						
		34	40	29	35	38
Seed quality						
		3.0	1.7	1.5	1.7	1.9
Downy Mildew ¹						
		4.1	3.7	2.9	2.7	2.9
SCN race 3 ²						
		S	S	S	S	S
Soybean mosaic virus ³						
		M	M	M	S	M
Peanut mottle virus ³						
		M	M	S	S	S
Peanut stunt virus ³						
		R	M	M	R	M
Soybean looper feeding ⁴						
		4	4	4	4	4
Flower color						
		W	P	W	W	W
Pubescence color						
		T	T	G	G	G
Pod wall color						
		B	B	T	T	T

¹Field rating - Eldorado, Illinois

²Field rating - Ames Plantation, TN

³Field inoculation - Blacksburg, VA

⁴Field cage rating - Stoneville, MS

Table 1 - (continued)

	V74-315	D77-18	K1044	Md77-5675	LS78-124-1	S77-7992	V76-411
Seed Yield - 1981							
East Coast	43.5	39.1	41.5	42.1	35.7	45.1	41.9
Upper & Central South	50.9	46.7	49.8	44.0-	44.3-	45.1-	53.2
Delta	39.9	40.0	41.8	37.7	36.1	40.9	43.5
West	45.5	43.4	43.0	42.4	40.3	42.5	46.3
1980-81							
East Coast	41.6	38.2	40.2	39.3			
Upper & Central South	47.8	41.6	45.6	42.4			
Delta	37.8	37.5	38.9	34.3			
West	41.7	38.1	35.7	37.3			
1979-81							
East Coast	41.5						
Upper & Central South	47.8						
Delta	39.7						
West	40.2						
Oil Content - 1981	20.0	18.9-	18.6-	19.0-	18.6-	19.5-	19.8
1980-81	20.8	19.4	19.1	19.5			
1979-81	20.5						
Protein Content - 1981	42.2	43.8+	44.2+	45.1+	41.2	40.8-	42.4
1980-81	41.8	43.8	44.2	44.9			
1979-81	41.5						
Seed size	13.6-	14.6-	15.5-	15.9-	11.0-	14.3-	13.2-
Maturity index	+9	+7	+3	+5	+6	+12	+9
Height	32	34	36	34	32	33	30
Seed quality	1.7	1.6	1.9	1.8	2.1	1.5	1.5
Downy Mildew	3.2	1.0	1.0	3.5	3.4	1.2	3.2
SCN race 3	S	R	S	S	Seg.	S	S
Soybean mosaic virus	R	M	R	R	R	R	R
Peanut mottle virus	R	S	M	R	M	M	S
Peanut stunt virus	S	R	R	R	R	M	R
Soybean looper feeding	4	4	4	4	4	4	5
Flower color	P	W	W	P	W	W	P
Pubescence color	G	T	T	T	T	T	G
Pod wall color	T	T	T	T	T	T	Br

Table 2 - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1981

Location	Douglas	Crawford	S76-2109	S76-2203	S76-2229	V74-315	D77-18
<u>EAST COAST</u>							
Queenstown, MD	47.7	44.0	47.3	45.5	43.8	49.0	43.7
Warsaw, VA	41.6	34.2-	39.5	35.9-	36.5	38.0	34.4-
Mean	44.7	39.1	43.4	40.7	40.2	43.5	39.1
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	52.0	43.4-	50.6	40.9-	41.8-	48.9	38.1-
Knoxville, TN	44.4	53.5+	51.1+	52.5+	58.0+	52.7+	48.3
Eldorado, IL	49.5	41.0-	43.1-	34.6-	32.5-	43.6-	41.9-
Princeton, KY	61.3	53.0	64.0	54.1	49.0	58.5	58.6
Mean	51.8	47.7	52.2	45.6-	45.3-	50.9	46.7
<u>DELTA</u>							
Portageville, MO (A)	40.8	39.7	33.8	36.7	36.4	36.8	37.8
Portageville, MO (B)	22.9	17.9	27.8	28.9	24.5	27.4	26.4
Martin, TN	50.3	52.0	59.5+	46.8	55.7	53.7	55.4
Keiser, AR	39.2	36.1	42.1	44.5	49.7	45.1	46.0
Stoneville, MS (B)	53.9	51.4	50.9	55.0	50.7	36.7-	34.4-
Mean	41.4	39.4	42.8	42.4	43.4	39.9	40.0
<u>WEST</u>							
Manhattan, KS	40.6	50.5+	53.5+	50.1+	42.3	49.1+	51.3+
Ottawa, KS	50.1	40.9-	44.4-	42.5	38.8-	45.3-	44.5-
Parsons, KS	15.9	16.0	18.3	22.1	20.5	23.9	21.8
Bixby, OK	48.1	43.7	44.8	44.6	47.7	44.8	41.2
Bushland, TX	74.5	68.9	69.9	51.3	62.1-	66.6-	61.6-
Clovis, NM	41.4	45.5	51.3+	38.0	44.3	43.1	40.3
Mean	45.1	44.3	47.0	41.4	42.6	45.5	43.4

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

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

Table 2 - (continued)

Location	K1044	Md77-5675	LS78-124-1	S77-7992	V76-411	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Queenstown, MD	51.8	47.9	40.5-	52.6	43.0	6.2	8
Warsaw, VA	31.2-	36.2-	30.9-	37.5	40.7	5.2	9
Mean	41.5	42.1	35.7	45.1	41.9		
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	48.2	38.3-	41.2-	45.1	53.6	7.1	9
Knoxville, TN	50.9+	44.8	47.4	49.1	58.8+	5.9	7
Eldorado, IL	44.5-	37.5-	37.3-	34.0-	39.5-	4.1	6
Princeton, KY	55.7	55.2	51.3	52.4	60.9	7.3	8
Mean	49.8	44.0-	44.3-	45.1-	53.2		
<u>DELTA</u>							
Portageville, MO (A)	35.2	34.3	33.3	31.2	34.2	N.S.	16
Portageville, MO (B)	27.6	21.0	21.3	30.4+	22.6	5.2	12
Martin, TN	49.4	52.3	54.9	52.9	62.3+	8.0	9
Keiser, AR	45.3	41.5	38.3	44.9	48.3	N.S.	14
Stoneville, MS (B)	51.7	39.3-	32.8-	45.1	50.0	9.4	12
Mean	41.8	37.7	36.1	40.9	43.5		
<u>WEST</u>							
Manhattan, KS	52.4+	47.1+	48.3+	42.4	54.5+	6.0	7
Ottawa, KS	43.5-	43.7-	40.7-	41.0-	45.8-	2.7	4
Parsons, KS	18.8	20.4	18.4	15.2	18.3	N.S.	18
Bixby, OK	39.7	42.5	40.9	44.9	38.8	N.S.	11
Bushland, TX	67.0-	60.1-	55.8-	65.7-	68.5-	6.1	6
Clovis, NM	36.3	40.9	37.8	46.0	51.9+	5.9	8
Mean	43.0	42.4	40.3	42.5	46.3		

Table 3 - Chemical composition and seed size for the strains in Uniform Group IV-S, 1981

Location	Douglas	Crawford	S76-2109	S76-2203	S76-2229	V74-315
<u>OIL PERCENTAGE</u>						
Queenstown, MD	20.3	20.5	18.9	19.7	19.8	20.6
Warsaw, VA	19.2	18.6	18.6	18.2	19.2	19.6
Orange, VA	19.5	18.5	17.9	18.2	18.0	18.4
Knoxville, TN	22.2	20.0	19.4	19.5	20.7	21.5
Eldorado, IL	19.5	18.1	17.7	17.3	17.9	19.3
Portageville, MO (A)	19.9	19.8	18.5	18.4	19.0	19.1
Keiser, AR	20.6	20.0	19.7	19.9	20.7	21.1
Stoneville, MS (B)	20.4	20.5	18.7	19.2	20.0	21.1
Ottawa, KS	19.5	18.5	18.0	18.2	18.0	19.1
Bixby, OK	20.8	19.6	18.5	19.1	20.0	20.1
Mean	20.2	19.4-	18.6-	18.8-	19.3-	20.0
<u>PROTEIN PERCENTAGE</u>						
Queenstown, MD	40.6	43.5	42.7	44.2	41.5	42.2
Warsaw, VA	39.7	41.7	38.6	39.8	36.7	39.0
Orange, VA	43.5	44.2	42.9	43.6	43.6	43.3
Knoxville, TN	43.8	43.9	43.3	43.6	41.3	42.7
Eldorado, IL	42.0	43.7	44.5	45.0	43.1	42.6
Portageville, MO (A)	40.3	40.9	41.4	42.3	40.6	39.5
Keiser, AR	42.9	42.3	42.2	41.5	40.6	40.9
Stoneville, MS (B)	44.0	44.2	43.7	45.9	42.7	42.3
Ottawa, KS	41.2	44.8	44.0	45.2	45.1	44.7
Bixby, OK	43.2	45.4	41.5	44.9	42.3	44.3
Mean	42.1	43.5+	42.5	43.6+	41.8	42.2
<u>GRAMS PER 100 SEEDS</u>						
Queenstown, MD	18.3	16.7	12.8	14.1	15.8	15.0
Warsaw, VA	19.2	16.5	12.4	13.9	15.8	13.6
Orange, VA	23.0	19.3	13.7	14.0	15.7	15.0
Knoxville, TN	18.6	19.3	14.6	15.9	18.0	17.7
Eldorado, IL	17.8	15.6	10.5	11.5	12.1	12.3
Portageville, MO (A)	16.8	15.0	11.0	11.8	13.3	11.6
Keiser, AR	16.0	14.0	10.0	10.0	11.0	11.0
Stoneville, MS (B)	18.6	15.6	10.6	12.4	13.4	13.0
Ottawa, KS	18.9	15.3	10.7	12.5	13.4	12.4
Bixby, OK	19.8	17.9	13.6	14.1	15.4	14.6
Mean	18.7	16.5-	12.0-	13.0-	14.4-	13.6-

Table 3 - (continued)

Location	D77-18	K1044	Md77-5675	LS78-124-1	S77-7992	V76-411	L.S.D. (.05)
<u>OIL PERCENTAGE</u>							
Queenstown, MD	19.0	19.8	19.0	18.7	19.3	20.7	
Warsaw, VA	18.3	17.7	18.9	17.8	19.1	19.2	
Orange, VA	18.3	18.4	18.4	18.1	19.1	19.6	
Knoxville, TN	20.4	19.5	19.9	19.4	21.0	20.8	
Eldorado, IL	17.7	17.4	18.4	17.2	18.1	18.8	
Portageville, MO (A)	17.9	18.0	17.9	19.1	20.0	20.3	
Keiser, AR	20.2	19.1	20.5	20.0	19.9	20.1	
Stoneville, MS (B)	19.0	19.3	19.0	19.5	20.5	20.0	
Ottawa, KS	18.3	17.9	18.7	17.4	18.4	18.9	
Bixby, OK	19.4	18.4	19.1	18.9	19.7	19.5	
Mean	18.9-	18.6-	19.0-	18.6-	19.5-	19.8	0.4
<u>PROTEIN PERCENTAGE</u>							
Queenstown, MD	43.3	43.7	44.6	42.3	39.7	41.1	
Warsaw, VA	41.1	42.1	42.8	38.2	35.6	39.4	
Orange, VA	40.1	42.5	43.8	40.6	40.2	42.0	
Knoxville, TN	44.5	45.3	47.7	40.4	42.8	43.2	
Eldorado, IL	46.5	45.7	46.5	41.3	41.3	43.0	
Portageville, MO (A)	43.4	44.2	43.5	40.5	42.1	43.3	
Keiser, AR	43.9	43.6	44.2	39.4	39.9	39.8	
Stoneville, MS (B)	44.8	44.9	45.7	43.6	40.7	43.0	
Ottawa, KS	45.8	45.8	45.4	43.9	43.9	45.6	
Bixby, OK	44.1	44.2	46.9	42.2	41.8	43.3	
Mean	43.8+	44.2+	45.1+	41.2	40.8-	42.4	1.0
<u>GRAMS PER 100 SEEDS</u>							
Queenstown, MD	15.5	15.2	17.2	11.4	15.1	13.0	
Warsaw, VA	15.4	16.8	16.1	11.2	14.9	14.1	
Orange, VA	15.0	16.7	18.7	12.0	16.0	15.7	
Knoxville, TN	17.1	18.4	17.6	12.9	17.9	16.2	
Eldorado, IL	12.6	14.5	15.0	9.5	12.9	10.8	
Portageville, MO (A)	13.1	13.6	14.5	9.9	13.4	11.5	
Keiser, AR	12.0	14.0	14.0	9.0	12.0	11.0	
Stoneville, MS (B)	13.4	13.8	13.4	11.6	13.4	11.8	
Ottawa, KS	16.1	14.6	15.2	10.7	13.4	14.4	
Bixby, OK	15.3	17.6	16.8	11.6	13.8	13.9	
Mean	14.6-	15.5-	15.9-	11.0-	14.3-	13.2-	0.7

Table 4 - Relative maturity data, days earlier (-) or later (+) than Douglas,
for the strains in Uniform Group IV-S, 1981

Location	Date Planted	Douglas	Crawford	S76-2109	S76-2203	S76-2229	V74-315
<u>EAST COAST</u>							
Queenstown, MD	5-27	9-29	+5	+12	+11	+16	+13
Warsaw, VA	6-4	9-28	+5	+14	+14	+20	+9
Mean		9-29	+5	+13	+13	+18	+11
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	5-27	10-1	+4	+18	+18	+21	+18
Knoxville, TN	5-5	9-16	+6	+9	+8	+22	+8
Eldorado, IL	6-15	10-5	+4	+10	+13	+16	+9
Princeton, KY	5-29	10-1	+4	+7	+7	+17	+6
Mean		9-28	+5	+11	+12	+19	+10
<u>DELTA</u>							
Portageville, MO (A)	5-6	9-24	+2	+4	+3	+8	+2
Portageville, MO (B)	5-7	9-16	+7	+12	+14	+15	+7
Martin, TN	6-14	10-5	0	+2	+5	+9	+2
Keiser, AR	6-12	9-29	-1	+7	+8	+10	+4
Stoneville, MS (B)	5-11	9-17	+3	+4	+5	+1	+3
Mean		9-24	+2	+6	+7	+9	+4
<u>WEST</u>							
Manhattan, KS	5-15	9-30	+4	+10	+9	+14	+8
Bushland, TX	4-27	9-23	+3	+20	+22	+18	+11
Clovis, NM	5-7	9-19	+5	+17	+24	+24	+13
Mean		9-24	+4	+16	+18	+19	+11

Table 4 - (continued)

Location	D77-18	K1044	Md77-5675	LS78-124-1	S77-7992	V76-411
<u>EAST COAST</u>						
Queenstown, MD	+10	+6	+4	+8	+13	+11
Warsaw, VA	+10	+1	+3	+10	+17	+12
Mean	+10	+4	+4	+9	+15	+12
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	+18	0	+18	+11	+18	+18
Knoxville, TN	+6	+10	+10	+6	+10	+9
Eldorado, IL	+8	+2	+5	+4	+12	+9
Princeton, KY	+3	+2	+5	+3	+10	+7
Mean	+9	+4	+10	+6	+13	+11
<u>DELTA</u>						
Portageville, MO (A)	0	+4	+2	0	+3	+2
Portageville, MO (B)	+8	+12	+7	+7	+13	+9
Martin, TN	0	+3	+7	0	+3	+4
Keiser, AR	-2	0	+2	+3	+6	+2
Stoneville, MS (B)	+2	+5	+3	+1	+4	+4
Mean	+2	+5	+4	+2	+6	+4
<u>WEST</u>						
Manhattan, KS	+5	+3	+4	+5	+9	+10
Bushland, TX	+1	-3	0	+5	+11	+13
Clovis, NM	+11	-9	+2	+13	+16	+14
Mean	+6	-3	+2	+8	+12	+12

Table 5 - Plant height for the strains in Uniform Group IV-S, 1981

Location	Douglas	Crawford	S76-2109	S76-2203	S76-2229	V74-315
<u>EAST COAST</u>						
Queenstown, MD	33	42	32	38	41	38
Warsaw, VA	33	39	29	38	40	35
Mean	33	41	31	38	41	37
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	43	49	35	41	44	37
Knoxville, TN	28	35	24	29	33	28
Eldorado, IL	33	38	29	35	40	33
Princeton, KY	41	45	33	38	44	33
Mean	36	42	30	36	40	33
<u>DELTA</u>						
Portageville, MO (A)	35	44	25	34	33	33
Portageville, MO (B)	25	33	23	32	28	23
Martin, TN	41	42	33	37	42	33
Keiser, AR	32	38	25	31	34	28
Stoneville, MS (B)	35	41	25	31	42	19
Mean	34	40	26	33	36	27
<u>WEST</u>						
Manhattan, KS	35	51	35	41	42	38
Ottawa, KS	42	47	31	37	41	33
Parsons, KS	24	21	18	27	24	23
Bixby, OK	30	36	24	30	31	26
Bushland, TX	29	36	27	30	34	30
Clovis, NM	29	35	30	35	35	32
Mean	32	38	28	33	35	30

Table 5 - (continued)

Location	D77-18	K1044	Md77-5675	LS78-124-1	S77-7992	V76-411
<u>EAST COAST</u>						
Queenstown, MD	37	36	37	35	36	33
Warsaw, VA	37	33	34	34	37	29
Mean	37	35	36	35	37	31
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	39	45	39	38	42	37
Knoxville, TN	28	30	29	26	29	25
Eldorado, IL	35	35	36	30	31	30
Princeton, KY	39	43	37	35	37	35
Mean	35	38	35	32	35	32
<u>DELTA</u>						
Portageville, MO (A)	30	41	33	33	28	26
Portageville, MO (B)	32	30	24	22	27	22
Martin, TN	38	40	41	41	38	35
Keiser, AR	31	33	33	31	30	28
Stoneville, MS (B)	24	42	30	23	25	23
Mean	31	37	32	30	30	27
<u>WEST</u>						
Manhattan, KS	38	46	41	37	34	40
Ottawa, KS	38	38	39	36	35	35
Parsons, KS	24	22	30	24	20	23
Bixby, OK	29	32	31	30	31	25
Bushland, TX	27	32	31	26	28	28
Clovis, NM	31	27	31	32	32	33
Mean	31	33	34	31	30	31

Table 6 - Lodging scores for the strains in Uniform Group IV-S, 1981

Location	Douglas	Crawford	S76-2109	S76-2203	S76-2229	V74-315
<u>EAST COAST</u>						
Queenstown, MD	2.7	4.2	2.8	4.0	3.5	4.0
Warsaw, VA	1.3	1.4	1.3	1.4	1.5	1.4
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	1.0	2.3	3.7	3.0
Knoxville, TN	1.0	2.0	1.0	1.0	2.0	1.0
Eldorado, IL	1.3	2.4	1.2	2.5	3.3	2.4
Princeton, KY	1.7	3.3	1.0	2.7	3.3	1.7
<u>DELTA</u>						
Portageville, MO (A)	1.5	2.0	1.5	2.0	2.0	2.0
Portageville, MO (B)	1.0	2.0	1.5	1.5	1.5	1.5
Martin, TN	2.0	3.0	2.0	3.0	2.0	2.0
Keiser, AR	1.0	1.3	1.0	1.7	2.0	1.0
Stoneville, MS (B)	2.0	2.7	2.0	2.0	2.3	2.0
<u>WEST</u>						
Manhattan, KS	1.5	2.0	1.3	2.3	2.5	1.7
Ottawa, KS	1.8	2.0	1.0	2.0	2.2	1.2
Parsons, KS	1.0	1.3	1.0	1.0	1.0	1.0
Bixby, OK	1.0	2.0	1.0	2.0	2.0	1.0
Bushland, TX	1.5	2.2	1.0	2.7	2.0	2.0
Clovis, NM	2.0	2.0	2.0	3.0	3.0	2.7

Table 6 - (continued)

Location	D77-18	K1044	Md77-5675	LS78-124-1	S77-7992	V76-411
<u>EAST COAST</u>						
Queenstown, MD	4.0	2.8	3.0	3.0	4.0	3.0
Warsaw, VA	1.6	1.0	1.4	1.5	1.8	1.0
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	2.7	1.0	2.3	1.0	4.3	1.3
Knoxville, TN	1.0	1.0	2.0	1.0	2.0	1.0
Eldorado, IL	3.3	1.3	2.4	1.9	3.0	2.3
Princeton, KY	3.7	3.0	3.7	2.0	4.0	1.7
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	2.0	2.0	1.5	1.5
Portageville, MO (B)	2.0	1.5	1.5	1.5	1.5	1.5
Martin, TN	3.0	2.0	3.0	3.0	2.0	1.0
Keiser, AR	1.7	1.0	2.0	1.7	1.7	1.0
Stoneville, MS (B)	2.0	2.0	2.0	2.3	2.0	2.0
<u>WEST</u>						
Manhattan, KS	2.5	2.0	2.0	1.8	1.7	1.5
Ottawa, KS	2.7	2.0	1.8	1.8	1.8	1.2
Parsons, KS	1.0	1.3	1.3	1.0	1.0	1.0
Bixby, OK	2.0	1.0	2.0	2.0	2.0	1.0
Bushland, TX	2.5	2.0	2.0	1.5	1.7	1.0
Clovis, NM	3.0	1.0	3.0	2.3	2.7	2.3

Table 7 - Seed quality scores for the strains in Uniform Group IV-S, 1981

Location	Douglas	Crawford	S76-2109	S76-2203	S76-2229	V74-315
<u>EAST COAST</u>						
Queenstown, MD	3.8	2.0	1.3	2.0	1.7	1.8
Warsaw, VA	1.6	1.2	1.3	1.0	1.2	1.0
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	5.0	3.0	2.0	1.0	2.0	3.0
Eldorado, IL	3.8	2.3	1.8	2.0	1.8	1.8
Princeton, KY	1.0	1.0	1.0	3.0	3.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	4.0	2.0	2.0	2.0	2.0	2.0
Portageville, MO (B)	3.0	2.0	2.0	2.0	3.0	2.0
Martin, TN	2.5	2.0	2.0	1.5	2.0	1.0
Keiser, AR	2.5	1.5	1.0	1.5	1.5	1.5
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
<u>WEST</u>						
Manhattan, KS	2.0	1.0	1.5	1.0	1.5	1.5
Ottawa, KS	5.0	1.5	1.0	2.0	3.5	2.0
Parsons, KS	4.0	2.5	1.5	1.5	2.0	2.5
Bushland, TX	3.3	1.5	1.5	1.5	1.0	1.5

Table 7 - (continued)

Location	D77-18	K1044	Md77-5675	LS78-124-1	S77-7992	V76-411
<u>EAST COAST</u>						
Queenstown, MD	2.0	1.7	2.0	2.7	1.5	1.7
Warsaw, VA	1.0	1.0	1.2	1.3	1.0	1.0
<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	3.0	2.0	2.0	1.0
Eldorado, IL	1.8	2.0	2.8	2.3	1.5	1.7
Princeton, KY	1.0	3.0	1.0	1.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	3.0	2.0	3.0	2.0	2.0
Portageville, MO (B)	2.0	2.0	2.0	3.0	2.0	3.0
Martin, TN	2.0	1.5	2.0	2.5	1.5	2.0
Keiser, AR	1.5	1.5	1.5	1.5	1.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.3	2.0	2.0
<u>WEST</u>						
Manhattan, KS	1.0	1.5	1.5	1.0	1.0	1.0
Ottawa, KS	1.0	2.5	1.0	3.5	2.5	1.0
Parsons, KS	2.0	1.5	2.0	2.0	1.5	1.5
Bushland, TX	2.0	1.5	2.5	3.0	1.5	1.5

PRELIMINARY GROUP IV-S

1981

Preliminary Group IV-S nurseries, including 22 experimental strains along with Douglas and Hill, were grown at 6 locations. The parentage of each of the strains is reported in Table 8. Performance data are summarized in Tables 8-14.

The variety Hill was included in the nursery as a check for maturity relations. Most of the strains fit into IV-S maturity range satisfactorily. LS78-952 should be classified as being of V maturity, and Tn77-28 was of mid-range VI maturity. There were no strains having seed yields significantly greater than that for Douglas. The two strains LS78-143 and LS78-243 were rated as resistant to SCN race 3. These strains were not evaluated for reaction to SCN race 4. All strains showed severe feeding by the soybean looper. Development of seed-coat mottling at Warsaw, Virginia, was relatively light.

The strains which appear to merit advancing to Uniform Group are K1083, V78-105, V78-713, and V78-727.

Table 8 - Parentage of the strains grown in Preliminary Group IV-S, 1981

Variety or strain	Parentage	Generation composited
1. Douglas		
2. Hill		
3. D54-2437	N48-1394 X L46-5679	F ₅
4. D65-2262	D54-2437 X PI 261467	F ₅
5. D78-5097	Tracy X D66-5566	F ₅
6. K1081	Tracy X Columbus	F ₅
7. K1082	Tracy X Columbus	F ₅
8. K1083	K69-8-72-722 X PI 157449	F ₅
9. K1084	Tracy X Bonus	F ₅
10. LS78-143	L71-436 X J74-5	F ₄
11. LS78-243	L71-436 X J74-5	F ₄
12. LS78-952	Sel from Ts76-952	F ₆
13. Md78-5544	Williams X Md86180	F ₅
14. Tn77-28	Forrest X SRF 450	
15. V77-326	V68-117 X V68-2331	F ₅
16. V77-751	V68-1034 X SRF 400	F ₅
17. V78-43	Essex X SRF 400	F ₅
18. V78-105	V68-1034 X V71-380	F ₅
19. V78-209	Essex mutant	M ₃
20. V78-441	Essex mutant	M ₃
21. V78-444	Essex mutant	M ₃
22. V78-713	Essex X V68-1171	F ₃
23. V78-727	Essex X V68-1171	F ₄
24. V78-1294	V68-183 X Williams	F ₄

Table 9 - General summary of performance for the strains grown in Preliminary Group IV-S, 1981

Strain	Seed yield	Maturity index	Ht.	Percent		SCN ¹ race 3	Soybean ² looper feeding	Percent ³ mottled seed
				Oil	Protein			
Douglas Hill	41.6	9-26	34	20.3	41.8	S	5	0
D54-2437	34.3-	+10	29	19.0-	40.0	S	4	5
D65-2262	33.1-	+3	35	19.8	41.2	S	5	0
D78-5097	35.7-	+5	28	18.1-	42.1	S	4	2
K1081	39.5	+2	30	18.5-	43.6	S	4	3
	40.4	+4	26	18.7-	45.7+	S	4	0
K1082	34.2-	+4	21	19.6	43.8	S	4	6
K1083	41.5	-2	34	20.3	42.8	S	4	1
K1084	41.2	+6	25	19.5-	42.7	S	5	1
LS78-143	38.9	+7	35	19.6	39.7	R	3	10
LS78-243	39.8	+13	35	19.2-	37.5-	R	4	5
LS78-952	43.2	+14	30	19.5-	41.6	S	4	1
Md78-5544	39.8	+3	40	19.9	42.6	S	4	0
Tn77-28	30.3-	+27	45	18.1-	41.1	S	5	6
V77-326	41.0	+10	33	19.6	41.0	S	5	0
V77-751	41.2	+7	30	19.2-	38.5-	S	5	2
V78-43	40.0	+9	24	19.4-	41.0	S	5	1
V78-105	41.9	+9	35	20.0	38.7-	S	5	0
V78-209	39.6	+7	26	19.7	41.7	S	4	0
V78-441	40.8	+11	26	19.5-	41.9	S	4	0
V78-444	41.7	+5	26	19.8	42.6	S	4	0
V78-713	43.4	+11	30	19.5-	41.9	S	4	0
V78-727	44.1	+11	27	19.7	42.3	S	4	0
V78-1294	40.2	+8	31	20.3	39.3-	S	5	2
L.S.D. (.05)	5.8			0.7	2.2			
L.S.D. (.01)	7.6			0.9	3.0			

¹SCN race 3 based on field ratings Ames Plantation, TN.

²Soybean looper ratings made in field cage, Stoneville, MS.

³Percent mottled seed, Warsaw, VA.

Table 10 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group IV-S, 1981

Strain	Queens- town, MD	Warsaw, VA	Portage- ville, MO (A)	Keiser, AR	*Stone- ville, MS (B)	Ottawa, KS
Douglas Hill	43.3	45.3	32.5	39.8	42.6	47.4
D54-2437	33.8-	38.4	31.4	39.9	19.2-	28.0-
D65-2262	29.9-	37.7-	27.3	36.4	38.5	34.0-
D78-5097	29.7-	45.4	31.5	33.4	49.1	38.6
K1081	41.1	40.1	29.6	39.7	10.5-	46.8
	42.6	43.4	26.0	45.0	5.7-	44.8
K1082	36.9	40.1	19.9	27.8-	23.1	44.2
K1083	44.9	44.2	29.3	42.2	46.6	47.1
K1084	38.9	44.8	30.8	46.7	28.6	44.7
LS78-143	43.0	38.8	35.2	41.9	44.5	35.5-
LS78-243	41.6	41.5	33.1	44.6	8.3-	38.0
LS78-952	40.4	48.6	35.9	52.4+	42.4	38.9
Md78-5544	44.6	38.6	32.1	42.2	49.7	41.6
Tn77-28	36.6-	41.2	22.5	36.7	-	14.6-
V77-326	44.8	46.3	28.4	44.5	42.2	40.8
V77-751	37.0	43.0	33.4	50.7+	27.1	41.3
V78-43	42.6	43.2	26.6	45.7	21.6-	41.8
V78-105	44.3	43.2	34.0	45.6	42.7	42.3
V78-209	47.5	44.3	29.4	29.7-	4.2-	47.0
V78-441	43.5	46.4	29.6	48.3	16.5-	36.2-
V78-444	51.4+	44.3	25.4	43.6	19.7-	44.0
V78-713	47.8	51.1	29.4	44.9	14.7-	43.9
V78-727	47.3	52.5+	34.4	41.2	31.5	45.0
V78-1294	42.6	44.1	31.1	40.4	7.5-	42.9
L.S.D. (.05)	6.6	6.9	N.S.	8.9	19.6	10.5
C.V.	8%	8%	13%	10%	34%	13%

*Not included in mean

Table 11 - Oil percentages for the strains in Preliminary Group IV-S, 1981

Strain	Queenstown, MD	Warsaw, VA	Keiser, AR	Ottawa, KS
Douglas	20.6	20.4	20.6	19.7
Hill	19.3	19.7	19.8	17.0
D54-2437	19.7	20.6	20.4	18.5
D65-2262	18.6	17.9	18.2	17.6
D78-5097	18.2	19.1	18.8	17.8
K1081	19.1	18.5	19.5	17.5
K1082	19.9	19.4	20.5	18.7
K1083	21.0	20.5	20.0	19.6
K1084	18.9	20.4	20.0	18.5
LS78-143	20.6	19.1	20.5	18.2
LS78-243	19.1	20.0	20.3	17.4
LS78-952	19.1	20.0	20.6	18.1
Md78-5544	20.6	19.7	20.2	19.0
Tn77-28	18.4	18.2	18.8	17.0
V77-326	19.4	19.5	20.9	18.7
V77-751	19.5	19.3	20.0	18.1
V78-43	19.4	20.7	20.1	17.5
V78-105	20.4	20.5	20.5	18.5
V78-209	19.2	20.4	20.3	18.8
V78-441	19.9	19.9	19.7	18.4
V78-444	19.3	20.6	20.5	18.8
V78-713	19.6	19.3	20.4	18.5
V78-727	19.7	20.7	20.3	17.9
V78-1294	20.9	20.4	20.4	19.6

Table 12 - Protein percentages for the strains in Preliminary Group IV-S, 1981

Strain	Queenstown, MD	Warsaw, VA	Keiser, AR	Ottawa, KS
Douglas	41.4	41.4	41.4	43.1
Hill	40.0	35.3	40.4	44.4
D54-2437	40.4	39.2	40.3	44.9
D65-2262	43.1	39.0	42.6	43.6
D78-5097	44.7	42.6	42.3	44.9
K1081	43.1	45.4	45.7	48.5
K1082	44.8	41.7	42.5	46.0
K1083	43.2	38.7	44.3	44.9
K1084	43.5	38.8	42.8	45.8
LS78-143	39.3	36.3	38.2	44.8
LS78-243	38.2	34.1	36.6	40.9
LS78-952	42.0	36.8	41.5	46.1
Md78-5544	43.3	38.3	44.2	44.6
Tn77-28	39.8	36.7	40.7	47.1
V77-326	41.0	40.5	38.6	43.9
V77-751	36.8	35.5	39.1	42.5
V78-43	40.5	34.3	42.4	46.8
V78-105	39.1	32.2	40.2	43.2
V78-209	41.5	37.7	42.8	44.9
V78-441	42.1	38.0	43.4	44.1
V78-444	44.1	39.0	42.1	45.2
V78-713	42.3	39.7	43.1	42.5
V78-727	41.8	39.2	43.6	44.7
V78-1294	37.6	36.8	41.7	41.1

Table 13 - Plant height for the strains in Preliminary Group IV-S, 1981

Strain	Queens- town, MD	Warsaw, VA	Portage- ville, MO (A)	Keiser, AR	Stone- ville, MS (B)	Ottawa, KS
Douglas	33	33	33	37	28	37
Hill	30	32	22	33	17	37
D54-2437	32	37	33	39	28	42
D65-2262	26	31	24	27	25	33
D78-5097	31	38	29	28	18	33
K1081	29	26	21	28	15	34
K1082	24	20	19	21	13	27
K1083	34	35	30	37	31	38
K1084	24	26	18	29	19	32
LS78-143	38	42	30	30	29	39
LS78-243	39	40	38	35	19	39
LS78-952	32	34	30	28	21	37
Md78-5544	42	40	37	37	39	43
Tn77-28	46	49	43	42	-	46
V77-326	38	40	28	33	22	36
V77-751	29	38	30	28	18	38
V78-43	23	28	21	22	15	32
V78-105	42	40	33	32	23	38
V78-209	28	30	23	26	21	29
V78-441	27	28	26	26	17	29
V78-444	31	30	26	26	17	28
V78-713	27	30	42	27	22	31
V78-727	30	32	25	25	18	33
V78-1294	36	38	22	34	19	39

Table 14 - Seed quality scores for the strains in Preliminary Group IV-S, 1981

Strain	Queens- town, MD	Warsaw, VA	Portage- ville, MO (A)	Keiser, AR	Stone- ville, MS (B)	Ottawa, KS
Douglas	3.0	1.4	3.0	3.0	2.0	1.5
Hill	2.0	1.0	2.0	1.5	2.0	2.5
D54-2437	1.0	1.0	2.0	2.5	2.0	3.0
D65-2262	2.0	1.1	2.0	2.0	2.0	1.0
D78-5097	1.8	1.2	2.0	2.0	2.0	1.0
K1081	2.3	1.1	2.0	1.5	3.0	3.0
K1082	2.0	1.3	2.0	2.0	3.5	2.5
K1083	2.0	1.2	2.0	2.0	2.0	1.0
K1084	2.0	1.0	2.0	1.5	2.0	1.0
LS78-143	2.0	1.2	2.0	2.0	2.0	3.5
LS78-243	2.5	1.4	2.0	2.0	3.0	2.0
LS78-952	1.8	1.0	3.0	1.5	2.5	1.0
Md78-5544	1.5	1.0	2.0	2.0	2.0	1.0
Tn77-28	2.5	1.2	3.0	1.5	-	2.5
V77-326	1.3	1.2	3.0	1.5	2.0	2.5
V77-751	1.5	1.2	2.0	1.0	2.0	1.0
V78-43	1.5	1.0	2.0	1.5	2.5	1.5
V78-105	1.3	1.2	2.0	1.5	2.0	1.0
V78-209	1.3	1.1	2.0	1.5	2.5	2.5
V78-441	1.5	1.0	2.0	1.0	2.0	2.0
V78-444	2.0	1.2	2.0	1.5	2.0	1.5
V78-713	1.5	1.0	2.0	1.5	3.0	1.0
V78-727	1.0	1.0	2.0	1.5	2.0	1.0
V78-1294	2.0	1.0	2.0	2.0	2.5	1.0

UNIFORM GROUP V

1981

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Essex	Lee X S5-7075	
2. Forrest	Dyer X Bragg	
3. Nathan	Forrest(2) X (D68-18 X PI 88788)	F ₅
4. V75-345	Essex X Shore	
5. D77-5090	Pickett 71(2) X [(Dare(2) X PI 96983)] X J74-47	F ₅
6. N77-179	N70-1549 X N72-3213	F ₅
7. D77-5169	Centennial X J74-47	F ₅
8. D78-3238	Forrest(4) X D51-4863	F ₄
9. R74-511	R66-873 X Mack	F ₄
10. R75-579	Forrest X Mack	F ₄
11. S77-7865	D69-8201 X Mack	F ₄
12. V76-600	V68-920 X V69-862	F ₅

Background of breeding lines used as parents:

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

D68-18 is a selection from Dyer X Bragg.

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

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

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

D51-4863 is a selection from Roanoke X N45-745 which was evaluated in Uniform Group VI in 1954-56.

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

D69-8201 is a selection from Hood X Semmes which was grown in Uniform Group VI in 1972.

V68-920 is a selection from York X Dare which was grown in Uniform Group V in 1972.

V69-862 is a selection from Hood X D60-9647.

Results of 29 Uniform Group V nurseries are summarized in Tables 15 through 21. Table 15 gives a summary of performance along with characteristics of each of the strains. Differences among strains for seed yield were significant in only 14 of the comparisons. Differences among strains for mean seed yield by regions were significant only in the Delta region. However, there were no strains having significantly higher seed yields than Essex or Forrest.

One strain, V75-345, has been evaluated 3 years. Two strains, D77-5090 and N77-179, have been evaluated 2 years. Both of these strains have yielded well. D77-5090 has been selected to combine major genes giving resistance to phytophthora rot, soybean mosaic virus, and soybean cyst nematode races 1, 3, and 4. Of the 5 strains evaluated 1 year, D77-5169 and R74-511 appear to have the best performance record. D78-3238 is basically Forrest with a major gene giving resistance to phytophthora rot added. It did not appear to have any yield advantage over Forrest even when grown on clay.

A planting was made at Ames Plantation in Tennessee to evaluate strains for reaction to soybean cyst nematode race 3. An infestation of soybean cyst nematodes was present in the field where plantings were made at Holland, Virginia. The infestation appeared to be SCN race 3. SCN race 4 was present in the area where plantings were made at Tiptonville, Tennessee.

Table 15 - General summary of performance of the strains in Uniform Group V, 1981

	No. of locations	Essex	Forrest	Nathan	V75-345	D77-5090	N77-179
Seed yield - 1981							
East Coast	5	42.4	45.0	39.3	39.9	42.5	40.6
Upper & Central South	9	44.3	47.2	43.1	47.7	44.8	47.4
Delta	8	41.8	42.0	38.6	37.7-	40.9	43.0
West	7	36.3	36.3	33.7	35.4	35.0	34.0
1980-81							
East Coast		38.6	39.8	34.4	36.8	37.5	37.4
Upper & Central South		40.1	43.8	37.3	43.4	41.1	42.4
Delta		38.8	41.2	36.7	37.3	39.9	41.3
West		34.6	36.4	32.9	35.1	35.7	33.0
1979-81							
East Coast		39.2	40.0	35.5	37.7		
Upper & Central South		41.2	44.1	38.6	44.1		
Delta		39.0	40.4	35.8	37.5		
West		36.6	37.7	33.7	37.4		
Oil Content - 1981							
		19.5	19.3	19.6	19.5	18.7-	19.9+
1980-81		19.7	19.7	19.9	19.8	19.3	20.0
1979-81		19.7	19.6	20.1	19.8		
Protein Content - 1981							
		42.7	40.0	39.6	41.3	42.6+	41.2
1980-81		43.6	40.9	41.1	42.1	43.0	42.0
1979-81		43.0	40.4	40.3	41.4		
Seed size		13.5	13.1	13.5	15.2+	14.6+	14.9+
Maturity index		10-4	+2	-1	+5	+1	+1
Height		26	33	38	34	31	27
Seed quality		1.7	1.9	1.9	1.6	1.8	1.9
SCN race 3		S	R	R	S	R	S
SCN race 4		S	S	R	S	R	S
Soybean looper feeding		5	4	4	4	4	5
Soybean mosaic virus		M	S	S	M	R	R
Flower color		P	W	W	P	P	W
Pubescence color		G	T	T	G	G	T
Pod wall color		T	T	T	Br	T	T

Table 15 - (continued)

	D77-5169	D78-3238	R74-511	R75-579	S77-7865	V76-600
Seed yield - 1981						
East Coast	42.2	43.9	42.1	43.7	42.3	40.7
Upper & Central South	49.7	46.7	43.6	45.3	42.4	45.2
Delta	42.6	40.6	41.4	42.4	39.9	39.4
West	37.4	36.3	39.1	35.1	35.5	33.9
1980-81						
East Coast						
Upper & Central South						
Delta						
West						
1979-81						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1981	18.9-	19.9+	19.3	18.3-	19.1	18.9-
1980-81						
1979-81						
Protein Content - 1981	41.3	39.6	41.3	42.2+	41.4	40.8
1980-81						
1979-81						
Seed size	15.5+	12.6-	14.2+	13.9	14.0	16.9+
Maturity index	+4	+2	0	+4	+6	+5
Height	34	32	28	31	33	32
Seed quality	1.8	1.7	1.7	1.8	1.8	1.7
SCN race 3	R	R	R	R	S	S
SCN race 4	R	S	S	S	S	S
Soybean looper feeding	5	5	5	5	4	4
Soybean mosaic virus	S	S	S	S	S	M
Flower color	P	W	P	P	W	W
Pubescence color	T	T	G	T	T	T
Pod wall color	T	T	T	T	T	T

Table 16 - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1981

Location	Essex	Forrest	Nathan	V75-345	D77-5090	N77-179	D77-5169
<u>EAST COAST</u>							
Queenstown, MD	50.4	44.1-	39.2-	48.3	45.9-	49.6	46.4
Georgetown, DE	48.7	47.7	38.0-	44.0	46.6	43.3	46.6
Warsaw, VA	40.5	41.5	35.2-	40.2	36.9	41.4	39.1
Holland, VA	24.3	39.7+	37.6+	18.4	36.4+	16.6-	30.2
Plymouth, NC	47.8	52.0	46.2	48.5	46.5	52.3	48.9
Mean	42.3	45.0	39.2	39.9	42.5	40.7	42.2
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	56.0	58.3	41.9-	52.5	40.2-	57.4	44.5-
Knoxville, TN	58.7	61.1	57.0	62.5	57.3	63.8	59.6
*Clemson, SC	40.0	36.5	25.6	29.9	36.6	39.5	42.4
Calhoun, GA	56.0	47.2	45.0	58.3	46.8	54.0	56.0
Athens, GA	18.9	21.3	24.1	27.0	24.2	22.5	33.3
Belle Mina, AL	35.5	54.1	43.0	50.4	51.9	46.9	49.2
Princeton, KY	57.3	52.4	46.9	55.3	55.0	58.7	56.3
Tiptonville, TN	28.9	29.5	37.2+	26.2	44.2+	22.5	43.5+
Martin, TN	48.0	58.3	50.3	47.7	37.9	51.4	54.6
Jackson, TN	39.2	42.4	42.4	49.8	45.6	49.6	50.3
Mean	44.3	47.2	43.1	47.7	44.8	47.4	49.7
<u>DELTA</u>							
Portageville, MO (A)	36.5	36.2	39.8	33.5	41.4	42.4	38.8
Portageville, MO (B)	30.4	24.9	24.1-	20.8-	26.0	30.8	29.8
Keiser, AR	49.8	55.8	42.7	47.3	48.9	50.1	51.0
Jonesboro, AR	28.7	23.4	25.5	21.1	19.9	25.5	22.5
Pine Tree, AR	26.2	26.9	27.7	19.7	36.0	28.5	35.5
Stoneville, MS (A)	55.4	58.9	51.2	56.7	51.0	57.0	54.7
Stoneville, MS (B)	43.4	44.7	41.1	46.2	41.8	45.5	45.3
St. Joseph, LA	64.3	65.1	56.5-	56.5-	62.2	64.6	62.9
Mean	41.8	42.0	38.6	37.7	40.9	43.0	42.6
<u>WEST</u>							
Ottawa, KS	41.7	32.9-	35.2-	35.8-	31.1-	35.8-	37.4
Parsons, KS	22.4	24.5	23.1	12.5-	22.0	23.2	20.8
Pine Bluff, AR	47.0	49.0	42.3	42.6	49.7	-	49.5
Stuttgart, AR	51.4	51.4	50.5	53.3	53.3	47.4	54.9
Bossier City, LA	18.3	21.5	18.6	20.6	16.3	18.1	20.8
Bixby, OK	43.3	41.6	41.1	47.4	43.2	38.4	46.5
Beaumont, TX	30.0	33.1	25.3	35.5+	29.2	33.3	32.1
Mean	36.3	36.3	33.7	35.4	35.0	32.7	37.4

*Not included in mean.

Table 16 - (continued)

Location	D78-3238	R74-511	R75-579	S77-7865	V76-600	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Queenstown, MD	44.2-	42.6-	41.3-	46.9	43.2	4.4	6
Georgetown, DE	56.1+	50.1	46.1	48.6	46.1	6.6	8
Warsaw, VA	38.6	38.1	40.3	39.1	42.8	4.0	6
Holland, VA	34.7+	31.7+	36.0+	29.3	19.7	7.2	14
Plymouth, NC	46.0	48.0	54.7	47.4	51.6	N.S.	7
Mean	43.9	42.1	43.7	42.3	40.7	N.S.	
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	50.0	42.3-	50.3	42.8-	47.4	8.9	11
Knoxville, TN	56.6	53.5	61.2	55.3	58.8	N.S.	9
Clemson, SC	34.2	31.4	35.7	33.1	35.2	N.S.	27
Calhoun, GA	49.7	54.0	54.6	42.6	51.6	N.S.	13
Athens, GA	29.3	26.3	24.9	25.2	27.5	6.5	16
Belle Mina, AL	52.3	45.6	48.8	48.3	46.3	N.S.	16
Princeton, KY	54.1	49.1	48.4	56.0	53.9	N.S.	8
Tiptonville, TN	24.6	32.2	29.0	28.3	28.0	6.5	12
Martin, TN	55.7	48.8	50.3	48.3	53.4	N.S.	12
Jackson, TN	47.6	40.8	40.3	34.8	39.7	N.S.	15
Mean	46.7	43.6	45.3	42.4	45.2	N.S.	
<u>DELTA</u>							
Portageville, MO (A)	39.0	39.4	43.4	36.7	39.7	N.S.	15
Portageville, MO (B)	26.1	25.9	23.1-	26.8	30.4	6.2	14
Keiser, AR	51.9	49.9	55.9	54.8	52.6	N.S.	9
Jonesboro, AR	20.8	24.7	25.9	19.1	25.9	N.S.	16
Pine Tree, AR	25.4	23.8	28.4	25.0	27.9	N.S.	19
Stoneville, MS (A)	57.1	57.5	55.9	55.9	44.2-	6.8	7
Stoneville, MS (B)	42.2	49.0	46.2	35.6-	37.7	6.1	8
St. Joseph, LA	61.7	61.0	60.6	65.8	56.5-	4.2	4
Mean	40.5	41.4	42.4	39.9	39.4	3.4	
<u>WEST</u>							
Ottawa, KS	34.3-	36.7	24.3-	32.6-	34.6-	5.3	9
Parsons, KS	24.5	25.9	20.5	21.5	18.9	5.5	15
Pine Bluff, AR	50.5	56.4	50.6	40.2	42.9	N.S.	14
Stuttgart, AR	48.8	52.5	49.4	50.7	47.7	N.S.	6
Bossier City, LA	19.7	22.4	20.4	18.3	18.8	N.S.	17
Bixby, OK	40.1	44.9	40.4	45.0	38.5	N.S.	11
Beaumont, TX	36.3+	34.6	40.0+	40.1+	35.6+	5.3	9
Mean	36.3	39.1	35.1	35.5	33.9	N.S.	

Table 17 - Chemical composition and seed size for the strains in Uniform Group V, 1981

Location	Essex	Forrest	Nathan	V75-345	D77-5090	N77-179	D77-5169
<u>OIL PERCENTAGE</u>							
Queenstown, MD	20.4	19.7	19.5	20.0	18.8	20.1	19.3
Warsaw, VA	19.2	18.1	18.1	18.5	18.0	18.3	18.2
Plymouth, NC	18.8	18.6	19.1	18.4	17.4	20.0	18.5
Orange, VA	19.2	18.1	17.6	18.6	18.3	18.8	17.8
Calhoun, GA	20.6	20.3	20.9	19.7	20.0	21.2	20.5
Jackson, TN	19.1	19.6	20.1	20.8	19.2	19.7	19.1
Portageville, MO (A)	18.8	18.9	19.6	19.0	17.9	19.1	17.9
Keiser, AR	19.7	19.6	19.9	19.7	18.8	20.5	18.9
Stoneville, MS (B)	19.2	20.3	20.3	20.2	18.6	20.8	19.0
Stuttgart, AR	19.6	19.8	21.0	20.0	19.8	20.3	19.7
Mean	19.5	19.3	19.6	19.5	18.7-	19.9+	18.9-
<u>PROTEIN PERCENTAGE</u>							
Queenstown, MD	40.4	37.3	38.5	38.4	40.8	38.8	38.3
Warsaw, VA	39.8	35.1	36.4	38.9	39.8	38.4	36.0
Plymouth, NC	46.7	43.0	42.6	43.8	48.7	43.6	44.9
Orange, VA	43.5	37.9	38.2	43.2	43.4	42.1	40.9
Calhoun, GA	43.4	43.9	42.2	42.7	42.9	40.9	43.7
Jackson, TN	40.8	38.8	37.8	38.1	40.5	40.2	40.5
Portageville, MO (A)	42.5	40.6	40.9	40.5	42.6	41.9	40.4
Keiser, AR	43.4	39.5	37.9	41.3	39.9	40.6	39.8
Stoneville, MS (B)	43.0	41.6	40.5	42.0	43.7	41.3	43.1
Stuttgart, AR	43.2	42.1	41.1	43.6	44.1	44.2	45.0
Mean	42.7	40.0	39.6	41.3	42.6+	41.2	41.3
<u>GRAMS PER 100 SEEDS</u>							
Queenstown, MD	13.7	12.8	13.6	15.4	14.6	15.2	15.3
Warsaw, VA	13.8	14.0	14.6	17.0	16.4	16.2	17.4
Plymouth, NC	14.1	14.4	15.3	16.2	14.6	15.6	15.7
Orange, VA	14.7	12.7	12.3	16.0	15.0	16.3	15.0
Calhoun, GA	14.3	14.5	14.0	15.3	14.5	16.5	17.1
Jackson, TN	13.1	13.1	14.0	14.3	14.1	14.7	15.5
Portageville, MO (A)	11.4	10.9	11.8	12.5	12.9	12.7	13.0
Keiser, AR	11.0	11.0	11.0	14.0	12.0	13.0	13.0
Stoneville, MS (B)	14.8	14.2	14.4	16.4	16.4	14.6	16.6
Stuttgart, AR	14.3	13.7	13.7	15.0	15.3	14.0	16.0
Mean	13.5	13.1	13.5	15.2+	14.6+	14.9+	15.5+

Table 17 - (continued)

Location	D78-3238	R74-511	R75-579	S77-7865	V76-600	L.S.D. (.05)
<u>OIL PERCENTAGE</u>						
Queenstown, MD	20.4	19.3	18.9	19.4	19.2	
Warsaw, VA	19.3	18.3	16.9	18.2	17.8	
Plymouth, NC	19.3	18.7	17.4	18.1	18.1	
Orange, VA	19.5	18.1	17.9	18.7	18.5	
Calhoun, GA	20.5	20.8	18.7	20.3	19.9	
Jackson, TN	19.9	20.0	19.0	19.2	19.3	
Portageville, MO (A)	19.5	18.5	18.4	18.3	18.0	
Keiser, AR	19.7	19.6	19.0	19.9	19.7	
Stoneville, MS (B)	20.4	20.2	19.0	18.9	19.1	
Stuttgart, AR	20.0	19.5	17.8	19.6	19.4	
Mean	19.9+	19.3	18.3-	19.1-	18.9-	0.4
<u>PROTEIN PERCENTAGE</u>						
Queenstown, MD	38.5	38.2	40.2	39.2	39.9	
Warsaw, VA	33.9	37.2	39.5	37.3	38.7	
Plymouth, NC	42.6	44.9	44.9	46.4	42.6	
Orange, VA	38.8	44.1	41.1	39.8	41.2	
Calhoun, GA	38.6	42.0	44.3	42.5	41.2	
Jackson, TN	38.7	40.0	40.0	36.6	39.8	
Portageville, MO (A)	39.1	41.7	41.3	41.0	43.2	
Keiser, AR	38.5	41.2	42.2	41.6	40.3	
Stoneville, MS (B)	42.5	42.9	42.8	43.2	40.0	
Stuttgart, AR	45.0	41.0	45.6	46.0	41.4	
Mean	39.6	41.3	42.2+	41.4	40.8	1.1
<u>GRAMS PER 100 SEEDS</u>						
Queenstown, MD	12.8	13.3	12.3	13.4	17.3	
Warsaw, VA	14.0	15.4	14.6	16.2	18.7	
Plymouth, NC	14.2	14.9	16.7	14.7	17.9	
Orange, VA	12.7	15.7	13.7	14.3	17.0	
Calhoun, GA	13.1	15.4	14.7	15.1	17.5	
Jackson, TN	13.3	13.9	14.1	13.6	16.9	
Portageville, MO (A)	10.6	12.4	12.4	11.0	14.8	
Keiser, AR	9.0	11.0	11.0	13.0	14.0	
Stoneville, MS (B)	13.0	15.0	15.0	14.2	16.6	
Stuttgart, AR	13.3	15.0	14.7	14.3	18.0	
Mean	12.6-	14.2+	13.9	14.0	16.9+	0.6

Table 18 - Relative maturity, days earlier (-) or later (+) than Essex, for the strains in Uniform Group V, 1981

Location	Date planted	Essex matured	Forrest	Nathan	V75-345	D77-5090	N77-179
<u>EAST COAST</u>							
Queenstown, MD	6-1	10-17	+11	+2	+8	+4	+4
Georgetown, DE	6-4	10-23	0	-2	+2	-1	-2
Warsaw, VA	6-4	10-18	+4	+1	+2	+3	+1
Holland, VA	5-18	10-11	+2	+1	+1	+1	+2
Plymouth, NC	5-12	10-8	+8	+10	+2	0	-2
Mean		10-15	+5	+2	+3	+1	-1
<u>UPPER AND CENTRAL SOUTH</u>							
Knoxville, TN	5-5	9-27	+5	-2	+5	+3	+3
Clemson, SC	5-14	9-26	0	-8	+3	0	-1
Calhoun, GA	5-21	9-28	0	0	+2	0	0
Athens, GA	5-25	9-28	-1	-6	+5	-2	-4
Princeton, KY	5-29	10-16	+1	-1	+2	0	-1
Martin, TN	6-14	10-14	+4	+3	+8	+2	+2
Jackson, TN	5-21	9-29	+6	+1	+8	+5	+5
Mean		10-3	+2	+2	+5	+1	+1
<u>DELTA</u>							
Portageville, MO (A)	5-6	9-30	+2	-3	+1	+2	0
Portageville, MO (B)	5-7	9-28	+3	0	+14	+4	+4
Keiser, AR	6-12	10-12	+2	-4	+7	+2	0
Jonesboro, AR	5-21	9-28	+3	+1	+5	+2	+3
Pine Tree, AR	6-10	10-7	+2	-1	+7	0	+1
Stoneville, MS (A)	5-15	9-28	-1	-4	+1	0	-1
Stoneville, MS (B)	5-11	9-29	+1	-5	+5	0	0
St. Joseph, LA	5-12	9-11	0	-3	+8	+1	0
Mean		9-29	+2	-2	+6	+1	+1
<u>WEST</u>							
Pine Bluff, AR	6-18	10-10	-1	-7	+6	0	-2
Stuttgart, AR	5-23	9-29	-1	-2	+1	-2	0
Bossier City, LA	6-2	10-1	+2	+1	-1	+4	+5
Beaumont, TX	5-27	9-24	+4	-3	+9	+6	-3
Mean		10-1	+1	-3	+4	+2	0

Table 18 - (continued)

Location	D77-5169	D78-3238	R74-511	R75-579	S77-7865	V76-600
<u>EAST COAST</u>						
Queenstown, MD	+8	+8	+4	+12	+12	+12
Georgetown, DE	+4	+3	-2	+5	+6	+3
Warsaw, VA	+3	+3	0	+7	+7	+4
Holland, VA	+3	+2	0	+4	+10	+4
Plymouth, NC	+10	+10	0	+6	+8	+8
Mean	+6	+5	0	+7	+9	+6
<u>UPPER AND CENTRAL SOUTH</u>						
Knoxville, TN	+8	+4	+1	+9	+8	+11
Clemson, SC	0	-1	0	+2	+3	+5
Calhoun, GA	+2	0	0	0	+3	0
Athens, GA	+2	+2	+1	+2	+4	+6
Princeton, KY	0	0	-2	+1	+3	+1
Martin, TN	+4	+2	-2	+5	+9	+3
Jackson, TN	+7	+4	0	+7	+6	+8
Mean	+3	+2	0	+4	+5	+5
<u>DELTA</u>						
Portageville, MO (A)	+7	+2	+2	+10	+8	+2
Portageville, MO (B)	+4	+12	+2	+4	+15	+12
Keiser, AR	+5	-1	-1	+7	+6	+2
Jonesboro, AR	+6	+5	+1	+4	+5	+5
Pine Tree, AR	+3	0	+2	+6	+3	+6
Stoneville, MS (A)	+2	0	0	+1	+4	+3
Stoneville, MS (B)	+3	-1	-1	+1	+4	+5
St. Joseph, LA	+7	-2	0	+4	+7	+4
Mean	+5	+2	+1	+5	+7	+5
<u>WEST</u>						
Pine Bluff, AR	+4	0	-1	+3	+6	+2
Stuttgart, AR	+1	0	-1	0	+1	+2
Bossier City, LA	+3	-2	+1	0	0	+1
Beaumont, TX	+9	+4	0	+4	+9	+11
Mean	+4	+1	0	+2	+4	+4

Table 19 - Plant height for the strains in Uniform Group V, 1981

Location	Essex	Forrest	Nathan	V75-345	D77-5090	N77-179
<u>EAST COAST</u>						
Queenstown, MD	36	37	49	45	41	37
Georgetown, DE	30	41	44	40	35	35
Warsaw, VA	32	38	45	39	37	34
Holland, VA	21	29	35	31	26	20
Plymouth, NC	23	27	33	27	27	22
Mean	28	34	41	36	33	30
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	35	46	55	45	41	37
Knoxville, TN	24	34	38	33	31	30
Clemson, SC	21	28	31	30	29	22
Calhoun, GA	24	31	33	32	29	25
Athens, GA	15	20	27	26	19	17
Belle Mina, AL	20	29	31	34	28	22
Princeton, KY	32	37	42	40	35	33
Tiptonville, TN	20	30	40	28	32	18
Martin, TN	33	41	39	39	40	37
Jackson, TN	29	39	44	38	34	30
Mean	25	34	38	35	32	27
<u>DELTA</u>						
Portageville, MO (A)	30	37	42	38	36	28
Portageville, MO (B)	25	24	38	28	33	28
Keiser, AR	33	33	40	38	35	27
Jonesboro, AR	31	44	50	39	41	33
Pine Tree, AR	21	25	30	24	26	23
Stoneville, MS (A)	29	38	39	41	37	29
Stoneville, MS (B)	27	35	41	39	32	27
St. Joseph, LA	28	37	43	43	39	27
Mean	28	34	40	36	35	28
<u>WEST</u>						
Ottawa, KS	34	41	44	40	37	34
Parsons, KS	22	23	29	24	28	20
Pine Bluff, AR	27	31	40	37	35	26
Stuttgart, AR	18	25	33	31	25	17
Bossier City, LA	19	24	28	24	23	18
Bixby, OK	25	31	37	31	35	27
Beaumont, TX	20	24	26	26	23	18
Mean	24	28	34	30	29	23

Table 19 - (continued)

Location	D77-5169	D78-3238	R74-511	R75-579	S77-7865	V76-600
<u>EAST COAST</u>						
Queenstown, MD	38	37	34	37	41	42
Georgetown, DE	43	43	37	37	41	43
Warsaw, VA	39	36	36	37	38	35
Holland, VA	28	25	24	24	29	23
Plymouth, NC	28	26	21	24	27	27
Mean	35	33	30	32	35	34
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	37	41	33	40	39	42
Knoxville, TN	30	33	22	28	32	31
Clemson, SC	29	28	22	25	28	24
Calhoun, GA	33	31	26	32	32	27
Athens, GA	21	19	17	18	21	18
Belle Mina, AL	31	25	22	22	27	25
Princeton, KY	38	35	35	36	37	39
Tiptonville, TN	30	30	18	24	28	28
Martin, TN	38	35	36	39	37	39
Jackson, TN	33	33	31	32	35	35
Mean	32	31	26	30	32	31
<u>DELTA</u>						
Portageville, MO (A)	38	33	35	37	39	36
Portageville, MO (B)	33	30	23	28	32	31
Keiser, AR	32	30	29	30	30	32
Jonesboro, AR	45	39	36	41	35	42
Pine Tree, AR	27	23	19	22	24	23
Stoneville, MS (A)	41	37	32	36	39	33
Stoneville, MS (B)	34	35	32	32	34	31
St. Joseph, LA	38	34	30	36	39	29
Mean	36	33	30	33	34	32
<u>WEST</u>						
Ottawa, KS	39	41	36	40	40	38
Parsons, KS	24	28	23	29	28	25
Pine Bluff, AR	35	33	28	32	33	41
Stuttgart, AR	26	24	22	19	20	20
Bossier City, LA	27	24	21	26	23	24
Bixby, OK	36	35	28	33	35	36
Beaumont, TX	25	25	17	23	25	23
Mean	31	30	25	29	29	30

Table 20 - Lodging scores for the strains in Uniform Group V, 1981

Location	Essex	Forrest	Nathan	V75-345	D77-5090	N77-179
<u>EAST COAST</u>						
Queenstown, MD	3.3	3.5	4.2	3.5	4.3	3.2
Georgetown, DE	2.7	2.5	2.7	2.8	3.3	2.0
Warsaw, VA	1.5	1.9	2.3	1.6	1.7	1.3
Holland, VA	1.7	2.3	2.7	1.3	3.0	1.0
Plymouth, NC	3.7	3.7	3.7	3.3	4.3	3.3
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.3	3.0	4.3	2.3	3.3	2.0
Knoxville, TN	2.0	2.0	2.0	3.0	3.0	2.0
Calhoun, GA	1.2	1.2	1.7	1.2	2.0	1.0
Athens, GA	1.0	1.3	1.5	1.5	1.0	1.3
Belle Mina, AL	2.0	2.0	4.0	4.0	4.0	2.0
Princeton, KY	1.3	2.0	2.7	3.0	3.7	1.0
Tiptonville, TN	1.0	1.0	2.0	1.0	2.0	1.0
Martin, TN	1.0	3.0	3.0	2.0	3.0	1.0
Jackson, TN	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	2.5	2.5	2.5	1.5
Portageville, MO (B)	1.5	2.0	2.0	1.5	2.5	1.5
Keiser, AR	1.0	1.7	2.7	2.3	2.7	1.0
Jonesboro, AR	1.3	1.8	1.6	2.2	2.8	1.2
Pine Tree, AR	1.2	1.2	1.0	1.0	1.3	1.2
Stoneville, MS (A)	2.0	2.0	2.0	2.6	2.6	2.0
Stoneville, MS (B)	2.0	2.0	2.0	3.0	2.3	2.0
St. Joseph, LA	1.2	1.7	1.8	2.8	3.0	1.0
<u>WEST</u>						
Ottawa, KS	1.2	1.7	2.8	2.7	2.8	1.7
Parsons, KS	1.0	1.0	1.0	1.0	1.0	1.0
Pine Bluff, AR	1.0	1.0	2.0	1.0	3.0	1.0
Stuttgart, AR	1.0	1.0	1.0	1.0	1.0	1.0
Bossier City, LA	1.0	1.6	2.6	1.3	2.6	1.0
Bixby, OK	1.0	2.0	3.0	2.0	4.0	1.0
Beaumont, TX	1.2	1.5	1.6	1.3	1.6	1.2

Table 20 - (continued)

Location	D77-5169	D78-3238	R74-511	R75-579	S77-7865	V76-600
<u>EAST COAST</u>						
Queenstown, MD	3.2	3.8	3.3	4.0	3.2	3.3
Georgetown, DE	3.5	3.0	2.5	3.2	2.5	2.5
Warsaw, VA	1.8	1.7	1.2	2.0	1.3	1.5
Holland, VA	3.7	1.7	1.3	2.0	1.7	1.0
Plymouth, NC	3.7	3.7	3.3	3.7	3.7	3.7
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	3.3	4.0	2.0	3.0	4.3	1.7
Knoxville, TN	2.0	2.0	1.0	1.0	2.0	1.0
Calhoun, GA	1.3	1.5	1.2	1.0	1.2	1.0
Athens, GA	1.5	1.3	1.2	1.5	1.3	1.5
Belle Mina, AL	3.0	2.0	1.0	1.0	3.0	2.0
Princeton, KY	3.7	2.3	2.3	1.7	3.0	1.0
Tiptonville, TN	2.0	1.0	1.0	1.0	1.0	1.0
Martin, TN	3.0	3.0	3.0	2.0	3.0	2.0
Jackson, TN	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	2.0	2.0	2.0	2.0
Portageville, MO (B)	2.0	1.0	1.5	2.0	1.5	1.0
Keiser, AR	2.0	2.0	1.0	2.3	1.3	1.3
Jonesboro, AR	1.5	1.7	1.7	1.8	1.5	1.5
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.3	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	2.5	1.7	1.2	1.6	1.2	1.0
<u>WEST</u>						
Ottawa, KS	1.8	1.8	1.7	1.8	1.7	1.2
Parsons, KS	1.0	1.0	1.0	1.0	1.0	1.0
Pine Bluff, AR	2.0	1.0	1.0	1.0	1.0	2.0
Stuttgart, AR	1.0	1.0	1.0	1.0	1.0	1.0
Bossier City, LA	2.6	1.3	1.0	1.6	1.6	1.0
Bixby, OK	3.0	3.0	2.0	2.0	1.0	1.0
Beaumont, TX	1.6	1.3	1.3	1.4	1.4	1.3

Table 21 - Seed quality scores for the strains in Uniform Group V, 1981

Location	Essex	Forrest	Nathan	V75-345	D77-5090	N77-179
<u>EAST COAST</u>						
Queenstown, MD	1.7	2.3	2.5	1.3	2.0	2.3
Georgetown, DE	1.7	2.0	2.0	1.8	2.0	1.5
Warsaw, VA	1.2	1.0	1.0	1.2	1.3	1.2
Holland, VA	1.3	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Calhoun, GA	1.5	2.0	2.5	1.5	2.0	1.5
Athens, GA	2.3	1.8	1.8	2.0	2.0	2.0
Princeton, KY	1.0	1.0	1.0	1.0	1.0	1.0
Martin, TN	2.5	2.5	2.5	2.5	3.0	2.0
Jackson, TN	1.0	1.0	1.0	1.0	1.0	1.0
<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	1.5	2.0	1.5
Jonesboro, AR	3.0	3.0	2.7	3.0	3.0	3.0
Pine Tree, AR	3.0	2.3	3.0	2.3	3.0	3.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	2.5	1.9	2.5	2.1	2.1	2.1
<u>WEST</u>						
Ottawa, KS	1.0	2.5	3.5	1.5	1.5	1.5
Parsons, KS	1.5	2.0	1.5	1.0	1.5	3.0
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, AR	2.0	2.0	2.0	1.5	2.0	2.0
Bossier City, LA	1.0	1.6	1.3	1.0	1.0	3.3
Beaumont, TX	2.7	3.2	3.0	2.0	2.7	2.7

Table 21 - (continued)

Location	D77-5169	D78-3238	R74-511	R75-579	S77-7865	V76-600
<u>EAST COAST</u>						
Queenstown, MD	2.2	2.3	2.2	2.3	2.2	1.3
Georgetown, DE	1.7	2.0	1.8	2.5	2.5	1.7
Warsaw, VA	1.2	1.0	1.0	1.2	1.0	1.2
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Calhoun, GA	2.0	1.5	1.8	1.5	2.0	2.2
Athens, GA	2.0	1.8	2.0	1.5	2.3	2.0
Princeton, KY	1.0	1.0	1.0	1.0	1.0	1.0
Martin, TN	2.5	2.0	2.5	2.0	2.5	2.5
Jackson, TN	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	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	1.0	1.5	1.5	2.0	1.5
Jonesboro, AR	3.0	3.0	2.3	2.7	3.0	3.0
Pine Tree, AR	2.7	2.7	1.7	3.0	3.0	3.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	2.1	1.9	2.1	1.8	1.9	2.2
<u>WEST</u>						
Ottawa, KS	1.5	1.5	1.5	3.0	2.0	1.0
Parsons, KS	2.0	1.5	1.5	1.5	1.5	2.0
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, AR	2.0	1.5	1.5	1.8	1.5	2.0
Bossier City, LA	1.5	1.5	1.8	1.3	1.3	1.0
Beaumont, TX	2.8	3.0	2.0	2.5	2.2	2.0

PRELIMINARY GROUP V

1981

Preliminary Group V nurseries, including 34 experimental strains along with Forrest and Hill, were grown at 8 locations. The parentage for each of the strains is reported in Table 22. Performance data from 7 of the locations are summarized in Tables 23-28.

Differences among strains for seed yield were significant at the five percent level of confidence in 6 of the comparisons. The combined analysis of variance for seed yield also showed differences among strains to be significant at the five percent level of confidence. Forrest had a mean seed yield of 47.1 bushels per acre. Three strains had mean seed yields slightly greater than that for Forrest. Hill and 9 experimental strains had mean seed yields significantly lower than that for Forrest.

Plantings were made at Ames Plantation in Tennessee for rating strains for reaction to SCN race 3. Twenty-two strains were considered resistant, and one strain appeared to be segregating in reaction. The planting at Tiptonville, Tennessee, was on soil infested with SCN race 4. Sixteen strains were rated resistant in this planting. The CV for seed yield in this planting was 22 percent. The high CV is believed to be the result of the variable reaction to cyst nematodes for the susceptible strains in the planting.

Three strains showed very little feeding by soybean looper in the planting in field cages at Stoneville. These strains are N79-2317, N79-2337, and N80-5051.

Table 22 - Parentage of the strains grown in Preliminary Group V, 1981

Strain or variety	Parentage	Generation composited
1. Forrest		
2. Hill		
3. D77-15	Forrest(2) X Tracy	F ₅
4. D77-4809	D74-7631 X J74-57	F ₅
5. D77-5064	[Forrest(2) X PI 229358] X J74-8	F ₅
6. D77-5147	Pickett 71(2) X [Dare(2) X PI 96983] X J74-47	F ₅
7. D77-5161	Centennial X J74-47	F ₅
8. D77-5193	Centennial X J74-47	F ₅
9. D77-6056	Centennial X J74-47	F ₅
10. D78-3012	D72-8707 X D75-10701	F ₅
11. D78-3036	D72-8707 X D75-10701	F ₅
12. D78-3100	D72-8707 X D75-10701	F ₅
13. D78-3120	D72-8707 X D75-10701	F ₅
14. D78-5658	D61-4863 X Essex	F ₅
15. D79-5322	J74-77 X D72-8927	F ₅
16. D79-5353	J74-77 X D72-8927	F ₅
17. K1085	Tracy X Columbus	F ₅
18. La79-3854	Forrest X Mack	F ₅
19. N79-2317	Forrest(2) X 4-74-6-3	F ₄
20. N79-2337	Forrest(2) X 4-74-6-3	F ₄
21. N80-5051	Forrest(3) X 4-74-6-3	F ₄
22. R75-622J	Forrest X Essex	F ₃
23. R77-127	Mack X V72-128	F ₄
24. R78-869S	R72-22 X Centennial	F ₅
25. R78-2401K	FC33423 X Hill	F ₇
26. R79-55	[(D68-B4 X R66-1516 X RAY] X (York X Davis)	F ₅
27. R79-121	Mack X V72-128	F ₅
28. LS78-229	L712-436 X J74-5	F ₅
29. LS78-248	L712-436 X J74-5	F ₄
30. LS78-335	L712-436 X J74-5	F ₄
31. LS78-344	L712-436 X J74-5	F ₄
32. S76-2425	D70-3115 X Essex	
33. S77-7711	Forrest X V71-480	
34. Ts80-1152	James X Shore	F ₆
35. V77-2014	V68-1034 X V68-920	F ₅
36. V78-214	V68-1034 X V68-920	F ₅

Table 23 - General summary of performance for the strains grown in Preliminary Group V, 1981

Strain	Seed yield	Maturity index	Ht.	Percent		SCN race 3	SCN race 4	Soybean looper	Percent
				Oil	Protein				mottled seed
Forrest Hill	47.1	10-10	33	19.1	39.9	R	S	5	1
D77-15	40.7-	-10	30	19.4	40.6	S	S	5	2
D77-4809	46.1	-3	34	19.1	41.5	R	S	5	0
D77-5064	42.4-	+2	43	18.6	40.6	R	R	5	2
D77-5147	44.5	-4	36	18.8	41.0	R	R	5	3
D77-5161	47.1	-2	37	19.3	40.0	R	R	4	3
D77-5193	44.9	-3	35	19.0	41.4	R	R	5	3
D77-6056	45.6	-2	34	18.7	41.4	R	R	5	0
D78-3012	47.9	+2	36	18.9	40.8	R	R	4	0
D78-3036	39.5-	+3	38	16.9-	42.6+	R	R	4	0
D78-3100	42.5-	-3	32	17.6-	41.9+	R	R	4	1
D78-3120	42.9	+7	41	18.0-	42.1+	R	R	4	0
D78-5658	44.6	0	36	18.2-	41.0	R	R	3	0
D79-5322	44.2	+2	33	19.6	42.5+	S	S	5	0
D79-5353	38.4-	-8	38	18.8	40.7	R	R	5	7
K1085	41.0-	-6	38	18.4-	38.8	R	R	4	8
La79-3854	34.2-	-8	24	18.4-	45.5+	S	S	4	1
N79-2317	35.9-	+3	27	19.8+	41.5	R	S	5	9
N79-2337	44.5	-2	30	19.1	39.4	Seg.	S	2	2
N80-5051	44.0	-2	32	18.9	39.5	R	S	2	3
R75-622J	45.8	+1	37	19.1	40.4	S	S	2	0
R77-127	45.6	+1	32	19.2	40.0	R	S	4	0
R78-869S	43.5	-2	34	18.5	42.2+	R	S	4	0
R78-2401K	45.2	+3	32	18.2-	42.3+	R	R	4	1
R79-55	45.4	+1	33	18.8	40.7	S	S	4	1
LS78-229	45.5	+3	42	19.1	40.8	S	S	4	2
LS78-248	47.6	-5	36	18.7	41.7+	S	S	3	2
LS78-335	42.9	-6	32	19.7	38.8	S	S	4	4
LS78-344	42.1-	-9	29	19.1	40.2	R	R	3	3
S76-2425	44.5	-3	34	19.6	37.9-	R	R	4	9
S77-7711	41.5-	-8	38	20.4+	37.9-	R	S	4	3
Ts80-1152	49.3	+2	35	19.2	40.6	S	S	4	0
V77-2014	47.1	-1	35	19.8+	39.7	S	S	3	3
V78-214	39.4-	+2	25	19.0	42.0+	S	S	3	2
L.S.D. (.05)	46.5	-4	29	19.4	38.4	S	S	4	0
L.S.D. (.01)	45.1	-6	29	19.1	38.5	S	S	4	0
				0.6	1.6				
				0.8	2.1				

Table 24 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group V, 1981

Strain	Warsaw, VA	Plymouth, NC	Portage- ville, MO (A)	Tipton- ville, TN	Keiser, AR	Stone- ville, MS (A)	Stone- ville, MS (B)
Forrest	44.4	59.7	45.8	36.6	41.0	58.0	44.2
Hill	45.0		34.3-	34.1	39.4	37.8-	45.6
D77-15	39.0	54.8	43.7	35.9	44.4	58.4	46.4
D77-4809	31.6-	49.5	41.1	42.2	40.9	48.6-	42.8
D77-5064	41.3	50.1	38.4	39.0	41.1	57.4	44.2
D77-5147	41.5	58.6	47.6	43.5	41.7	55.8	40.8
D77-5161	40.7	49.4	41.3	38.6	44.9	55.2	44.2
D77-5193	42.9	54.3	40.7	41.1	44.7	50.4	45.5
D77-6056	45.6	50.8	45.3	47.8	43.3	58.1	44.8
D78-3012	35.2-	40.3	36.4-	40.0	39.8	46.7-	38.1
D78-3036	39.1	45.1	39.7	39.4	40.1	53.2	40.8
D78-3100	35.3-	55.5	37.9-	37.0	43.5	49.1-	42.0
D78-3120	42.3	48.3	41.8	43.1	39.7	58.5	38.6
D78-5658	43.9	41.2	42.1	36.3	47.2	59.4	39.6
D79-5322	30.0-	42.7	35.5-	36.9	34.2	49.0-	40.9
D79-5353	32.3-	52.0	33.1-	40.9	37.1	51.1	40.5
K1085	45.8	40.1	29.5-	19.6	44.4	30.0-	30.4-
La79-3854	44.3		19.7-	35.8	30.0	36.2-	34.9-
N79-2317	45.3	48.6	44.8	33.9	45.3	54.7	38.9
N79-2337	49.0	56.0	42.7	30.3	44.7	52.8	32.5-
N80-5051	45.9	53.4	40.4	39.0	42.5	56.9	42.3
R75-622J	43.7	55.6	41.1	38.5	41.5	55.4	43.1
R77-127	42.3	50.4	41.3	36.6	39.8	52.1	42.4
R78-869S	33.7-	51.5	41.9	40.8	45.8	57.5	45.3
R78-2401K	42.9	56.2	39.1	39.8	46.7	53.3	39.7
R79-55	40.8	53.0	38.9	35.5	46.4	54.6	49.6
R79-121	41.2	50.9	46.9	38.1	48.7	59.5	48.3
LS78-229	42.0	51.7	38.2-	35.2	44.3	50.5	38.6
LS78-248	40.2	49.9	40.2	39.9	37.1	50.0	38.3
LS78-335	43.1	49.3	42.6	40.7	47.8	48.8-	39.4
LS78-344	42.1	49.2	40.3	30.5	42.7	52.0	33.8-
S76-2425	43.1	58.9	43.7	43.7	48.0	58.7	49.1
S77-7711	45.8	56.3	44.7	40.6	48.2	53.5	40.6
Ts80-1152	47.7	52.6	34.7-	28.0	36.6	47.7-	28.7-
V77-2014	48.3	52.1	41.7	34.8	50.9+	57.1	40.8
V78-214	41.3	55.5	44.6	34.8	47.2	49.0-	43.5
L.S.D. (.05)	6.7	8.0	7.4	N.S.	8.9	8.5	9.0
C.V.	8%	8%	9%	22%	10%	8%	11%

Table 25 - Oil percentages for the strains in Preliminary Group V, 1981

	Warsaw, VA	Plymouth, NC	Portageville, MO (A)	Keiser, AR	Stoneville, MS (B)
Forrest	19.3	18.2	18.1	20.0	19.7
Hill	18.5	18.8	19.9	19.7	20.0
D77-15	19.2	18.1	18.5	20.4	19.5
D77-4809	17.1	18.1	18.6	19.7	19.7
D77-5064	18.5	17.7	18.8	19.8	19.2
D77-5147	19.1	18.7	19.3	19.9	19.7
D77-5161	19.4	18.1	18.5	19.9	19.3
D77-5193	17.7	18.4	19.0	18.7	19.6
D77-6056	18.2	18.4	19.1	19.8	19.0
D78-3012	16.1	16.2	16.6	18.3	17.5
D78-3036	17.5	16.5	17.8	18.6	17.5
D78-3100	18.2	17.7	17.2	19.1	18.0
D78-3120	18.1	17.5	18.2	19.3	18.0
D78-5658	18.5	18.4	20.0	19.9	21.1
D79-5322	18.5	17.2	18.7	20.3	19.2
D79-5353	17.8	16.9	18.5	19.6	19.0
K1085	18.3	17.8	17.8	19.5	18.4
La79-3854	19.4	-	19.4	21.1	20.7
N79-2317	19.0	19.3	18.6	19.8	19.0
N79-2337	17.5	19.0	18.6	19.3	20.3
N80-5051	18.5	19.3	18.9	19.5	19.2
R75-622J	18.1	18.2	18.7	20.6	20.2
R77-127	18.2	17.4	18.5	19.5	18.8
R78-869S	17.2	17.8	18.0	19.3	18.8
R78-2401K	18.1	18.5	18.6	19.7	19.2
R79-55	18.2	18.5	18.8	19.9	20.2
R79-121	18.4	17.8	18.5	19.5	19.2
LS78-229	19.2	18.8	19.6	20.2	20.8
LS78-248	19.1	17.6	19.3	19.9	19.4
LS78-335	19.1	19.0	18.9	20.6	20.3
LS78-344	20.2	18.6	20.6	21.6	21.2
S76-2425	18.5	18.5	19.3	19.3	20.4
S77-7711	19.3	19.1	19.6	20.6	20.2
Ts80-1152	18.4	18.3	18.2	19.8	20.1
V77-2014	19.3	17.6	19.0	20.9	20.0
V78-214	18.7	17.8	18.1	20.6	20.5

Table 26 - Protein percentages for the strains in Preliminary Group V, 1981

	Warsaw, VA	Plymouth, NC	Portageville, MO (A)	Keiser, AR	Stoneville, MS (B)
Forrest	35.1	43.8	39.9	38.2	42.5
Hill	40.7	42.1	37.8	39.3	42.9
D77-15	37.6	44.2	40.4	40.3	44.8
D77-4809	39.1	43.5	40.1	39.5	40.9
D77-5064	39.7	45.2	39.8	38.1	42.1
D77-5147	37.1	43.6	39.2	37.5	42.5
D77-5161	37.5	45.3	41.5	39.0	43.5
D77-5193	39.3	43.6	41.3	40.4	42.5
D77-6056	37.7	44.3	39.6	39.5	42.9
D78-3012	41.7	45.6	42.2	40.6	42.8
D78-3036	39.6	45.5	40.7	40.0	43.6
D78-3100	38.8	44.1	42.9	40.6	44.1
D78-3120	37.6	45.0	41.9	36.2	44.1
D78-5658	41.4	45.8	39.8	41.0	44.6
D79-5322	39.6	42.8	40.6	37.7	43.0
D79-5353	37.3	41.0	36.4	37.0	42.5
K1085	44.0	46.2	45.0	44.6	47.6
La79-3854	39.0	-	41.0	40.4	43.0
N79-2317	36.0	41.7	41.4	37.3	40.4
N79-2337	36.4	41.3	41.3	37.8	40.8
N80-5051	37.1	41.7	40.5	41.8	41.0
R75-622J	39.7	43.3	39.8	35.9	41.4
R77-127	42.0	44.0	41.3	41.4	42.4
R78-869S	39.0	46.9	41.2	39.8	44.5
R78-2401K	38.0	43.2	40.6	39.3	42.4
R79-55	37.5	43.2	38.9	39.8	44.5
R79-121	39.0	43.3	41.1	40.7	44.4
LS78-229	34.5	41.2	37.7	40.3	40.1
LS78-248	39.0	42.1	39.1	38.8	41.8
LS78-335	33.5	40.6	37.8	38.7	38.8
LS78-344	33.8	43.3	37.3	36.3	38.6
S76-2425	39.1	42.7	39.2	39.7	42.3
S77-7711	35.4	42.5	39.7	38.5	42.4
Ts80-1152	41.4	44.2	40.1	41.9	42.2
V77-2014	38.5	40.9	36.8	35.4	40.2
V78-214	36.5	43.2	37.3	37.0	38.4

Table 27 - Plant height for the strains in Preliminary Group V, 1981

	Warsaw, VA	Plymouth, NC	Portage- ville, MO (A)	Tipton- ville, TN	Keiser, AR	Stone- ville, MS (A)	Stone- ville, MS (B)
Forrest	38	30	38	26	29	37	33
Hill	34	28	23	26	28	36	32
D77-15	38	34	35	24	30	41	33
D77-4809	51	39	44	38	42	47	42
D77-5064	42	36	33	30	35	42	36
D77-5147	44	38	36	28	35	39	36
D77-5161	38	32	36	28	32	42	37
D77-5193	39	29	33	30	34	42	34
D77-6056	42	31	38	34	32	40	35
D78-3012	44	40	42	36	32	38	32
D78-3036	38	25	36	28	31	38	31
D78-3100	49	40	41	38	35	41	45
D78-3120	46	30	39	34	29	42	34
D78-5658	40	30	31	32	32	36	31
D79-5322	47	30	42	32	33	42	39
D79-5353	42	34	36	38	35	40	38
K1085	28	22	25	16	28	24	23
La79-3854	32	20	24	24	27	32	27
N79-2317	39	24	32	22	31	32	29
N79-2337	40	31	32	24	32	34	29
N80-5051	40	38	42	28	31	40	37
R75-622J	38	31	30	28	28	37	34
R77-127	38	26	41	32	31	37	33
R78-869S	44	32	39	34	34	43	34
R78-2401K	39	32	36	24	34	38	31
R79-55	50	35	45	42	37	44	41
R79-121	42	34	40	30	32	42	32
LS78-229	40	28	31	26	33	36	31
LS78-248	36	31	27	26	27	31	27
LS78-335	40	32	36	26	34	36	31
LS78-344	46	36	38	30	37	43	38
S76-2425	43	33	38	30	31	39	33
S77-7711	44	32	33	30	33	40	33
Ts80-1152	34	23	27	18	23	27	22
V77-2014	38	25	29	22	27	36	24
V78-214	40	26	28	20	29	34	27

Table 28 - Seed quality scores for the strains in Preliminary Group V, 1981

Strain	Warsaw, VA	Plymouth, NC	Portageville, MO (A)	Keiser, AR	Stoneville, MS (A)	Stoneville, MS (B)
Forrest	1.2	1.5	2.0	1.5	2.0	2.0
Hill	1.2	1.5	2.0	1.5	2.0	2.0
D77-15	1.0	1.5	1.0	1.0	2.0	2.0
D77-4809	1.3	1.5	2.0	1.5	2.0	2.0
D77-5064	1.1	1.5	2.0	1.5	2.0	2.0
D77-5147	1.2	1.5	2.0	1.0	2.0	2.0
D77-5161	1.0	1.5	2.0	1.0	2.0	2.0
D77-5193	1.2	1.5	2.0	1.5	2.0	2.0
D77-6056	1.4	1.5	1.0	1.0	2.0	2.0
D78-3012	1.4	1.5	2.0	1.5	2.0	2.0
D78-3036	1.3	1.5	2.0	2.0	2.5	2.0
D78-3100	1.2	1.5	2.0	1.5	2.0	2.0
D78-3120	1.2	1.5	2.0	1.5	2.0	2.0
D78-5658	1.1	1.5	2.0	1.5	2.0	2.0
D79-5322	1.4	1.5	2.0	1.0	2.5	2.0
D79-5353	1.2	1.5	2.0	1.5	2.0	2.0
K1085	1.4	1.5	2.0	1.5	2.5	2.0
La79-3854	1.3	1.5	2.0	1.5	2.0	2.0
N79-2317	1.0	1.5	2.0	1.0	2.0	2.0
N79-2337	1.2	1.5	2.0	1.0	2.0	2.0
N80-5051	1.4	1.5	2.0	1.5	2.0	2.0
R75-622J	1.5	1.5	2.0	1.5	2.0	2.0
R77-127	1.3	1.5	2.0	1.0	2.0	2.0
R78-869S	1.4	1.5	1.0	1.5	2.0	2.0
R78-2401K	1.0	1.5	2.0	1.5	2.0	2.0
R79-55	1.2	1.5	3.0	2.0	2.0	2.0
R79-121	1.0	1.5	2.0	1.0	2.0	2.0
LS78-229	1.5	1.5	2.0	2.0	2.0	2.0
LS78-248	1.0	1.5	2.0	2.0	3.0	2.5
LS78-335	1.2	1.5	2.0	2.0	2.5	2.0
LS78-344	1.3	1.5	2.0	1.0	2.0	2.0
S76-2425	1.0	1.5	2.0	1.5	2.0	2.0
S77-7711	1.2	1.5	2.0	1.0	2.0	2.0
Ts80-1152	1.2	1.5	2.0	1.0	2.0	2.0
V77-2014	1.0	1.5	2.0	1.0	2.0	2.0
V78-214	1.0	1.5	2.0	1.5	2.0	2.0

UNIFORM GROUP VI

1981

<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. Jeff	Centennial X [R72-2647(3) X sel. (D68-18 X PI 88788)]	F ₃
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. N77-114	Essex X N70-2173	F ₅
9. D77-6166	Centennial X J74-47	F ₅
10. D78-5502	Forrest(2) X Tracy	F ₅
11. D78-5576	Forrest(2) X Tracy	F ₅
12. R74-39K	Davis X York	F ₆

Background of breeding lines used as parents:

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

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

N70-2173 is a selection from Hutton X Ransom.

R72-2647 is a Lee type resistant to SCN races 1 and 3.

Results of 31 Uniform Group VI nurseries are summarized in Tables 29 through 35. Table 29 gives a general summary of production qualities, oil and protein content of the seed, along with reaction to pest problems.

Differences among strains for seed yield were significant (.05 level of confidence) in 23 of the comparisons. Mean seed yield differences among strains were significant only in the Delta region.

The strain N75-2213 has been evaluated 4 years. A decision will be made whether or not to release this strain. D76-9665 has been evaluated 3 years. This strain has yielded well in all areas. One of its merits in comparison with Centennial is that it has a moderate level of resistance to the root-knot nematode, Meloidogyne arenaria, to which Centennial is susceptible. This strain was considered for possible release for production in areas having soybean cyst nematode race 3 and the 2 root-knot nematodes, M. incognita and M. arenaria. However, the breeding line F77-1797, evaluated in Uniform Group VIII, appears to have a higher level of resistance to M. arenaria and would serve as a variety for production in the areas where these 3 nematodes occur. Three strains, D77-12, D77-6057, and N77-174, have been evaluated 2 years. D77-6057 had a regional mean yield significantly higher than that for Centennial in the Delta region.

Eight of the strains are resistant to SCN race 3. Three strains, Jeff, D77-6057, and D77-6166, are also resistant to SCN race 4. SCN race 4 was present in the area near Jackson, Tennessee, where this material was grown. An unidentified disease was also present in this nursery area. Strains susceptible to SCN race 4 appeared to be more seriously affected. Jeff, although resistant to SCN race 4, yielded significantly less than D77-6057 or D77-6166. There was little difference in cyst count among these 3 strains. A difference in disease expression was apparent among strains susceptible to race 4. D78-5502 received the lowest disease score rating for the strains susceptible to SCN race 4 and had the highest seed yield of these strains.

Tracy-M showed distinctly less feeding by soybean looper in the field cage plantings at Stoneville than did Centennial or Jeff. These results support previous field observations and also greenhouse studies.

Ratings for reaction to Cylindrocladium crotalaria were made at Hartsville, South Carolina. Jeff had the highest score (4.0) and N72-2213 the lowest score (1.5). Scores for other strains were in the range of 2.0 to 3.2.

Seedlings from the first planting on clay at Stoneville were beginning to emerge as a heavy rain fell and was followed by several days of below normal temperatures. Satisfactory stands were obtained for Centennial, but for most other strains, killing was nearly complete. Pythium spp. was considered to be the cause of the killing.

Soybean cyst nematodes and root-knot nematodes were present in the area where these plantings were made at Holland, Virginia.

Table 29 - General summary of the performance for the strains grown in Uniform Group VI, 1981

	No. of locations	Centennial	Tracy-M	Jeff	N75-2213	D76-9665	D77-12
Seed yield - 1981							
East Coast	6	39.3	36.6	37.8	40.2	40.5	38.0
Southeast	6	40.8	36.1	39.3	41.5	41.1	39.8
Upper & Central South	5	35.3	35.0	33.1	40.5	35.9	35.5
Delta	7	39.8	38.5	40.1	43.0	39.8	40.6
West	5	40.0	40.4	39.5	40.3	39.2	41.4
1980-81							
East Coast		36.5	34.5	36.2	35.5	38.2	35.4
Southeast		36.4	32.9	35.4	36.8	39.0	35.8
Upper & Central South		32.4	30.3	29.1	32.9	29.3	31.3
Delta		41.7	38.9	42.2	41.8	42.4	35.8
West		39.7	35.4	37.5	37.1	40.2	35.4
1979-81							
East Coast		38.3	36.3		38.5	39.6	
Southeast		37.1	33.7		37.4	39.4	
Upper & Central South		35.1	33.4		36.6	33.3	
Delta		38.0	37.2		40.1	40.0	
West		42.8	39.1		39.3	42.9	
Oil Content - 1981							
		18.2	17.1-	18.9+	18.8+	18.8+	18.5
1980-81		18.9	17.9	19.2	19.2	19.2	18.9
1979-81		18.7	17.9		19.2	19.3	
Protein Content - 1981							
		43.9	44.5	42.0-	44.0	39.7-	43.4
1980-81		43.9	44.3	42.3	44.1	40.9	43.6
1979-81		43.2	43.8		43.7	40.2	
Seed size							
		13.1	16.1+	14.4+	13.7	11.6-	11.9-
Maturity index							
		10-16	-1	0	-2	0	-2
Height							
		37	35	39	38	40	37
Seed quality							
		1.8	2.0	1.8	1.6	1.7	1.8
SCN race 3 ¹							
		R	S	R	S	R	R
SCN race 4 ²							
		S	S	R	S	S	S
Disease "X" ³							
		3.0	3.4	1.8	5.0	3.3	2.7
Soybean looper ⁴							
		5	3	5	4	4	3
Percent mottled seed ⁵							
		0.3	7.3	0.7	0.0	0.3	2.0
Flower color							
		P	W	P	W	P	W
Pubescence color							
		T	T	T	G	T	T
Pod wall color							
		T	T	T	T	T	T

¹SCN race 3 - Field ratings Ames Plantation, TN.

² & ³SCN race 4 & Disease "X" ratings made near Jackson, TN.

⁴Soybean looper ratings made in field cage at Stoneville.

⁵Percent mottled seed at Warsaw, VA.

Table 29 - (continued)

	D77-6057	N77-114	D77-6166	D78-5502	D78-5576	R74-39K
Seed yield - 1981						
East Coast	39.6	42.0	39.4	42.1	42.7	37.3
Southeast	37.0	37.7	41.3	42.3	38.9	42.0
Upper & Central South	40.2	37.3	39.4	37.1	36.3	37.8
Delta	45.3+	42.9	42.3	42.1	38.7	38.1
West	43.1	44.1	42.3	43.8	41.7	37.3
1980-81						
East Coast	35.0	38.8				
Southeast	33.1	32.3				
Upper & Central South	33.4	30.8				
Delta	45.9	44.3				
West	39.6	38.2				
1979-81						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
Oil Content - 1981	17.9	20.1+	18.0	18.6	18.3	19.4+
1980-81	18.6	20.4				
1979-81						
Protein Content - 1981	42.8	40.8-	42.6-	42.5-	43.2	41.5-
1980-81	43.5	41.9				
1979-81						
Seed size	14.1+	14.8+	13.0	15.0+	14.1+	16.2+
Maturity index	-5	-6	0	0	-1	0
Height	33	27	37	34	34	36
Seed quality	1.9	2.0	1.7	2.0	1.7	1.8
SCN race 3	R	S	R	R	R	S
SCN race 4	R	S	R	S	S	S
Disease "X"	1.0	5.0	1.0	2.0	2.3	3.3
Soybean looper	4	3	4	5	4	5
Percent mottled seed	3.0	0.0	1.3	0.3	0.3	0.0
Flower color	P	P	P	W	W	P
Pubescence color	T	G	T	T	T	G
Pod wall color	T	Br	T	T	T	T

Table 30 - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1981

Location	Centennial	Tracy-M	Jeff	N75-2213	D76-9665	D77-12	D77-6057
<u>EAST COAST</u>							
Warsaw, VA	35.8	38.7	36.0	34.9	36.4	39.1	36.6
Holland, VA	29.1	16.7-	20.0-	18.4-	26.1	25.5	21.8
Plymouth, NC	48.5	47.0	52.0	53.1	49.4	50.4	50.2
*Clinton, NC	42.3	39.1	43.6	48.2	31.6	40.0	35.9
Kinston, NC	34.0	36.2	32.8	38.0	32.9	32.7	33.6
Florence, SC	54.4	55.7	56.9	57.9	62.0+	53.6	57.7
Hartsville, SC	33.9	25.1-	29.4	38.5	36.4	26.6	38.0
Mean	39.3	36.6	37.9	40.1	40.5	38.0	39.7
<u>SOUTHEAST</u>							
Blackville, SC	46.9	41.5-	41.6-	44.9	42.8	42.4	39.6-
Tifton, GA	50.6	41.9-	48.7	46.1	50.6	43.1-	43.6-
Quincy, FL	45.7	35.9-	36.6	48.4	43.2	37.5	33.6-
Jay, FL	41.7	37.3	44.3	38.7	44.6	44.0	42.0
Fairhope, AL	32.1	37.6+	36.9	46.9+	33.6	35.8	39.6
Baton Rouge, LA	27.8	22.3	27.5	23.8	31.9	36.0+	23.2
Mean	40.8	36.1	39.3	41.5	41.1	39.8	36.9
<u>UPPER AND CENTRAL SOUTH</u>							
Calhoun, GA	51.7	56.5	48.0	54.1	46.1	43.9	53.4
Belle Mina, AL	42.4	39.4	39.2	46.2	44.7	45.9	41.3
Clemson, SC	38.7	32.9	35.4	50.1+	42.1	36.5	38.7
Jackson, TN (A)	29.4	35.2	26.7	43.3	35.7	38.7	40.8
Jackson, TN (B)	14.4	10.9	16.4	8.8	11.0	12.6	26.6+
Mean	35.3	35.0	33.1	40.5	35.9	35.5	40.2
<u>DELTA</u>							
Portageville, MO (A)	38.0	42.4	41.5	40.1	39.6	43.4	46.3
Portageville, MO (B)	23.2	22.4	19.6	28.2+	21.7	27.6	32.6+
Keiser, AR	44.1	42.4	43.5	47.2	43.9	42.4	43.9
*Jonesboro, AR	5.9	9.2	4.5	12.1+	9.1+	8.2	12.3+
*Pine Tree, AR	31.6	34.0	32.9	31.4	30.7	27.3	35.8
Stoneville, MS (A)	46.4	44.1	48.2	48.7	50.1	47.2	56.3+
Stoneville, MS (B)	45.1	38.0-	41.5	51.3+	40.7	41.6	47.6
St. Joseph, LA	49.4	54.1+	58.8+	56.5+	54.0+	54.7+	60.9+
Rohwer, AR	32.3	26.4-	27.4	28.7	28.5	27.5	29.6
Mean	39.8	38.5-	40.1	43.0	39.8	40.6	45.3
<u>WEST</u>							
Pine Bluff, AR	37.6	38.3	41.6	43.9	41.9	42.5	50.3
Stuttgart, AR	46.4	42.4	42.6	45.0	45.0	45.8	44.3
*Bossier City, LA	14.2	11.5	12.4	12.2	13.8	14.2	18.3
Crowley, LA	37.0	48.3+	37.1	39.5	36.1	42.8	43.0
Beaumont, TX	42.3	35.6	38.2	32.6-	38.3	35.0-	33.7-
Bixby, OK	36.6	37.3	38.2	40.7	34.7	40.9	44.3
Mean	40.0	40.4	39.5	40.3	39.2	41.4	43.1

*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	N77-114	D77-6166	D78-5502	D78-5576	R74-39K	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Warsaw, VA	48.0+	37.7	41.0+	41.5+	31.8-	3.7	6
Holland, VA	15.0	28.0	25.6	28.7	13.4	5.7	15
Plymouth, NC	57.0+	47.2	54.7+	55.5+	50.8	6.8	7
Clinton, NC	-	42.5	48.0	48.9	-	7.7	11
Kinston, NC	40.5	32.2	39.7	35.8	36.5	N.S.	10
Florence, SC	53.3	54.1	52.3	58.2	60.5+	5.6	6
Hartsville, SC	37.8	37.3	39.2	36.3	30.8	7.8	14
Mean	41.9	39.4	42.1	42.7	37.3	N.S.	
<u>SOUTHEAST</u>							
Blackville, SC	45.0	43.8	47.0	45.4	48.3	4.9	7
Tifton, GA	47.3	50.4	51.7	50.2	52.2	6.7	8
Quincy, FL	41.4	38.9	38.1	31.7-	40.4	9.1	14
Jay, FL	34.0	46.0	46.0	46.7	43.3	N.S.	12
Fairhope, AL	43.7+	38.1+	40.4+	37.1	41.4	5.1	8
Baton Rouge, LA	14.8-	30.9	30.6	22.3	26.2	7.8	17
Mean	37.7	41.4	42.3	38.9	42.0	N.S.	
<u>UPPER AND CENTRAL SOUTH</u>							
Calhoun, GA	56.9	49.7	54.0	46.8	56.9	N.S.	12
Belle Mina, AL	37.2	46.2	44.9	44.0	43.6	N.S.	13
Clemson, SC	39.4	40.0	31.0	32.8	39.5	8.9	14
Jackson, TN (A)	42.7	35.0	36.3	41.5	38.0	N.S.	18
Jackson, TN (B)	10.4	26.1+	19.3	16.6	11.0	6.0	23
Mean	37.3	39.4	37.1	36.3	37.8	N.S.	
<u>DELTA</u>							
Portageville, MO (A)	47.0	40.3	43.1	40.5	43.3	N.S.	8
Portageville, MO (B)	29.9+	30.2+	25.6	20.1	26.1	4.8	11
Keiser, AR	42.1	44.4	45.0	43.5	42.3	N.S.	8
Jonesboro, AR	15.0+	7.9	10.8+	10.7+	6.4+	3.1	19
Pine Tree, AR	20.4	35.4	39.9	30.7	30.2	N.S.	27
Stoneville, MS (A)	55.6+	48.0	47.7	46.6	40.6	6.0	7
Stoneville, MS (B)	42.1	44.7	41.9	40.3	41.2	5.5	8
St. Joseph, LA	64.8+	55.7+	61.5+	51.1	55.4+	3.6	4
Rohwer, AR	18.7-	32.4	29.7	29.0	17.6-	5.0	11
Mean	42.9	42.2	42.1	38.7	38.1	3.5	
<u>WEST</u>							
Pine Bluff, AR	45.6	49.0	45.5	47.2	35.0	N.S.	17
Stuttgart, AR	50.8	42.8	43.1	43.5	40.9-	4.8	6
Bossier City, LA	20.2+	14.0	12.7	13.1	16.5	3.5	15
Crowley, LA	43.0	40.0	44.3+	38.6	34.4	8.5	9
Beaumont, TX	26.2-	36.0	39.4	37.3	32.4-	7.1	12
Bixby, OK	55.0	43.8	46.6	41.6	43.8	N.S.	17
Mean	44.1	42.3	43.8	41.6	37.3	N.S.	

Table 31 - Chemical composition and seed size for the strains in Uniform Group VI, 1981

Location	Centennial	Tracy-M	Jeff	N75-2213	D76-9665	D77-12
<u>OIL PERCENTAGE</u>						
Warsaw, VA	17.9	16.4	19.1	17.7	18.0	18.6
Plymouth, NC	17.5	16.5	17.6	18.1	18.0	17.5
Kinston, NC	17.6	16.8	18.1	17.9	17.4	17.3
Jay, FL	19.2	17.1	19.8	19.3	19.6	18.8
Jackson, TN (A)	17.8	16.5	18.1	19.6	18.6	18.6
Portageville, MO (A)	17.6	17.6	18.5	18.4	18.5	18.2
Keiser, AR	18.6	16.9	19.9	19.8	19.6	19.5
Stoneville, MS (B)	18.0	16.7	18.6	18.7	18.9	18.3
Stuttgart, AR	18.9	17.4	19.6	18.7	19.2	18.3
Beaumont, TX	19.1	19.1	20.0	19.7	20.0	20.2
Mean	18.2	17.1	18.9	18.8	18.5	17.9
<u>PROTEIN PERCENTAGE</u>						
Warsaw, VA	39.2	43.1	39.5	40.3	36.5	41.1
Plymouth, NC	45.4	46.5	42.7	45.4	42.2	45.1
Kinston, NC	48.1	46.7	46.8	47.0	42.5	46.0
Jay, FL	42.9	42.3	43.3	44.9	39.5	43.0
Jackson, TN (A)	40.1	41.3	38.9	42.1	36.9	41.1
Portageville, MO (A)	45.6	44.9	41.0	43.5	38.9	44.2
Keiser, AR	41.5	44.5	37.3	40.7	35.7	40.8
Stoneville, MS (B)	45.0	44.9	44.4	43.3	39.9	43.3
Stuttgart, AR	44.2	46.0	41.3	45.9	41.5	43.9
Beaumont, TX	47.1	45.2	44.7	47.2	43.4	45.0
Mean	43.9	44.5	42.0	44.0	39.7	43.4
<u>GRAMS PER 100 SEEDS</u>						
Warsaw, VA	14.2	19.2	15.3	14.6	12.5	14.4
Plymouth, NC	13.7	16.0	15.8	15.6	12.5	11.8
Kinston, NC	11.9	15.2	14.7	14.1	11.5	11.2
Jay, FL	14.0	18.0	16.0	13.0	12.0	13.0
Jackson, TN (A)	13.3	14.8	13.8	12.6	11.5	11.7
Portageville, MO (A)	12.4	16.5	12.8	12.6	10.7	11.5
Keiser, AR	12.0	14.0	11.0	13.0	10.0	10.0
Stoneville, MS (B)	12.6	15.8	14.6	13.8	11.0	11.2
Stuttgart, AR	13.3	15.0	15.0	12.3	11.7	12.0
Beaumont, TX	13.5	16.5	14.6	15.6	12.3	12.5
Mean	13.1	16.1	14.4	13.7	11.6	11.9

Table 31 - (continued)

Location	D77-6057	N77-114	D77-6166	D78-5502	D78-5576	R74-39K	L.S.D. (.05)
<u>OIL PERCENTAGE</u>							
Warsaw, VA	17.2	20.0	17.7	18.6	18.8	18.1	
Plymouth, NC	17.5	19.1	17.3	17.7	17.2	18.2	
Kinston, NC	17.3	19.0	16.9	17.0	17.2	18.3	
Jay, FL	18.6	20.1	18.4	19.0	19.2	21.1	
Jackson, TN (A)	18.0	20.4	17.8	19.3	18.0	19.4	
Portageville, MO (A)	17.6	20.4	17.7	18.2	17.6	18.7	
Keiser, AR	18.4	20.5	19.0	19.9	19.3	20.1	
Stoneville, MS (B)	17.2	20.0	17.4	17.7	18.0	19.1	
Stuttgart, AR	18.6	20.3	18.1	17.6	17.9	19.7	
Beaumont, TX	18.7	20.7	19.7	20.5	19.9	20.9	
Mean	20.1	18.0	18.6	18.3	19.4	18.5	0.4
<u>PROTEIN PERCENTAGE</u>							
Warsaw, VA	38.1	35.9	41.1	38.7	39.2	38.6	
Plymouth, NC	43.5	42.3	45.7	43.5	45.9	42.4	
Kinston, NC	45.3	42.7	45.9	44.5	47.2	45.0	
Jay, FL	42.7	41.2	42.2	42.1	44.8	40.8	
Jackson, TN (A)	38.6	38.9	38.5	38.1	38.2	38.3	
Portageville, MO (A)	42.1	38.0	43.1	43.5	43.8	41.0	
Keiser, AR	43.3	39.7	40.8	40.3	38.6	37.5	
Stoneville, MS (B)	42.9	39.8	41.5	42.6	43.1	41.3	
Stuttgart, AR	44.8	42.2	42.3	45.2	45.1	43.8	
Beaumont, TX	46.3	47.3	44.7	46.5	46.0	46.7	
Mean	42.8	40.8	42.6	42.5	43.2	41.5	1.1
<u>GRAMS PER 100 SEEDS</u>							
Warsaw, VA	14.7	15.2	14.2	17.6	16.1	17.1	
Plymouth, NC	16.3	15.9	12.7	15.6	14.5	16.3	
Kinston, NC	14.9	15.6	13.2	13.6	14.4	14.8	
Jay, FL	16.0	15.0	14.0	17.0	16.0	18.0	
Jackson, TN (A)	14.0	14.8	12.7	13.2	12.8	15.4	
Portageville, MO (A)	13.1	13.0	12.5	13.5	12.7	14.7	
Keiser, AR	12.5	13.5	11.0	14.0	12.0	14.5	
Stoneville, MS (B)	13.6	15.4	13.0	15.2	14.0	17.0	
Stuttgart, AR	12.3	14.7	12.7	15.0	14.3	16.0	
Beaumont, TX	13.8	15.1	13.5	15.1	14.6	18.6	
Mean	14.1	14.8	13.0	15.0	14.1	16.2	0.7

Table 32 - Relative maturity data, days earlier (-) or later (+) than Centennial, for the strains in Uniform VI, 1981

Location	Date planted	Centennial	Tracy-M	Jeff	N75-2213	D76-9665	D77-12
<u>EAST COAST</u>							
Warsaw, VA	6-4	10-28	-4	0	+4	+7	-1
Plymouth, NC	5-12	10-24	-2	0	+2	+2	+2
Clinton, NC	5-20	10-20	+8	+8	+8	0	0
Kinston, NC	5-18	10-20	0	0	0	0	0
Florence, SC	5-20	10-14	0	-2	-2	0	-2
Hartsville, SC	6-2	10-13	-6	-4	-4	0	-4
Mean		10-19	-1	0	+1	+2	-1
<u>SOUTHEAST</u>							
Blackville, SC	5-18	10-14	-7	-3	-5	0	-3
Tifton, GA	5-11	10-3	+1	0	-3	+1	0
Quincy, FL	6-16	10-10	+5	-1	0	-3	-4
Jay, FL	6-5	10-13	+3	0	0	+1	+2
Fairhope, AL	6-5	10-2	-5	-1	-3	-1	-1
Baton Rouge, LA	5-13	10-17	0	-2	-9	0	0
Mean		10-10	0	-1	-3	0	-1
<u>UPPER AND CENTRAL SOUTH</u>							
Calhoun, GA	5-21	10-14	-4	-2	-3	-2	-2
Clemson, SC	5-14	10-15	-5	-1	-1	+2	-1
Jackson, TN (A)	5-21	10-19	-1	0	-2	0	-2
Mean		10-16	-3	-1	-2	0	-1
<u>DELTA</u>							
Portageville, MO (A)	5-6	10-24	-4	-3	-4	-2	-3
Portageville, MO (B)	5-7	10-22	-5	-1	-5	-1	-1
Keiser, AR	6-24	10-26	+2	+1	+2	0	+2
Jonesboro, AR	5-21	10-25	-3	0	-6	-4	-5
Stoneville, MS (A)	5-15	10-15	-6	0	-8	-1	-6
Stoneville, MS (B)	5-29	10-20	0	+1	-3	+1	-3
St. Joseph, LA	5-12	10-4	-7	0	-7	+3	-4
Rohwer, AR	6-16	10-25	+6	+1	+6	+1	-1
Mean		10-20	+2	0	-3	0	-3
<u>WEST</u>							
Pine Bluff, AR	6-18	10-25	+3	-1	-2	+1	-4
Stuttgart, AR	5-23	10-8	+1	+1	0	+1	+1
Bossier City, LA	6-2	10-10	-1	+1	-1	0	-2
Crowley, LA	5-20	10-14	-9	+4	-9	+4	-3
Beaumont, TX	5-27	10-15	0	0	-3	+2	-1
Mean		10-14	-1	-1	-3	+2	-2

Table 32 - (continued)

Location	D77-6057	N77-114	D77-6166	D78-5502	D78-5576	R74-39K
<u>EAST COAST</u>						
Warsaw, VA	-2	-6	-2	-3	-3	+7
Plymouth, NC	-2	-2	+2	0	+2	-2
Clinton, NC	+8	+8	+8	0	0	0
Kinston, NC	-6	0	0	0	0	0
Florence, SC	-2	+2	0	0	0	+4
Hartsville, SC	-5	-6	-2	-2	+2	-1
Mean	-2	0	+1	-1	0	+1
<u>SOUTHEAST</u>						
Blackville, SC	-7	-8	-1	-2	-2	-1
Tifton, GA	-8	-3	0	0	0	-3
Quincy, FL	+6	+7	-3	+4	-2	+7
Jay, FL	-8	-8	+1	+1	0	-1
Fairhope, AL	-4	-9	0	-1	-3	-2
Baton Rouge, LA	-12	-1	+3	+1	-2	-7
Mean	-6	-4	0	+1	-2	-1
<u>UPPER AND CENTRAL SOUTH</u>						
Calhoun, GA	-5	-11	-3	-2	-3	-2
Clemson, SC	-8	-16	-3	+2	-2	-2
Jackson, TN (A)	-4	-7	+1	-1	0	-1
Mean	-4	-9	-1	0	-1	-1
<u>DELTA</u>						
Portageville, MO (A)	-12	-21	-3	-3	-3	-2
Portageville, MO (B)	-6	-12	-1	-1	-1	-2
Keiser, AR	-2	-8	+2	+3	+1	+3
Jonesboro, AR	-4	-6	-3	-4	-4	-6
Stoneville, MS (A)	-11	-12	+1	0	-4	+2
Stoneville, MS (B)	-3	-3	+1	+1	-1	+2
St. Joseph, LA	-13	-15	+1	0	-5	-3
Rohwer, AR	+3	-17	+3	+1	+1	+7
Mean	-6	-12	0	0	-2	0
<u>WEST</u>						
Pine Bluff, AR	-3	-6	-2	-2	-3	-3
Stuttgart, AR	0	0	0	+1	0	0
Bossier City, LA	-2	-4	+1	+1	0	+4
Crowley, LA	-17	-17	+4	-1	-3	-7
Beaumont, TX	-3	-8	+1	-2	+1	-2
Mean	-5	-7	+1	-1	-1	-2

Table 33 - Plant height for the strains in Uniform Group VI, 1981

Location	Centennial	Tracy-M	Jeff	N75-2213	D76-9665	D77-12
<u>EAST COAST</u>						
Warsaw, VA	44	40	48	46	48	41
Holland, VA	34	30	32	34	30	32
Plymouth, NC	37	34	37	35	38	35
Clinton, NC	36	37	42	42	46	41
Kinston, NC	44	39	42	46	45	44
Florence, SC	36	36	39	36	44	39
Hartsville, SC	41	36	44	41	47	33
Mean	39	36	41	40	43	38
<u>SOUTHEAST</u>						
Blackville, SC	41	36	44	40	46	40
Tifton, GA	32	30	33	33	34	32
Quincy, FL	29	29	32	31	34	25
Jay, FL	31	32	34	32	35	30
Fairhope, AL	34	36	39	40	43	39
Baton Rouge, LA	37	32	39	36	33	38
Mean	34	33	37	35	38	34
<u>UPPER AND CENTRAL SOUTH</u>						
Calhoun, GA	40	38	39	41	42	34
Belle Mina, AL	39	39	38	42	44	41
Clemson, SC	34	32	36	39	38	37
Jackson, TN (A)	47	41	43	44	50	45
Jackson, TN (B)	40	32	40	36	39	36
Mean	40	36	39	40	43	39
<u>DELTA</u>						
Portageville, MO (A)	39	45	48	47	44	41
Portageville, MO (B)	38	36	38	39	35	36
Keiser, AR	37	40	40	42	39	36
Jonesboro, AR	42	37	38	45	46	36
Stoneville, MS (A)	44	42	47	47	47	43
Stoneville, MS (B)	38	38	41	39	36	39
St. Joseph, LA	46	39	48	46	49	43
Rohwer, AR	30	27	35	25	33	32
Mean	39	38	42	41	41	38
<u>WEST</u>						
Pine Bluff, AR	43	39	45	43	43	41
Stuttgart, AR	37	37	40	31	38	37
Bossier City, LA	24	28	27	27	25	26
Crowley, LA	31	31	29	25	31	33
Beaumont, TX	26	26	29	28	30	28
Bixby, OK	35	35	35	39	37	43
Mean	33	33	34	32	34	35

Table 33 - (continued)

Location	D77-6057	N77-114	D77-6166	D78-5502	D78-5576	R74-39K
<u>EAST COAST</u>						
Warsaw, VA	38	31	42	40	41	40
Holland, VA	25	20	31	26	24	31
Plymouth, NC	30	28	37	35	31	34
Clinton, NC	25	20	36	41	37	38
Kinston, NC	36	32	41	39	41	40
Florence, SC	32	25	36	32	33	36
Hartsville, SC	37	27	45	36	39	37
Mean	32	26	38	36	35	37
<u>SOUTHEAST</u>						
Blackville, SC	38	26	40	36	29	41
Tifton, GA	30	27	29	29	30	35
Quincy, FL	27	26	31	27	29	33
Jay, FL	30	20	28	28	28	34
Fairhope, AL	38	25	37	32	35	40
Baton Rouge, LA	31	37	37	36	36	27
Mean	32	27	34	31	31	35
<u>UPPER AND CENTRAL SOUTH</u>						
Calhoun, GA	37	26	41	38	34	37
Belle Mina, AL	28	28	39	30	33	41
Clemson, SC	29	25	33	32	32	34
Jackson, TN (A)	41	29	46	40	42	42
Jackson, TN (B)	35	25	39	33	35	35
Mean	34	27	40	35	35	38
<u>DELTA</u>						
Portageville, MO (A)	35	26	38	42	40	39
Portageville, MO (B)	28	26	34	34	33	36
Keiser, AR	35	31	40	35	40	39
Jonesboro, AR	42	29	51	41	42	40
Stoneville, MS (A)	41	35	43	41	41	43
Stoneville, MS (B)	35	27	39	35	35	36
St. Joseph, LA	41	30	48	36	32	41
Rohwer, AR	26	16	30	28	29	29
Mean	35	28	40	37	37	38
<u>WEST</u>						
Pine Bluff, AR	41	33	43	40	40	42
Stuttgart, AR	26	22	37	34	35	36
Bossier City, LA	28	27	28	25	25	21
Crowley, LA	28	22	32	27	27	26
Beaumont, TX	24	21	27	26	23	30
Bixby, OK	36	30	39	39	35	41
Mean	31	26	34	32	31	33

Table 34 - Lodging scores for the strains in Uniform Group VI, 1981

Location	Centennial	Tracy-M	Jeff	N75-2213	D76-9665	D77-12
<u>EAST COAST</u>						
Warsaw, VA	2.9	2.1	3.6	2.9	3.6	4.0
Holland, VA	2.3	2.0	2.7	2.0	2.3	3.7
Plymouth, NC	4.0	4.0	4.0	4.0	4.0	4.0
Clinton, NC	2.0	3.0	3.0	3.0	3.0	3.0
Kinston, NC	2.0	2.7	3.0	2.7	2.3	3.0
Florence, SC	1.0	2.0	3.0	2.0	3.0	3.0
Hartsville, SC	2.3	1.8	2.3	1.5	2.8	3.0
<u>SOUTHEAST</u>						
Blackville, SC	1.0	2.0	2.0	2.0	3.0	4.0
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	1.0	1.0	1.0	2.0	1.0	1.0
Baton Rouge, LA	1.0	2.5	2.5	2.2	2.3	2.5
<u>UPPER AND CENTRAL SOUTH</u>						
Calhoun, GA	1.3	1.7	3.2	1.3	1.8	2.2
Belle Mina, AL	3.0	4.0	5.0	3.0	4.0	5.0
Jackson, TN (A)	2.0	2.0	2.0	2.0	2.0	2.0
Jackson, TN (B)	2.0	2.0	3.0	2.5	2.5	3.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	3.0	3.5	2.0	2.5	3.5
Portageville, MO (B)	2.0	2.5	3.0	2.5	2.0	2.5
Keiser, AR	1.7	3.0	2.7	3.0	2.0	4.0
Jonesboro, AR	1.3	2.0	2.3	2.3	1.3	3.0
Stoneville, MS (A)	2.7	3.0	4.0	3.0	3.0	3.3
Stoneville, MS (B)	2.0	2.3	2.3	2.0	2.0	2.0
Rohwer, AR	1.7	1.0	3.3	1.0	1.0	3.3
<u>WEST</u>						
Pine Bluff, AR	2.0	3.0	3.0	2.0	3.0	4.0
Stuttgart, AR	1.5	1.3	1.3	1.0	1.3	1.7
Bossier City, LA	1.6	1.0	1.6	2.0	1.0	1.6
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	1.4	1.6	1.6	1.6	1.6	1.8
Bixby, OK	2.0	3.0	4.0	3.0	1.0	4.0

Table 34 - (continued)

Location	D77-6057	N77-114	D77-6166	D78-5502	D78-5576	R74-39K
<u>EAST COAST</u>						
Warsaw, VA	2.3	1.6	3.2	2.8	3.4	3.7
Holland, VA	1.7	1.0	2.0	2.7	2.3	1.7
Plymouth, NC	3.0	3.0	3.7	4.0	4.0	3.7
Clinton, NC	2.0	2.0	2.0	2.0	1.0	4.0
Kinston, NC	2.0	2.0	2.7	2.3	2.7	2.7
Florence, SC	1.0	1.0	2.0	2.0	3.0	3.0
Hartsville, SC	1.5	1.0	2.0	3.0	2.5	1.7
<u>SOUTHEAST</u>						
Blackville, SC	1.0	1.0	2.0	3.0	1.0	3.0
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	1.0	2.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	3.0	1.0	1.2	2.0	2.3	1.7
<u>UPPER AND CENTRAL SOUTH</u>						
Calhoun, GA	1.7	1.0	1.3	1.8	1.5	2.0
Belle Mina, AL	2.0	1.0	3.0	3.0	2.0	3.0
Jackson, TN (A)	2.0	1.0	2.0	1.0	2.0	2.0
Jackson, TN (B)	1.5	1.5	2.0	2.5	2.5	2.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	1.5	3.0	3.0	3.5	2.5
Portageville, MO (B)	1.5	1.0	2.0	2.5	2.0	1.5
Keiser, AR	1.7	1.0	2.0	2.7	3.0	3.0
Jonesboro, AR	2.3	1.0	1.7	2.0	2.7	1.0
Stoneville, MS (A)	2.0	2.0	3.7	3.7	3.0	3.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.3
Rohwer, AR	1.0	1.0	1.0	2.0	1.7	1.0
<u>WEST</u>						
Pine Bluff, AR	1.0	1.0	2.0	3.0	2.0	1.0
Stuttgart, AR	1.0	1.0	1.0	1.2	1.0	1.2
Bossier City, LA	1.0	1.0	1.0	1.3	1.3	1.6
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	1.4	1.1	1.2	1.3	1.0	1.8
Bixby, OK	1.0	2.0	2.0	4.0	3.0	2.0

Table 35 - Seed quality scores for the strains in Uniform Group VI, 1981

Location	Centennial	Tracy-M	Jeff	N75-2213	D76-9665	D77-12
<u>EAST COAST</u>						
Warsaw, VA	1.0	1.1	1.2	1.0	1.3	1.3
Holland, VA	1.0	2.0	1.3	1.0	1.0	1.0
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>SOUTHEAST</u>						
Blackville, SC	1.0	2.0	1.0	1.0	1.0	1.0
Tifton, GA	1.5	2.0	2.0	2.0	1.5	2.0
Quincy, FL	2.0	3.0	2.0	1.0	2.0	2.0
Jay, FL	2.0	4.0	2.0	2.0	2.0	3.0
Baton Rouge, LA	1.3	2.3	1.7	2.0	2.2	1.3
<u>UPPER AND CENTRAL SOUTH</u>						
Calhoun, GA	2.0	1.5	1.5	1.5	1.5	1.5
Jackson, TN (A)	2.0	1.5	1.5	1.0	1.5	2.2
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	2.0	2.0	2.0	1.0
Portageville, MO (B)	2.0	2.0	3.0	2.0	3.0	2.0
Keiser, AR	2.0	2.0	1.5	1.0	2.0	1.0
Jonesboro, AR	2.3	2.0	3.0	2.7	2.7	3.0
Pine Tree, AR	2.0	3.0	3.0	3.0	1.8	3.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	2.0	2.2	2.4	2.1	2.0	2.0
Rohwer, AR	2.0	4.0	3.3	2.5	2.7	3.8
<u>WEST</u>						
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, AR	2.5	3.0	2.5	1.5	1.5	2.2
Bossier City, LA	1.0	2.0	1.0	1.3	1.3	1.3
Crowley, LA	3.0	2.2	2.8	2.3	2.6	1.7
Beaumont, TX	2.0	2.5	2.5	2.3	2.3	2.7

Table 35 - (continued)

Location	D77-6057	N77-114	D77-6166	D78-5502	D78-5576	R74-39K
<u>EAST COAST</u>						
Warsaw, VA	1.0	1.0	1.0	1.1	1.2	1.2
Holland, VA	1.7	1.0	1.3	1.7	1.3	1.7
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>SOUTHEAST</u>						
Blackville, SC	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	3.0	3.5	2.0	2.0	2.0	2.5
Quincy, FL	2.0	2.0	2.0	2.0	2.0	2.0
Jay, FL	3.0	3.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	2.0	3.0	1.5	3.2	2.2	2.0
<u>UPPER AND CENTRAL SOUTH</u>						
Calhoun, GA	2.0	2.0	1.5	1.7	1.5	1.5
Jackson, TN (A)	1.5	1.5	1.5	2.0	1.5	1.0
<u>DELTA</u>						
Portageville, MO (A)	1.0	2.0	2.0	2.0	2.0	3.0
Portageville, MO (B)	3.0	2.0	2.0	2.0	2.0	2.0
Keiser, AR	1.5	2.0	1.5	1.5	1.0	1.5
Jonesboro, AR	2.3	2.0	2.7	3.0	2.3	2.3
Pine Tree, AR	3.0	3.3	2.0	3.0	3.0	2.3
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	2.1	2.9	1.9	2.2	2.0	2.3
Rohwer, AR	3.0	2.7	2.2	3.2	3.2	4.0
<u>WEST</u>						
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, AR	2.5	3.0	2.0	2.0	1.5	1.7
Bossier City, LA	2.0	1.0	1.3	2.3	1.6	1.0
Crowley, LA	1.5	2.8	2.2	3.0	1.8	2.3
Beaumont, TX	2.3	3.0	2.0	2.5	2.3	2.3

PRELIMINARY GROUP VI

1981

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 37-42. Differences among strains for seed yield were significant (.05 level of confidence) in seven of the eight comparisons. The combined analysis of variance for seed yield also showed differences among strains to be significant. There were 2 strains having a mean seed yield significantly higher than that for Centennial and 9 strains having a mean seed yield significantly lower than that for Centennial. The strains having a higher seed yield than Centennial were N79-491 and S77-281. S77-281 was included in Preliminary Group V in 1980, but proved to be of Group VI maturity. Its average maturity in 1981 was similar to that for Centennial.

Thirteen of the strains were rated as resistant to SCN race 3. Three strains were considered to be segregating in reaction to SCN race 3. Bedford and one experimental strain, S77-281, were the only strains resistant to SCN race 4. In the planting at Jackson, Tennessee, where SCN race 4 was present, Bedford had a yield of 36.7 bushels per acre and S77-281, a yield of 27.1. S77-281 showed light symptoms for the disease described in the Uniform Group VI discussion. N79-491 had a mean yield of 35 bushels per acre in this planting. It was considered to be susceptible to SCN race 4 but had a score of 1 for the disease condition. There was a considerable range in disease expression among strains rated susceptible to SCN race 4. For the most part, disease symptoms were uniform within the plots. Plants made normal growth but showed interveinal chlorosis. Row middles were not well filled.

The two strains D79-10158 and D79-10515, selected for resistance to foliar-feeding insects, showed good resistance to soybean looper in the field cage plantings at Stoneville.

Table 36 - Parentage of the strains in Preliminary Group VI, 1981

Strain or variety		Parentage	Generation composited
1.	Centennial		
2.	Bedford		
3.	D77-5813	D71-6664 X D71-6234	F ₅
4.	D78-5412	Tracy X D66-5566	F ₅
5.	D78-5520	Forrest(2) X Tracy	F ₅
6.	D78-5813	D73-7725 X Lee	F ₅
7.	D78-6029	D73-7725 X Lee	F ₅
8.	D78-6299	Tracy X [(Hill X PI 245331) X D70-7202]	F ₅
9.	D79-5951	Tracy X Centennial	F ₅
10.	D79-6057	Tracy X Centennial	F ₅
11.	D79-6105	Tracy X Centennial	F ₅
12.	D79-6174	Tracy X D66-11005	F ₅
13.	D79-10158	Forrest X D75-10169	F ₅
14.	D79-10515	Forrest X D75-10169	F ₅
15.	Ga77-8	Hutton X D64-4636	F ₆
16.	Ga77-607	R67-141 X Tracy	F ₆
17.	Ga77-653	R67-141 X Tracy	F ₆
18.	Ga78-324	Essex X Davis	F ₆
19.	Ga78-618	Forrest X Pickett 71	F ₆
20.	Ga77-171	Davis X Forrest	
21.	La79-923	Davis X York	F ₅
22.	N73-1102	Tracy X Ransom	F ₅
23.	N79-280	Essex X N70-3037	F ₆
24.	N79-461	N70-1501 X Centennial	F ₆
25.	N79-491		
26.	N79-606	Essex X Centennial	F ₆
27.	N79-645	Essex X Centennial	F ₆
28.	N79-2272	Forrest X 4-74-6-3	F ₄
29.	R76-730J	C5-28 X Pickett 71	F ₄
30.	R77-238S	Forrest X Lee 74	F ₅
31.	R79-167S	R72-26 X Forrest	F ₅
32.	R79-179S	R72-26 X Forrest	F ₅
33.	R79-248	Forrest X (Tracy X Verde)	F ₅
34.	R79-413S	R72-22 X Centennial	F ₅
35.	R79-772	Centennial X R75-12L	F ₅
36.	S77-281	D70-3115 X J74-39	F ₄

Table 37 - General summary of performance for the strains in Preliminary Group VI, 1981

Strain	Seed yield	Maturity index	Ht.	Percent		SCN race 3	SCN race 4	Disease "X"	Soybean looper
				Oil	Protein				
Centennial	40.3	10-17	38	18.2	44.5	R	S	3.0	5
Bedford	42.6	-10	37	19.0	40.7-	R	R	1.0	4
D77-5813	36.7	-7	38	16.3-	50.2+	S	S	2.5	4
D78-5412	40.2	+5	41	17.6	45.8	S	S	3.0	3
D78-5520	39.7	+2	39	18.2	43.2	S	S	1.5	5
D78-5813	33.1-	+2	38	17.5	44.3	S	S	2.5	4
D78-6029	37.5	0	37	18.1	45.4	S	S	2.0	4
D78-6299	36.7	-5	39	16.7-	44.1	S	S	1.5	4
D79-5951	40.2	+3	41	17.4	43.8	R	S	2.0	4
D79-6057	41.7	+3	39	16.8-	45.0	R	S	2.0	4
D79-6105	39.3	+4	39	17.2-	44.8	R	S	1.0	4
D79-6174	35.1-	+1	37	16.9-	46.6+	S	S	3.0	5
D79-10158	36.9	+2	36	18.7	42.6	Seg.	S	3.0	1
D79-10515	38.6	+5	43	17.5	44.9	R	S	1.0	2
Ga77-8	35.4-	+3	38	17.6	44.6	S	S	4.0	5
Ga77-607	36.3	+2	40	17.7	43.6	S	S	4.0	3
Ga77-653	34.6-	0	43	17.8	44.3	S	S	3.0	4
Ga78-324	37.7	+1	42	18.3	44.8	S	S	4.0	5
Ga78-618	36.9	+3	32	18.5	42.4-	R	S	2.0	5
GaT77-171	34.3-	+3	34	18.1	41.2-	S	S	2.5	5
La79-923	40.7	+7	40	19.2+	40.2-	S	S	-	5
N73-1102	40.9	+2	38	17.7	43.3	S	S	4.0	3
N79-280	38.4	-7	32	19.5+	43.8	S	S	3.5	4
N79-461	41.5	-2	35	18.9	43.5	R	S	2.0	5
N79-491	45.2+	-11	31	19.0	42.7	R	S	1.0	5
N79-606	44.6	-3	34	18.9	44.8	S	S	1.0	5
N79-645	41.8	+1	35	18.4	45.1	S	S	4.0	5
N79-2272	41.0	+3	41	17.6	42.5-	R	S	2.0	3
R76-730J	38.9	+2	33	18.2	43.6	Seg.	S	4.0	4
R77-238S	39.3	+3	39	18.1	42.7	Seg.	S	3.0	4
R79-167S	42.8	+5	38	18.2	42.8	R	S	2.0	4
R79-179S	39.3	+2	39	18.2	41.9-	R	S	2.0	5
R79-248	40.4	+3	42	18.3	41.2-	R	S	1.5	5
R79-413S	40.1	+4	39	18.4	44.7	S	S	2.0	5
R79-772	40.7	+3	41	18.3	41.8-	S	S	2.0	5
S77-281	44.9+	0	34	18.9	42.1-	R	R	1.5	4
L.S.D. (.05)	4.3			0.9	1.9				
L.S.D. (.01)	5.6			1.2	2.5				

SCN race 3 ratings made in the field at Ames Plantation, Tennessee.
 SCN race 4 and Disease "X" ratings made at Jackson, Tennessee.

Table 38 - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1981

Strain	Holland, VA	Ply- mouth, NC	Belle Mina, AL	Jay, FL	Keiser, AR	Jackson, TN (B)	Stone- ville, MS (A)	Stone- ville, MS (B)
Centennial	36.2	46.6	47.0	41.5	40.0	23.7	45.5	42.3
Bedford	37.8	50.8	48.5	36.5	40.6	36.7+	58.7+	31.0-
D77-5813	36.3	46.1	38.0	32.5	38.2	17.9	45.4	39.6
D78-5412	43.1	54.2	44.5	38.5	36.1	19.9	47.3	38.0
D78-5520	35.3	47.4	36.7-	46.0	38.2	29.3	46.8	38.0
D78-5813	37.0	48.4	36.9-	28.0-	39.5	6.0-	33.2-	35.6-
D78-6029	29.4	50.7	42.6	38.5	39.8	16.6	39.0	43.3
D78-6299	35.2	47.4	37.6	35.5	38.4	20.5	42.3	36.6-
D79-5951	38.0	49.0	41.9	48.0	38.8	21.1	45.3	39.3
D79-6057	39.8	46.2	45.6	42.5	43.9	21.9	49.4	44.6
D79-6105	39.3	43.9	37.1-	42.0	39.0	23.5	47.9	42.1
D79-6174	31.4	49.2	32.9-	36.5	41.0	16.3	45.1	28.5-
D79-10158	37.4	49.1	44.9	32.0	40.0	16.0	43.5	32.3-
D79-10515	30.4	51.7	43.5	35.0	37.3	25.1	48.2	37.8
Ga77-8	34.4	44.6	43.9	32.5	41.1	8.1-	38.5	40.1
Ga77-607	34.2	48.0	38.9	41.0	41.3	7.1-	40.0	40.4
Ga77-653	38.2	47.1	33.1-	24.0-	40.7	16.6	37.1	40.2
Ga78-324	36.0	50.1	44.8	35.0	39.8	8.6-	45.4	42.1
Ga78-618	33.7	43.2	38.9	41.5	35.7	18.9	44.3	39.3
GaT77-171	35.2	45.3	33.3-	32.0	25.5-	21.4	45.9	35.8-
La79-923	48.2+	49.2	44.2	33.5	42.8	16.9	48.2	42.8
N73-1102	34.7	57.2	47.8	41.5	45.7+	13.7-	47.9	39.8
N79-280	36.7	52.2	44.6	34.5	43.4	13.2-	50.6	32.2-
N79-461	37.9	48.6	47.6	44.0	39.9	25.6	48.9	39.9
N79-491	44.5	55.8	44.2	39.5	41.6	35.0+	56.8+	43.9
N79-606	42.1	52.2	51.5	37.0	39.1	31.3	61.0+	42.8
N79-645	45.7+	48.2	46.7	41.0	47.0+	14.6	53.6+	37.7
N79-2272	40.0	49.4	41.2	47.0	37.1	22.1	50.6	40.8
R76-730J	37.9	50.1	47.5	36.5	41.1	9.6-	49.4	38.8
R77-238S	36.6	50.3	44.4	42.5	43.1	18.0	36.9-	43.1
R79-167S	41.7	53.6	51.8	47.0	43.0	17.4	47.6	40.4
R79-179S	39.7	52.1	47.2	42.5	38.2	20.5	35.6-	38.6
R79-248	32.5	51.1	47.9	40.0	38.4	24.4	50.0	39.2
R79-413S	32.3	54.1	49.4	34.0	39.1	23.1	45.4	43.9
R79-772	30.8	51.3	43.3	48.5	34.4-	26.1	49.2	41.8
S77-281	42.7	54.0	46.0	47.5	40.6	27.1	55.3+	46.2
L.S.D. (.05)	9.0	N.S.	9.6	10.6	5.5	9.2	7.8	5.4
C.V.	12%	8%	11%	13%	7%	23%	8%	7%

Table 39 - Oil percentages for the strains in Preliminary Group VI, 1981

Strain	Holland, VA	Plymouth, NC	Jay, FL	Stoneville, MS (B)
Centennial	17.3	17.8	19.7	18.1
Bedford	18.8	18.5	19.8	18.9
D77-5813	16.0	16.0	16.8	16.2
D78-5412	16.5	17.8	18.3	17.8
D78-5520	17.4	17.9	19.3	18.3
D78-5813	16.4	17.5	17.8	18.1
D78-6029	17.0	17.9	19.6	18.0
D78-6299	16.1	16.9	17.7	16.2
D79-5951	16.1	17.6	18.1	17.8
D79-6057	15.5	17.1	17.5	17.1
D79-6105	16.9	17.3	17.5	17.1
D79-6174	16.2	17.1	17.0	17.4
D79-10158	18.0	19.0	19.4	18.2
D79-10515	16.8	18.1	18.1	16.9
Ga77-8	17.2	17.6	18.7	16.8
Ga77-607	16.3	18.0	18.4	18.1
Ga77-653	16.6	17.4	19.1	18.0
Ga78-324	17.8	18.2	19.2	17.9
Ga78-618	16.7	18.2	19.7	19.3
GaT77-171	17.6	18.3	18.7	17.9
La79-923	18.9	19.2	20.2	18.6
N73-1102	15.9	18.2	18.2	18.6
N79-280	18.7	19.5	20.4	19.2
N79-461	18.1	19.2	19.7	18.7
N79-491	18.7	19.2	19.8	18.3
N79-606	18.2	18.9	20.4	17.9
N79-645	17.9	18.3	19.9	17.6
N79-2272	16.5	17.5	20.0	16.2
R76-730J	16.9	18.0	20.1	17.9
R77-238S	16.9	17.8	20.7	16.8
R79-167S	17.1	17.8	20.3	17.4
R79-179S	16.6	17.9	20.9	17.2
R79-248	17.0	18.2	19.8	18.0
R79-413S	16.5	19.3	20.7	17.2
R79-772	16.7	17.9	20.5	18.0
S77-281	18.0	19.1	21.0	17.4

Table 40 - Protein percentages for the strains in Preliminary Group VI, 1981

Strain	Holland, VA	Plymouth, NC	Jay, FL	Stoneville, MS (B)
Centennial	44.9	45.1	43.5	44.3
Bedford	39.3	42.6	39.3	41.4
D77-5813	50.7	50.7	49.4	50.0
D78-5412	45.0	46.9	45.1	46.1
D78-5520	44.4	44.1	40.9	43.5
D78-5813	46.6	45.5	42.1	43.1
D78-6029	46.7	45.4	44.8	44.6
D78-6299	46.2	46.1	43.0	41.2
D79-5951	45.6	45.3	42.1	42.3
D79-6057	43.4	47.1	44.2	45.2
D79-6105	43.7	46.5	42.9	45.9
D79-6174	46.0	50.2	44.5	45.6
D79-10158	42.7	43.9	40.9	42.7
D79-10515	43.2	46.7	42.9	46.8
Ga77-8	44.5	46.1	41.7	45.9
Ga77-607	44.6	45.5	42.5	41.7
Ga77-653	44.6	45.7	42.9	44.1
Ga78-324	44.4	47.4	43.4	44.0
Ga78-618	43.6	42.5	39.6	44.0
GaT77-171	41.4	42.2	39.7	41.6
La79-923	41.9	40.8	38.8	39.1
N73-1102	43.9	46.0	42.3	40.8
N79-280	43.8	46.1	42.9	42.4
N79-461	43.5	44.4	43.3	42.8
N79-491	44.2	42.8	42.0	41.8
N79-606	45.5	46.3	45.6	41.9
N79-645	46.7	45.4	46.0	42.3
N79-2272	43.4	42.6	43.1	40.8
R76-730J	45.9	44.4	43.2	40.9
R77-238S	43.6	43.8	42.5	40.7
R79-167S	42.3	45.1	42.8	41.1
R79-179S	42.4	43.9	41.7	39.5
R79-248	42.0	41.6	41.8	39.4
R79-413S	44.8	43.8	48.0	42.3
R79-772	44.2	42.8	40.7	39.3
S77-281	40.8	43.8	41.9	41.9

Table 41 - Plant height for the strains in Preliminary Group VI, 1981

Strain	Holland, VA	Ply- mouth, NC	Belle Mina, AL	Jay, FL	Keiser, AR	Jackson, TN (B)	Stone- ville, MS (A)	Stone- ville, MS (B)
Centennial	40	38	42	28	37	40	43	36
Bedford	45	36	35	32	36	36	47	31
D77-5813	44	37	40	26	38	40	42	36
D78-5412	40	42	48	33	40	36	50	39
D78-5520	39	37	42	34	43	36	46	36
D78-5813	39	42	36	28	40	40	47	35
D78-6029	42	36	36	29	41	36	42	33
D78-6299	40	42	42	31	43	34	45	37
D79-5951	50	39	44	32	44	38	42	39
D79-6057	43	35	47	34	39	38	41	35
D79-6105	40	38	43	33	40	36	46	38
D79-6174	39	38	36	32	38	30	47	32
D79-10158	38	36	36	28	39	36	42	27
D79-10515	45	47	41	32	46	42	48	39
Ga77-8	37	39	38	28	40	40	46	34
Ga77-607	42	39	44	34	41	34	45	40
Ga77-653	47	41	43	34	48	40	49	39
Ga78-324	49	38	44	34	44	42	50	38
Ga78-618	37	32	28	26	34	28	40	27
GaT77-171	39	32	36	28	34	28	41	29
La79-923	43	40	45	35	38	38	44	35
N73-1102	44	36	42	30	42	32	43	33
N79-280	33	32	32	24	34	34	39	27
N79-461	38	35	34	30	34	36	41	32
N79-491	35	29	31	24	31	32	36	27
N79-606	38	35	30	24	36	40	40	28
N79-645	41	34	34	26	36	38	44	30
N79-2272	45	49	44	32	39	36	43	38
R76-730J	35	32	30	25	37	34	41	29
R77-238S	41	37	40	28	41	44	46	35
R79-167S	38	40	40	29	40	40	43	31
R79-179S	41	40	36	28	44	38	48	35
R79-248	45	42	41	32	42	46	51	37
R79-413S	44	37	42	30	39	40	41	37
R79-772	44	40	42	34	43	44	47	36
S77-281	32	35	34	30	34	34	40	32

Table 42 - Seed quality scores for the strains in Preliminary Group VI, 1981

Strain	Holland, VA	Plymouth, NC	Jay, FL	Keiser, AR	Jackson, TN(B)	Stone- ville, MS (A)	Stone- ville, MS (B)
Centennial	1.0	1.5	2.0	1.0	3.0	2.0	2.0
Bedford	1.5	1.5	2.0	1.0	1.0	2.0	2.0
D77-5813	1.5	1.5	2.0	1.5	2.0	2.0	2.0
D78-5412	1.5	1.5	2.0	2.0	2.0	2.0	2.0
D78-5520	1.0	1.5	2.0	1.5	1.0	2.0	2.0
D78-5813	1.0	1.5	2.0	1.0	2.0	2.0	2.0
D78-6029	1.0	1.5	2.0	1.0	1.0	2.0	2.0
D78-6299	1.0	1.5	3.0	1.5	1.0	2.0	2.0
D79-5951	1.5	1.5	2.0	1.0	3.0	2.0	2.0
D79-6057	1.0	1.5	2.0	2.0	2.0	2.0	2.0
D79-6105	1.0	1.5	3.0	1.0	1.0	2.0	2.0
D79-6174	1.0	1.5	3.0	1.0	4.0	2.0	2.0
D79-10158	1.0	1.5	2.0	1.5	3.0	2.0	2.0
D79-10515	1.0	1.5	2.0	1.5	1.0	2.0	2.0
Ga77-8	1.0	1.5	2.0	1.0	4.0	2.0	2.0
Ga77-607	1.5	1.5	2.0	1.0	4.0	2.0	2.0
Ga77-653	1.0	1.5	2.0	1.5	4.0	2.0	2.0
Ga78-324	1.5	1.5	2.0	2.0	4.0	2.0	2.0
Ga78-618	1.0	1.5	2.0	1.5	2.0	2.0	2.0
GaT77-171	1.0	1.5	2.0	1.0	2.0	2.0	2.0
La79-923	1.5	1.5	2.0	2.0	3.0	2.0	2.0
N73-1102	1.5	1.5	4.0	1.5	4.0	2.0	2.0
N79-280	1.0	1.5	2.0	2.0	3.0	2.0	2.0
N79-461	1.0	1.5	3.0	1.5	2.0	2.0	2.0
N79-491	1.0	1.5	2.0	1.5	1.0	2.0	2.0
N79-606	1.5	1.5	3.0	1.5	1.0	2.0	2.0
N79-645	1.0	1.5	2.0	1.5	5.0	2.0	2.0
N79-2272	1.0	1.5	2.0	1.5	1.0	2.0	2.0
R76-730J	1.0	1.5	3.0	1.5	3.0	2.0	2.0
R77-238S	1.0	1.5	2.0	1.5	3.0	2.0	2.0
R79-167S	1.0	1.5	2.0	1.0	3.0	2.0	2.0
R79-179S	1.0	1.5	2.0	1.0	2.0	2.0	2.0
R79-248	1.5	1.5	2.0	1.5	1.0	2.0	2.0
R79-413S	1.0	1.5	2.0	1.5	3.0	2.0	2.0
R79-772	1.0	1.5	3.0	2.0	2.0	2.0	2.0
S77-281	1.0	1.5	3.0	1.5	1.0	2.0	2.0

UNIFORM GROUP VII

1981

<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. F77-1576	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
7. F77-2000	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
8. N77-940	N70-1549 X Centennial	F ₅
9. D76-9454	Forrest X Centennial	F ₅
10. F77-1880	Centennial X [Forrest X (Cobb X D68-216)]	F ₅
11. F77-7016	Forrest X (Cobb X D68-216)	F ₅
12. F77-7142	Centennial X [Forrest X (Cobb X D68-216)]	F ₅

Background of breeding lines used as parents:

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

D60-7965 is a high protein selection from a cross of an 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.

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

Results of 26 Uniform Group VII nurseries are summarized in Tables 43 through 49. Table 43 gives a general summary of performance of the strains along with agronomic characteristics. Reaction of the strains to pest problems is also reported.

Differences among strains were significant (.05 level of confidence) at 16 of the locations. Differences among strains within regions were significant only in the Delta and West.

Nine of the strains were rated as being resistant to SCN race 3. Only one strain was resistant to SCN race 4. Plantings were made at Jay, Florida, to evaluate the strains for reaction to M. incognita and near Blackville, South Carolina, to rate the strains for reaction to M. arenaria. Neither location provided complete data on all strains. All strains were severely defoliated by soybean looper in the field cage planting at Stoneville.

Plantings at Hartsville, South Carolina, were rated for reaction to Cylindrocladium crotalaria. Ratings ranged between 1.0 for Braxton and 3.0 for D77-7926.

Table 43 - General summary of performance for the strains in Uniform Group VII, 1981

	No. of locations	Braxton	Wright	F76-8757	D77-6103	D77-7926	F77-1576
Seed yield - 1981							
East Coast	5	40.5	36.9	38.7	38.6	36.3	36.4
Southeast	9	33.7	33.1	35.1	33.6	34.3	36.0
Upper & Central South	3	37.0	34.4	36.9	37.2	31.2	35.8
Delta & West	9	35.9	39.3	37.3	38.1	35.6	39.5
1980-81							
East Coast		34.5	34.7	34.8	34.1	33.1	34.5
Southeast		32.0	31.9	34.2	32.2	31.8	35.0
Upper & Central South		36.8	33.8	34.5	33.2	31.5	34.8
Delta & West		37.4	41.4	39.9	40.1	37.8	42.0
1979-81							
East Coast		38.7	37.4				
Southeast		34.7	34.1				
Upper & Central South		40.2	37.6				
Delta & West		39.6	42.1				
Oil Content - 1981							
		18.9	19.1	19.2	18.7	18.5	19.6+
1980-81							
		19.1	19.4	19.5	19.2	18.9	19.8
1979-81							
		19.3	19.6				
Protein Content - 1981							
		43.1	42.9	43.1	44.7+	43.4	43.2
1980-81							
		43.4	43.3	43.5	44.6	43.8	43.5
1979-81							
		42.7	42.4				
Seed size							
		18.9	19.1	19.2	18.7	18.5	19.6+
Maturity index							
		10-23	-2	0	-3	-1	0
Height							
		39	38	39	39	35	40
Seed quality							
		1.8	1.7	1.7	1.8	1.6	1.7
SCN race 3							
		S	S	R	R	R	R
SCN race 4							
		S	S	S	R	S	S
Soybean looper							
		4	5	5	5	4	4
Flower color							
		P	P	W	P	P	W
Pubescence color							
		T	T	T	T	T	T
Pod wall color							
		T	T	T	T	T	T

Table 43 - (continued)

	F77-2000	N77-940	D76-9454	F77-1880	F77-7016	F77-7142
Seed yield - 1981						
East Coast	36.3	40.8	40.8	39.3	38.6	42.9
Southeast	34.5	33.0	34.0	35.8	33.2	35.5
Upper & Central South	33.6	35.9	36.2	32.2	27.7	36.7
Delta & West	33.4	39.1	39.6+	40.3+	38.3	37.5
1980-81						
East Coast	34.9	35.5				
Southeast	34.1	31.8				
Upper & Central South	34.5	35.1				
Delta & West	37.0	39.9				
1979-81						
East Coast						
Southeast						
Upper & Central South						
Delta & West						
Oil Content - 1981	19.2	19.0	19.4+	18.6	19.8+	19.1
1980-81	19.6	19.4				
1979-81						
Protein Content - 1981	41.9-	43.6	42.6	44.3+	41.8-	43.1
1980-81	42.3	43.6				
1979-81						
Seed size	19.2	19.0	19.4+	18.6	19.8+	19.1
Maturity index	+1	-5	-2	+1	-4	0
Height	38	33	37	37	40	43
Seed quality	1.7	1.7	1.9	1.8	1.8	1.9
SCN race 3	R	S	R	R	R	R
SCN race 4	S	S	S	S	S	S
Soybean looper	5	5	4	5	4	4
Flower color	W	W	W	P	W	W
Pubescence color	G	T	T	T	T	G
Pod wall color	T	T	T	T	T	T

Table 44 - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1981

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	F77-1576	F77-2000
<u>EAST COAST</u>							
Plymouth, NC	46.7	39.3	41.7	48.1	40.8	41.1	41.8
Kinston, NC	39.8	31.1	31.8	33.3	31.3	29.7	29.3
Clinton, NC	33.7	36.4	42.3+	34.7	35.1	34.0	31.0
Florence, SC	52.3	51.0	50.8	43.9	44.9	47.0	49.5
Hartsville, SC (A)	29.9	26.7	27.2	33.0	29.2	30.3	30.0
*Hartsville, SC (B)	45.1	43.7	44.4	45.1	40.5	44.3	43.0
Mean	40.5	36.9	38.8	38.6	36.3	36.4	36.3
<u>SOUTHEAST</u>							
Blackville, SC	32.1	32.4	30.9	30.8	29.4	34.6	28.8
Tallassee, AL	29.6	28.7	26.3	31.0	35.9	37.9	31.5
Tifton, GA	43.9	43.1	37.6	40.2	38.3	36.8	39.2
Gainesville, FL	34.1	37.8	36.6	34.0	28.0	38.9	33.9
Quincy, FL	31.4	36.4	43.2	35.6	43.0	39.2	39.7
Jay, FL	39.7	34.0	46.7+	46.7+	40.7	41.0	47.3+
Fairhope, AL	38.9	32.8-	31.3-	34.6	33.8-	28.5-	29.8-
Poplarville, MS	30.3	29.6	28.3	26.7	23.0	33.2	27.8
Baton Rouge, LA	23.6	23.5	35.4+	23.2	37.0+	34.2+	32.3
Mean	33.7	33.1	35.1	33.6	34.3	36.0	34.5
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	27.0	19.3	25.3	24.2	21.3	24.0	23.7
Calhoun, GA	51.4	51.7	55.1	52.4	42.2	46.6	46.9
Clemson, SC	32.4	32.2	30.2	34.9	30.1	36.9	30.3
Mean	36.9	34.4	36.9	37.2	31.2	35.8	33.6
<u>DELTA AND WEST</u>							
Stoneville, MS (A)	40.8	42.0	46.5+	42.7	38.4	40.7	25.9-
Stoneville, MS (B)	41.7	39.4	37.9	39.5	36.2	41.3	39.6
Pine Bluff, AR	29.4	33.6	36.9	33.2	38.5	37.7	36.2
Stuttgart, AR	42.5	43.2	40.4	43.1	39.2	42.7	39.7
Rohwer, AR	18.4	28.0+	22.8	20.9	20.1	21.8	21.7
St. Joseph, LA	46.2	49.4	48.9	59.3+	43.5	51.0	37.1-
*Bossier City, LA	21.8	21.5	20.8	20.6	16.5	11.6	23.3
Crowley, LA	35.7	38.8	36.6	37.3	33.6	43.4	33.2
Beaumont, TX	32.6	37.5	35.1	32.3	34.2	34.3	32.7
Uvalde, TX	36.0	41.5	30.5	35.0	36.5	42.2	34.6
Mean	35.9	39.3	37.3	38.1	35.6	39.5	33.4

*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	N77-940	D76-9454	F77-1880	F77-7016	F77-7142	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Plymouth, NC	48.4	44.3	39.0	46.3	41.3	N.S.	9
Kinston, NC	36.8	38.7	36.8	36.1	40.3	4.1	7
Clinton, NC	41.3	39.3	38.4	25.6-	42.9	7.9	13
Florence, SC	46.7	51.3	49.0	49.0	57.7	N.S.	9
Hartsville, SC (A)	30.7	30.5	33.2	36.2	32.4	N.S.	11
Hartsville, SC (B)	45.2	45.5	44.7	47.1	49.2	6.0	6
Mean	40.8	40.8	39.3	38.6	42.9		
<u>SOUTHEAST</u>							
Blackville, SC	29.6	35.8	33.5	25.6	30.5	N.S.	14
Tallassee, AL	21.9	20.9	33.2	23.9	27.3	N.S.	23
Tifton, GA	41.1	46.5	40.7	44.0	42.9	N.S.	9
Gainesville, FL	27.1-	31.3	38.0	34.3	37.6	6.1	10
Quincy, FL	43.4	36.4	31.4	36.8	38.3	N.S.	13
Jay, FL	40.0	42.3	52.3+	46.0+	45.6	6.0	8
Fairhope, AL	37.4	34.8	32.3-	33.3-	36.9	4.4	8
Poplarville, MS	32.8	30.7	28.7	26.6	32.1	N.S.	15
Baton Rouge, LA	23.2	27.1	32.0	28.0	28.2	9.1	18
Mean	32.9	34.0	35.8	33.2	35.5		
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	25.1	21.5	22.6	20.0	23.4	6.1	15
Calhoun, GA	46.7	50.8	42.1	26.2-	51.9	10.1	13
Clemson, SC	35.8	36.3	32.0	36.9	34.4	N.S.	10
Mean	35.9	36.2	32.2	27.7	36.6		
<u>DELTA AND WEST</u>							
Stoneville, MS (A)	42.4	43.5	41.0	31.7-	42.1	5.2	8
Stoneville, MS (B)	38.1	41.7	41.7	37.7	35.4	N.S.	9
Pine Bluff, AR	33.8	45.0+	43.3+	48.3+	41.7+	9.3	14
Stuttgart, AR	40.4	42.8	46.4+	47.4+	41.9	3.4	5
Rohwer, AR	27.8+	22.9	23.6	18.8	16.3	6.3	17
St. Joseph, LA	45.1	51.5+	49.5	51.8+	51.5+	4.8	6
Bossier City, LA	21.3	26.7	21.8	20.8	25.8	N.S.	32
Crowley, LA	44.5	45.3	39.3	41.4	36.3	N.S.	13
Beaumont, TX	38.4	34.7	40.4	36.9	34.5	5.9	10
Uvalde, TX	41.8	29.0	37.7	30.7	37.7	7.5	12
Mean	39.1	39.6	40.3	38.3	37.5		

Table 45 - Chemical composition and seed size for the strains in Uniform Group VII, 1981

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	F77-1576
<u>OIL PERCENTAGE</u>						
Clinton, NC	17.1	17.3	17.6	17.5	16.8	18.5
Blackville, SC	18.9	19.1	19.4	18.5	19.2	19.3
Athens, GA	18.5	18.8	18.6	19.2	16.8	18.6
Tifton, GA	19.5	20.0	20.2	19.8	19.7	20.3
Gainesville, FL	18.1	19.1	19.1	18.7	19.0	19.4
Jay, FL	19.3	19.6	19.5	20.0	18.8	20.4
Baton Rouge, LA	20.8	19.8	19.8	18.7	19.8	20.3
Stoneville, MS (B)	18.8	17.9	18.3	17.8	17.6	19.0
Stuttgart, AR	18.7	19.0	18.9	17.8	17.8	19.3
Beaumont, TX	19.7	20.8	20.4	19.4	19.2	20.5
Mean	18.9	19.1	19.2	18.7	18.5	19.6+
<u>PROTEIN PERCENTAGE</u>						
Clinton, NC	44.0	42.9	44.0	43.8	45.1	42.1
Blackville, SC	42.1	40.3	41.9	42.6	42.1	41.9
Athens, GA	40.7	45.7	40.5	42.7	45.8	42.3
Tifton, GA	44.2	44.4	42.9	46.4	41.2	42.3
Gainesville, FL	44.4	43.3	43.7	45.0	42.9	43.6
Jay, FL	44.1	43.8	42.9	45.1	43.9	43.9
Baton Rouge, LA	42.5	43.2	45.1	45.4	43.7	44.4
Stoneville, MS (B)	42.5	39.5	43.6	45.2	44.4	43.9
Stuttgart, AR	43.6	43.2	43.8	44.1	43.9	42.7
Beaumont, TX	43.1	42.9	42.8	46.7	41.4	45.2
Mean	43.1	42.9	43.1	44.7+	43.4	43.2
<u>GRAMS PER 100 SEEDS</u>						
Clinton, NC	19.5	16.1	13.7	15.0	12.4	12.8
Blackville, SC	18.3	15.4	14.6	14.3	14.1	11.7
Athens, GA	16.1	15.4	13.1	13.6	11.4	12.5
Tifton, GA	17.3	14.7	13.4	15.3	11.9	12.6
Gainesville, FL	16.3	12.7	13.8	14.6	10.3	11.5
Jay, FL	18.0	14.0	16.0	14.0	12.0	11.0
Baton Rouge, LA	13.0	11.2	12.2	12.5	11.0	11.6
Stoneville, MS (B)	12.0	12.8	12.4	12.8	10.6	10.6
Stuttgart, AR	16.3	15.7	13.3	13.0	12.7	12.0
Beaumont, TX	15.3	13.5	12.5	14.0	11.4	12.2
Mean	16.2	14.2-	13.5-	13.9-	11.8-	11.9-

Table 45 - (continued)

Location	F77-2000	N77-940	D76-9454	F77-1880	F77-7016	F77-7142	L.S.D. (.05)
<u>OIL PERCENTAGE</u>							
Clinton, NC	17.9	17.8	17.2	17.1	19.0	17.7	
Blackville, SC	19.2	18.7	19.7	18.9	19.7	18.5	
Athens, GA	19.1	18.8	18.5	18.3	18.4	19.7	
Tifton, GA	19.6	20.1	21.1	19.8	20.7	18.9	
Gainesville, FL	17.7	18.9	18.8	18.2	19.3	18.8	
Jay, FL	20.2	20.0	19.6	19.2	19.7	20.2	
Baton Rouge, LA	20.7	19.3	20.2	19.0	21.0	19.6	
Stoneville, MS (B)	18.5	18.1	19.0	17.7	19.9	18.8	
Stuttgart, AR	19.1	18.4	19.7	17.8	19.6	19.0	
Beaumont, TX	19.7	20.0	19.7	20.2	21.1	20.1	
Mean	19.2	19.0	19.4+	18.6	19.8+	19.1	0.4
<u>PROTEIN PERCENTAGE</u>							
Clinton, NC	41.8	41.8	42.3	43.8	40.9	42.0	
Blackville, SC	40.3	41.3	40.6	41.1	40.7	42.0	
Athens, GA	43.7	44.3	39.9	43.1	41.2	44.0	
Tifton, GA	41.1	43.5	42.4	45.3	42.4	45.1	
Gainesville, FL	41.7	44.9	44.2	45.4	43.3	43.0	
Jay, FL	42.7	44.4	43.0	44.8	43.1	42.4	
Baton Rouge, LA	42.9	47.0	44.0	44.3	43.1	43.8	
Stoneville, MS (B)	41.1	41.9	42.4	45.2	40.5	41.5	
Stuttgart, AR	41.0	43.4	43.4	43.7	40.4	41.8	
Beaumont, TX	42.2	43.8	44.2	46.5	42.0	45.0	
Mean	41.9-	43.6	42.6	44.3+	41.8-	43.1	1.0
<u>GRAMS PER 100 SEEDS</u>							
Clinton, NC	12.6	15.6	16.4	14.5	14.7	15.3	
Blackville, SC	12.3	13.1	14.6	14.7	12.2	14.4	
Athens, GA	12.1	12.4	14.3	13.9	12.4	15.1	
Tifton, GA	11.3	14.4	16.5	13.7	14.0	14.4	
Gainesville, FL	11.1	11.3	15.1	12.6	11.7	12.8	
Jay, FL	12.0	15.0	15.0	16.0	12.0	15.0	
Baton Rouge, LA	11.2	11.5	13.5	12.8	12.7	12.0	
Stoneville, MS (B)	9.8	11.4	12.8	11.6	10.8	12.8	
Stuttgart, AR	11.7	12.7	14.3	16.0	11.7	14.0	
Beaumont, TX	11.6	11.8	14.2	14.5	12.3	13.7	
Mean	11.6-	12.9-	14.7-	14.0-	12.5-	14.0-	

Table 46 - Relative maturity data, days earlier (-) or later (+) than Braxton, for the strains in Uniform Group VII, 1981

Location	Date planted	Braxton matured	Wright	F76-8757	D77-6103	D77-7926	F77-1576
<u>EAST COAST</u>							
Plymouth, NC	5-12	11-2	-3	-3	-5	0	0
Kinston, NC	5-18	10-29	0	0	0	0	0
Florence, SC	5-20	10-27	+1	+1	-7	-7	+1
Hartsville, SC (A)	6-2	10-19	-3	+2	-4	+1	+1
Hartsville, SC (B)	6-17	10-22	+1	+4	0	+3	+4
Mean		10-26	-1	+1	-3	-1	+1
<u>SOUTHEAST</u>							
Blackville, SC	5-18	10-17	-1	+1	0	0	0
Tallassee, AL	5-14	10-8	-2	0	-7	+1	+3
Tifton, GA	5-11	10-9	0	0	0	0	0
Gainesville, FL	6-8	10-20	-7	-2	-6	-5	-2
Quincy, FL	6-16	10-17	-4	0	-2	0	0
Jay, FL	6-5	10-17	+1	+2	-2	-3	0
Fairhope, AL	6-5	10-9	-2	-5	-4	-1	-1
Mean		10-15	-2	-1	-3	0	0
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	5-29	10-15	+2	+5	+1	+6	+5
Calhoun, GA	5-21	10-20	-2	-1	-1	-1	-1
Clemson, SC	5-15	10-30	-2	+1	0	-2	-1
Mean		10-22	-1	+2	0	+1	+1
<u>DELTA AND WEST</u>							
Stoneville, MS (A)	5-15	10-25	0	-1	-2	-2	0
Stoneville, MS (B)	6-4	10-25	-2	-2	-2	-2	-2
Pine Bluff, AR	6-18	11-4	-1	-1	-3	+1	+1
Stuttgart, AR	5-23	10-14	+1	0	0	+1	+3
Rohwer, AR	6-16	11-1	-3	0	0	0	+1
St. Joseph, LA	5-12	10-17	-1	0	-6	0	0
Bossier City, LA	6-2	10-25	+1	0	-1	0	-2
Crowley, LA	5-20	11-11	-15	-7	-13	-13	-13
Beaumont, TX	5-29	10-23	-6	0	0	+1	+2
Uvalde, TX	6-10	11-9	0	-1	-3	0	-2
Mean		10-28	-3	-1	-3	-1	-1

Table 46 - (continued)

Location	F77-2000	N77-940	D76-9454	F77-1880	F77-7016	F77-7142
<u>EAST COAST</u>						
Plymouth, NC	0	-5	-5	-5	0	0
Kinston, NC	0	0	0	0	-9	0
Florence, SC	+2	-10	-3	+1	-3	+2
Hartsville, SC (A)	+2	-7	0	+2	-4	+2
Hartsville, SC (B)	+6	-2	+2	+6	+2	+6
Mean	+2	-4	-1	+1	-2	+2
<u>SOUTHEAST</u>						
Blackville, SC	+5	0	-1	+10	0	+3
Tallassee, AL	+4	-11	-9	+2	-14	+2
Tifton, GA	+2	0	+1	0	+1	0
Gainesville, FL	-1	-11	-2	-3	-8	-4
Quincy, FL	+2	-5	+2	+2	-9	-2
Jay, FL	+1	-3	-2	+4	-1	+1
Fairhope, AL	0	-6	-3	-1	-3	0
Mean	+2	-4	-2	+2	-4	0
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	+6	0	+1	+5	+4	+2
Calhoun, GA	0	-3	-1	0	0	0
Clemson, SC	-1	-11	-1	+1	-3	+1
Mean	+2	-5	0	+2	0	+1
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	0	-2	-2	0	-8	+1
Stoneville, MS (B)	-2	-2	-4	+1	-2	-1
Pine Bluff, AR	+3	-6	0	+2	-2	+1
Stuttgart, AR	+3	0	0	+3	0	0
Rohwer, AR	+2	-2	+1	0	-2	0
St. Joseph, LA	-5	-15	-5	-2	-10	-3
Bossier City, LA	+2	+1	-2	-2	+1	0
Crowley, LA	-7	-24	-15	0	-16	-13
Beaumont, TX	+3	-7	-5	+4	-8	-4
Uvalde, TX	+2	-1	-3	-2	-3	-1
Mean	0	-6	-4	0	-5	-2

Table 47 - Plant height for the strains in Uniform Group VII, 1981

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	F77-1576
<u>EAST COAST</u>						
Plymouth, NC	43	36	41	45	35	37
Kinston, NC	49	49	47	47	40	49
Clinton, NC	40	38	38	46	45	46
Florence, SC	40	36	40	36	34	39
Hartsville, SC (A)	45	44	46	43	39	45
Hartsville, SC (B)	38	38	40	40	37	38
Mean	43	40	42	43	38	42
<u>SOUTHEAST</u>						
Blackville, SC	47	43	43	41	45	47
Tallassee, AL	30	31	31	32	27	37
Tifton, GA	34	33	32	35	33	38
Gainesville, FL	30	32	34	36	29	37
Quincy, FL	33	38	38	38	31	40
Jay, FL	37	35	34	33	37	39
Fairhope, AL	43	41	46	38	42	52
Poplarville, MS	29	29	30	33	25	34
Baton Rouge, LA	39	37	39	40	42	35
Mean	36	35	36	36	35	40
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	33	32	33	37	27	33
Calhoun, GA	47	44	46	40	40	46
Clemson, SC	39	39	38	37	31	39
Mean	40	38	39	38	33	39
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	48	46	47	45	45	49
Stoneville, MS (B)	37	35	34	36	27	41
Pine Bluff, AR	47	41	48	47	43	46
Stuttgart, AR	42	43	42	40	40	44
Rohwer, AR	32	34	33	34	32	34
St. Joseph, LA	45	46	46	45	40	51
Bossier City, LA	33	31	33	31	26	32
Crowley, LA	29	33	35	35	33	36
Beaumont, TX	35	32	34	31	33	36
Uvalde, TX	29	27	23	21	25	29
Mean	38	37	38	37	34	40

Table 47 - (continued)

Location	F77-2000	N77-940	D76-9454	F77-1880	F77-7016	F77-7142
<u>EAST COAST</u>						
Plymouth, NC	40	35	39	40	39	42
Kinston, NC	49	41	47	47	51	53
Clinton, NC	44	37	43	38	41	54
Florence, SC	36	35	37	39	42	40
Hartsville, SC (A)	45	40	42	41	45	49
Hartsville, SC (B)	41	36	38	39	38	38
Mean	43	37	41	41	43	46
<u>SOUTHEAST</u>						
Blackville, SC	48	38	43	43	47	53
Tallassee, AL	31	23	29	31	35	35
Tifton, GA	35	30	34	33	36	42
Gainesville, FL	33	27	30	33	33	35
Quincy, FL	35	26	33	29	41	36
Jay, FL	38	26	32	32	36	36
Fairhope, AL	44	32	36	42	42	48
Poplarville, MS	29	27	29	27	34	37
Baton Rouge, LA	43	37	44	36	39	39
Mean	37	30	34	34	38	40
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	29	31	33	31	36	38
Calhoun, GA	42	38	46	44	44	44
Clemson, SC	37	32	36	36	43	43
Mean	36	34	38	37	41	42
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	48	42	45	45	46	50
Stoneville, MS (B)	34	29	36	36	34	39
Pine Bluff, AR	43	39	44	42	50	46
Stuttgart, AR	41	33	39	41	44	51
Rohwer, AR	32	30	31	33	36	37
St. Joseph, LA	47	38	45	43	51	53
Bossier City, LA	32	27	34	31	30	39
Crowley, LA	34	29	30	31	33	35
Beaumont, TX	35	26	28	30	33	37
Uvalde, TX	26	21	19	23	20	33
Mean	37	31	35	36	38	42

Table 48 - Lodging scores for the strains in Uniform Group VII, 1981

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	F77-1576
<u>EAST COAST</u>						
Plymouth, NC	3.3	4.7	4.3	4.3	3.0	4.7
Kinston, NC	2.0	3.7	2.3	2.0	1.0	3.0
Clinton, NC	4.0	4.0	3.0	4.0	2.0	5.0
Florence, SC	3.0	3.0	3.0	3.0	2.0	2.0
Hartsville, SC (A)	2.3	2.3	2.3	2.8	1.0	3.2
Hartsville, SC (B)	2.8	3.3	3.3	3.0	2.8	3.3
<u>SOUTHEAST</u>						
Blackville, SC	2.0	3.0	2.0	2.0	1.0	3.0
Tallassee, AL	1.0	1.0	1.0	1.0	1.0	1.2
Tifton, GA	1.0	1.0	1.0	1.5	1.0	1.0
Gainesville, FL	1.0	1.0	1.0	1.3	1.0	1.3
Quincy, FL	1.0	2.0	1.0	1.0	1.0	2.0
Jay, FL	1.0	1.0	1.0	1.0	1.0	2.0
Baton Rouge, LA	1.0	3.3	2.5	2.8	1.3	3.2
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.2	1.3	1.5	1.8	1.2	1.7
Calhoun, GA	1.8	3.2	1.8	2.0	1.5	2.3
Clemson, SC	1.0	2.7	1.0	1.3	1.0	2.7
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	2.7	4.0	3.0	3.0	2.0	4.3
Stoneville, MS (B)	2.3	2.0	2.0	2.3	2.0	2.0
Pine Bluff, AR	1.0	3.0	4.0	3.0	2.0	3.0
Stuttgart, AR	1.7	3.3	1.8	1.7	1.8	2.8
Rohwer, AR	1.3	4.3	1.7	4.3	1.0	4.0
St. Joseph, LA	2.0	2.8	2.2	2.3	1.6	2.6
Bossier City, LA	1.6	3.0	1.6	3.6	1.0	2.6
Crowley, LA	1.0	1.7	1.0	1.0	1.0	1.3
Beaumont, TX	1.7	1.8	1.9	1.7	1.6	2.1
Uvalde, TX	1.8	2.2	1.5	1.5	1.2	1.7

Table 48 - (continued)

Location	F77-2000	N77-940	D76-9454	F77-1880	F77-7016	F77-7142
<u>EAST COAST</u>						
Plymouth, NC	3.7	4.0	3.7	5.0	4.7	4.3
Kinston, NC	3.7	2.3	1.7	3.3	3.7	3.3
Clinton, NC	3.0	2.0	3.0	4.0	5.0	4.0
Florence, SC	3.0	3.0	2.0	3.0	3.0	3.0
Hartsville, SC (A)	2.3	1.2	1.8	2.5	3.2	2.7
Hartsville, SC (B)	2.8	2.0	2.0	3.3	2.8	3.3
<u>SOUTHEAST</u>						
Blackville, SC	3.0	2.0	2.0	2.0	4.0	3.0
Tallassee, AL	1.3	1.0	1.0	1.0	1.0	1.0
Tifton, GA	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, FL	1.6	1.0	1.0	1.0	1.0	1.0
Quincy, FL	2.0	1.0	1.0	1.0	2.0	1.0
Jay, FL	2.0	1.0	1.0	2.0	1.0	2.0
Baton Rouge, LA	2.2	2.8	2.2	3.0	3.0	2.3
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.2	1.5	1.2	1.5	1.5	1.5
Calhoun, GA	2.5	2.7	1.3	3.0	1.8	1.7
Clemson, SC	1.7	1.0	1.0	2.0	4.0	3.0
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	4.0	3.0	2.7	3.7	5.0	3.3
Stoneville, MS (B)	2.0	2.0	2.0	3.0	2.0	3.0
Pine Bluff, AR	3.0	3.0	2.0	3.0	4.0	3.0
Stuttgart, AR	2.7	1.5	1.7	2.8	2.7	2.7
Rohwer, AR	1.3	3.0	2.0	3.3	4.0	3.0
St. Joseph, LA	2.3	1.0	1.7	2.7	3.3	2.6
Bossier City, LA	1.3	1.0	2.3	2.6	3.0	2.3
Crowley, LA	1.0	1.0	1.0	1.0	2.3	2.0
Beaumont, TX	2.1	1.2	1.6	1.9	2.2	1.9
Uvalde, TX	2.0	1.2	1.2	1.5	1.2	1.8

Table 49 - Seed quality scores for the strains in Uniform Group VII, 1981

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	F77-1576
<u>EAST COAST</u>						
Plymouth, 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>						
Blackville, SC	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	2.0	1.5	2.0	2.0	1.5	1.5
Gainesville, FL	2.0	1.0	1.0	1.3	1.0	1.0
Quincy, FL	2.0	1.0	2.0	2.0	2.0	1.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	2.0	1.0	1.0	1.8	1.0	1.0
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.5	1.7	1.5	1.5	1.5	1.5
Calhoun, GA	2.2	2.2	2.2	2.0	1.8	2.2
<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	2.2	2.0	2.0	2.7	1.7	2.0
Rohwer, AR	2.5	2.3	1.8	2.8	1.8	2.2
St. Joseph, LA	2.0	2.0	2.0	2.0	1.9	2.3
Bossier City, LA	1.3	1.3	1.3	1.0	2.3	2.0
Crowley, LA	3.3	2.5	2.7	2.7	2.8	3.7
Beaumont, TX	2.3	2.2	1.8	2.3	2.0	2.3

Table 49 - (continued)

Location	F77-2000	N77-940	D76-9454	F77-1880	F77-7016	F77-7142
<u>EAST COAST</u>						
Plymouth, 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>						
Blackville, SC	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	1.5	1.5	2.0	2.0	2.0	1.5
Gainesville, FL	1.0	1.0	2.3	1.0	1.0	1.3
Quincy, FL	1.0	1.0	2.0	2.0	1.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	1.3	1.2	2.0	1.2	1.5	2.3
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.8	1.5	1.7	1.5	2.0	2.5
Calhoun, GA	2.3	2.3	2.0	2.5	2.3	1.8
<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	1.7	2.0	2.2	2.2	2.5	3.0
Rohwer, AR	2.0	2.5	3.0	2.2	3.7	3.2
St. Joseph, LA	2.0	2.1	1.9	1.8	2.2	2.0
Bossier City, LA	1.6	1.0	1.3	2.0	1.0	1.6
Crowley, LA	3.0	2.3	3.0	3.0	2.8	2.0
Beaumont, TX	2.2	2.0	2.7	2.0	2.5	2.3

PRELIMINARY GROUP VII

1981

Nine Preliminary Group VII nurseries, including 34 experimental strains along with Braxton and Centennial, were grown. The parentage for each of the strains is reported in Table 50. Performance data are summarized in Tables 51-56. The mean seed yield for Braxton for the nine locations was 35.7 bushels per acre, while Centennial, included as a maturity check, had a mean yield of 38.5 bushels.

Differences among strains for seed yield were significant (.05 level of confidence) at 6 locations. The combined analysis of variance for seed yield also showed differences in seed yield among strains to be significant. However, there were no strains having a mean seed yield significantly greater than that for Braxton. There were 9 strains with seed yields significantly lower than that for Braxton.

Complete information was not obtained for either reaction to M. incognita or M. arenaria. Ten strains were rated as being resistant to SCN race 3. Nine strains had a low level of feeding by soybean looper in the field cage planting at Stoneville. However, the mean seed yield for each of these strains was significantly below that for Centennial.

In the planting at Tallassee, Alabama, Braxton had a mean seed yield of 32.2 bushels per acre and Centennial a mean yield of 33.6 bushels. There were 17 strains which had mean seed yields of 22 bushels per acre or less, with one strain having a seed yield of 10.6 bushels per acre. The low seed yield for these strains is believed to be the result of susceptibility to stem canker. Hutton in Uniform Group VIII had a mean seed yield of 16.5 bushels per acre and was rated mature approximately one month earlier than its normal date of maturity. Hutton is considered to be very susceptible to stem canker.

Two strains, N79-856 and N79-872, were rated as being of Group VI maturity.

Table 50 - Parentage of strains in Preliminary Group VII, 1981

Variety or strain	Parentage	Generation composited
1. Braxton		
2. Centennial		
3. D78-4288	D73-10243 X sel [Pickett 71(2) X PI 171451]	
4. D78-4382	D73-10243 X sel [Pickett 71(2) X PI 227687]	
5. D78-4471	D73-10243 X sel [Pickett 71(2) X PI 227687]	
6. D79-10335	Forrest X D75-10179	F ₅
7. D79-10426	J74-39 X D75-10169	F ₅
8. D79-10458	J74-39 X D75-10169	F ₅
9. D79-10540	J74-39 X D75-10169	F ₅
10. D79-10556	J74-39 X D75-10169	F ₅
11. F77-2020	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
12. F77-2039	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
13. F77-2122	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
14. F77-6790	Forrest X (Cobb X D68-216)	F ₅
15. F78-6808	Bragg X (Cobb X D69-6344)	F ₅
16. F79-3998	Centennial X D71-9112	F ₅
17. F79-4092	Centennial X D71-9112	F ₅
18. F79-4117	Centennial X D71-9112	F ₅
19. F79-4252	Centennial X D71-9112	F ₅
20. Ga78-625	Forrest X Pickett 71	F ₄
21. Ga78-2485	Hutton X Ga70-276	F ₄
22. Ga78-2517	Hutton X Ga70-276	F ₄
23. Ga78-2708	Forrest X Pickett 71	F ₄
24. Ga78-2710	Forrest X Pickett 71	F ₄
25. GaT79-151	N68-351 X Forrest	
26. GaT79-168	(Hutton X Davis) X (R67-141 X Forrest)	
27. GaT79-177	N68-358 X Forrest	
28. La79-4656	Bragg X Pickett 71	F ₅
29. N79-782	N72-40 X N72-1014	F ₆
30. N79-856	Essex X N70-3037	F ₆
31. N79-872	Essex X N70-3037	F ₆
32. N79-930	Essex X Centennial	F ₆
33. N79-1304	N73-520-2 X Ransom	F ₅
34. N79-4047	RS _{III} Y IP C ₃	F ₅
35. N79-4097	RS _{III} Y IP C ₃	F ₅
36. N80-5023	Forrest X 6-39-4-6	F ₆

Table 51 - General summary of performance for the strains in Preliminary Group VII, 1981

Strain	Seed yield	Maturity index	Ht.	Percent		SCN race 3	Soybean looper
				Oil	Protein		
Braxton	35.7	10-20	30	18.5	43.4	S	4
Centennial	38.5	-5	27	19.0	43.7	R	5
D78-4288	31.8	-4	26	19.3+	43.5	S	2
D78-4382	32.0	-4	33	18.0	46.3+	S	1
D78-4471	31.4	-3	30	18.2	44.2	S	1
D79-10335	29.7-	+2	30	18.1	45.0+	S	2
D79-10426	31.7	+1	28	18.0	43.7	S	2
D79-10458	32.1	-5	26	18.6	44.1	S	1
D79-10540	31.3	-1	27	18.2	44.2	S	2
D79-10556	31.4	+1	31	18.1	43.4	S	2
F77-2020	34.6	-1	28	18.7	42.0	R	5
F77-2039	35.1	-1	35	18.9	42.4	R	5
F77-2122	36.5	-1	26	18.6	43.0	R	5
F77-6790	32.7	-1	31	19.4+	42.2	R	5
F78-6808	35.7	-1	29	18.9	41.3-	S	4
F79-3998	33.2	-1	35	17.8	43.6	S	5
F79-4092	35.5	-2	28	19.0	42.5	R	4
F79-4117	35.2	-2	25	18.7	42.1	S	4
F79-4252	29.0-	-2	33	18.1	43.4	S	4
Ga78-625	34.4	-3	25	18.7	43.9	R	4
Ga78-2485	35.0	0	27	19.0	43.7	S	4
Ga78-2517	33.4	-1	26	18.1	44.2	S	4
Ga78-2708	38.2	-4	25	19.1	41.8-	R	4
Ga78-2710	35.5	-4	25	19.8+	40.1-	R	4
GaT79-151	32.0	-5	22	19.3+	42.0	S	4
GaT79-168	35.7	-2	28	18.9	43.3	S	4
GaT79-177	33.3	-4	23	18.6	44.0	S	4
La79-4656	37.2	-3	25	18.8	43.1	R	5
N79-782	29.4-	-6	29	18.8	44.4	S	4
N79-856	37.1	-8	20	19.0	45.5+	S	5
N79-872	26.8-	-9	14	18.8	43.6	S	4
N79-930	34.8	-7	22	19.3+	45.6+	S	4
N79-1304	36.3	-5	24	19.9+	43.5	S	4
N79-4047	29.1-	-6	28.	18.6	44.1	S	5
N79-4097	29.5-	-5	27	18.2	46.0+	S	5
N80-5023	29.0-	-5	27	18.5	43.0	R	1
L.S.D. (.05)	4.6			0.7	1.4		
L.S.D. (.01)	6.1			1.0	1.9		

Table 52 - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1981

Strain	Clinton, NC	Black- ville, SC	Tifton, GA	Tallas- see, AL	Jay, FL	Baton Rouge, LA	Stone- ville, MS (A)	Stone- ville, MS (B)	Beau- mont, TX
Braxton	38.7	34.6	42.3	32.2	35.0	25.4	40.5	39.0	33.2
Centennial	38.7	35.9	38.9	33.6	40.5	45.4+	48.1	37.7	28.3
D78-4288	43.3	28.9	28.2-	18.4-	27.5	36.4+	34.2	38.4	31.3
D78-4382	34.1	26.1	38.3	30.9	36.0	38.1+	23.5-	35.7	25.4
D78-4471	35.9	24.6	38.3	26.3	34.5	34.9	28.3-	34.3	25.6
D79-10335	37.5	21.7	29.5-	25.9	39.5	22.1	35.8	30.9	24.1
D79-10426	28.7	22.9	35.5	23.3-	32.0	35.1	44.0	37.9	26.2
D79-10458	38.4	20.8	29.1-	30.8	29.0	30.0	40.3	39.9	30.4
D79-10540	37.6	26.8	33.4	21.8-	27.0	31.0	37.6	37.9	29.1
D79-10556	35.1	22.0	26.5-	29.5	36.0	29.6	41.4	35.2	27.8
F77-2020	31.4	33.8	28.9-	21.0-	46.0+	47.2+	29.7-	40.9	33.1
F77-2039	39.0	25.1	34.8	24.5	42.5	34.4	39.0	38.3	38.3
F77-2122	35.5	28.8	33.6	27.7	50.0+	44.1+	33.2	40.9	34.8
F77-6790	37.4	24.9	31.4	17.7-	42.0	35.9+	35.9	36.7	32.5
F78-6808	39.5	35.1	31.5	29.3	37.0	38.3+	42.7	41.2	27.3
F79-3998	33.7	24.7	37.3	26.8	34.0	35.5	37.8	37.0	32.3
F79-4092	43.0	29.8	39.4	33.1	40.0	39.4+	36.6	33.7	24.6
F79-4117	34.0	35.6	28.6-	26.5	35.5	44.9+	45.6	35.3	30.7
F79-4252	35.7	25.0	21.9-	23.7	29.5	30.6	37.8	31.5-	25.4
Ga78-625	35.9	30.4	34.3	23.9	40.5	37.3+	45.3	35.4	26.6
Ga78-2485	40.2	24.4	36.7	26.5	38.5	35.0	40.5	36.1	37.0
Ga78-2517	42.7	35.0	40.2	14.3-	33.0	28.0	41.0	37.2	29.5
Ga78-2708	50.0	28.6	35.9	26.1	45.0+	47.6+	40.9	39.7	30.1
Ga78-2710	41.8	25.5	33.8	21.9-	38.0	40.6+	41.7	41.5	34.6
GaT79-151	46.3	26.9	38.3	15.0-	24.0-	30.3	37.9	35.8	33.3
GaT79-168	41.3	32.3	40.7	22.2-	35.5	27.1	45.6	40.3	36.9
GaT79-177	30.2	35.2	43.1	16.1-	35.0	31.6	41.7	38.8	28.1
La79-4656	45.6	35.8	32.0	21.2-	43.0	30.8	50.6+	43.2	33.0
N79-782	31.5	21.9	34.3	24.4	26.0-	28.5	33.7	35.4	28.9
N79-856	47.6	36.2	41.2	14.8-	39.5	34.3	48.6	40.5	31.6
N79-872	38.8	24.4	24.7-	12.5-	31.5	17.2	37.2	24.7	30.6
N79-930	40.3	33.0	42.9	19.3-	39.5	29.2	41.4	38.4	30.0
N79-1304	43.4	35.8	30.5-	25.8	40.5	27.0	42.4	37.3	43.8
N79-4047	31.5	23.7	28.6-	14.9-	29.0	40.2+	29.4-	35.4	30.0
N79-4097	36.0	22.7	36.1	18.8-	34.0	29.5	28.6-	31.2-	28.6
N80-5023	35.1	22.5	31.2	10.6-	41.0	40.9+	31.3	25.9	22.3
L.S.D. (.05)	N.S.	N.S.	11.3	8.5	8.8	10.2	9.4	5.9	N.S.
C.V.	15%	21%	16%	12%	12%	15%	12%	8%	16%

Table 53 - Oil percentages for the strains in Preliminary Group VII, 1981

Strain	Clinton, NC	Blackville, SC	Jay, FL	Stoneville, MS (B)	Beaumont, TX
Braxton	18.3	18.6	19.8	16.9	19.0
Centennial	18.5	19.0	20.0	17.5	19.9
D78-4288	19.0	19.0	20.0	18.7	19.9
D78-4382	17.9	17.4	18.9	16.9	19.0
D78-4471	18.2	17.9	18.6	17.8	18.5
D79-10335	17.9	17.1	18.9	16.9	19.7
D79-10426	18.0	17.5	18.8	17.5	18.3
D79-10458	18.2	18.0	19.9	17.4	19.7
D79-10540	17.9	18.1	18.0	17.3	19.6
D79-10556	18.4	17.3	18.6	17.4	19.0
F77-2020	18.1	18.0	19.2	18.4	19.9
F77-2039	18.6	18.1	20.0	17.6	20.0
F77-2122	18.7	17.7	19.6	17.7	19.4
F77-6790	19.0	18.5	20.9	18.2	20.4
F78-6808	17.9	18.3	20.0	18.6	19.6
F79-3998	17.1	16.8	19.6	16.4	19.3
F79-4092	18.3	18.4	20.2	18.2	19.7
F79-4117	18.4	18.4	19.4	17.7	19.8
F79-4252	17.4	17.7	20.5	16.6	18.4
Ga78-625	18.2	18.7	20.3	17.0	19.1
Ga78-2485	18.3	18.7	19.7	17.8	20.4
Ga78-2517	17.8	17.3	19.3	16.6	19.3
Ga78-2708	18.8	18.7	19.7	18.7	19.7
Ga78-2710	19.2	18.8	21.6	18.5	20.9
GaT79-151	19.5	18.7	20.3	18.0	19.8
GaT79-168	18.4	19.0	20.4	16.9	20.0
GaT79-177	17.5	18.5	19.5	18.1	19.2
La79-4656	18.0	18.0	20.5	17.1	20.2
N79-782	18.3	18.0	19.9	18.4	19.5
N79-856	18.6	18.0	20.5	18.2	19.7
N79-872	18.4	18.2	20.3	18.2	18.9
N79-930	19.1	19.1	21.0	17.4	19.8
N79-1304	19.7	19.2	21.5	18.8	20.2
N79-4047	18.3	18.0	20.6	16.6	19.5
N79-4097	17.4	18.7	19.1	17.7	18.1
N80-5023	18.0	18.1	19.5	17.7	19.2

Table 54 - Protein percentages for the strains in Preliminary Group VII, 1981

Strain	Clinton, NC	Blackville, SC	Jay, FL	Stoneville, MS (B)	Beaumont, TX
Braxton	45.4	41.6	43.5	40.3	46.2
Centennial	44.8	41.2	43.9	43.1	45.3
D78-4288	45.1	42.4	44.0	44.2	41.7
D78-4382	46.2	45.8	47.1	44.9	47.4
D78-4471	43.5	43.1	45.3	43.0	46.3
D79-10335	46.4	44.3	45.1	43.1	46.2
D79-10426	43.1	43.2	43.5	42.9	46.0
D79-10458	45.4	42.7	44.7	43.4	44.4
D79-10540	44.8	41.9	45.3	43.7	45.3
D79-10556	45.6	42.2	40.8	41.5	46.7
F77-2020	43.1	41.0	42.5	39.9	43.5
F77-2039	43.3	40.9	41.6	42.5	43.5
F77-2122	44.2	42.3	43.4	42.5	42.8
F77-6790	43.8	42.3	42.0	39.9	42.8
F78-6808	41.1	40.0	42.7	41.0	41.8
F79-3998	46.0	41.6	42.6	43.3	44.3
F79-4092	42.9	42.1	42.4	42.0	43.3
F79-4117	42.7	40.9	41.7	41.4	43.6
F79-4252	43.7	43.1	39.8	43.6	46.9
Ga78-625	44.8	42.1	43.1	42.4	47.1
Ga78-2485	44.3	41.6	45.1	43.6	44.1
Ga78-2517	46.8	41.5	45.4	43.5	43.9
Ga78-2708	40.9	41.4	41.2	41.0	44.3
Ga78-2710	40.7	39.5	39.2	39.3	42.0
GaT79-151	43.0	41.0	41.3	40.6	44.0
GaT79-168	44.2	40.9	43.2	42.9	45.2
GaT79-177	44.5	43.2	44.9	41.9	45.3
La79-4656	45.0	40.7	43.7	42.0	43.9
N79-782	46.0	43.5	43.5	43.6	45.6
N79-856	47.7	43.3	46.5	42.6	47.6
N79-872	44.2	42.0	45.1	39.9	46.7
N79-930	45.4	43.1	45.4	44.5	49.7
N79-1304	44.8	42.3	44.6	42.6	43.2
N79-4047	44.5	43.8	42.4	43.6	46.4
N79-4097	46.5	44.7	46.0	44.7	48.3
N80-5023	41.7	42.6	42.9	42.2	45.8

Table 55 - Plant height for the strains in Preliminary Group VII, 1981

Strain	Clinton, NC	Black- ville, SC	Tifton, GA	Tallas- see, AL	Jay, FL	Baton Rouge, LA	Stone- ville, MS (A)	Stone- ville, MS (B)	Beau- mont, TX
Braxton	46	46	35	29	28	37	46	38	30
Centennial	39	42	30	30	26	42	44	34	27
D78-4288	42	43	25	19	24	42	38	28	26
D78-4382	48	39	36	30	29	41	44	35	33
D78-4471	49	46	31	26	30	39	45	33	30
D79-10335	40	44	30	32	36	39	46	35	30
D79-10426	41	41	27	27	30	34	46	29	28
D79-10458	38	38	27	31	27	36	41	35	26
D79-10540	43	41	25	23	28	30	46	34	27
D79-10556	39	44	32	28	32	39	50	37	31
F77-2020	35	44	25	25	28	35	41	33	28
F77-2039	46	48	30	25	29	36	50	36	35
F77-2122	41	49	31	25	28	39	43	34	26
F77-6790	46	49	32	33	36	35	51	39	31
F78-6808	44	45	30	30	31	42	46	35	29
F79-3998	43	51	38	29	33	36	51	34	35
F79-4092	47	48	34	30	32	33	46	35	28
F79-4117	40	42	27	22	26	31	40	33	25
F79-4252	46	50	31	29	36	39	54	34	33
Ga78-625	48	43	26	27	23	37	48	32	25
Ga78-2485	42	45	30	27	32	39	46	34	27
Ga78-2517	47	45	30	25	31	37	48	35	26
Ga78-2708	43	42	26	28	30	34	49	34	25
Ga78-2710	42	37	26	26	26	36	43	35	25
GaT79-151	36	41	25	19	22	28	43	29	22
GaT79-168	44	45	32	27	32	42	46	37	28
GaT79-177	42	42	25	23	23	35	46	29	23
La79-4656	44	40	28	22	27	39	45	34	25
N79-782	44	42	29	25	28	39	46	33	29
N79-856	37	28	18	16	18	32	37	26	20
N79-872	25	20	12	12	14	34	21	15	14
N79-930	37	33	21	22	32	36	39	27	22
N79-1304	38	33	21	23	31	43	40	33	24
N79-4047	40	47	29	26	31	43	46	35	28
N79-4097	38	43	23	24	26	43	46	27	27
N80-5023	43	42	22	28	30	39	45	27	27

Table 56 - Seed quality scores for the strains in Preliminary Group VII, 1981

Strain	Clinton, NC	Black- ville, SC	Tifton, GA	Tallas- see, AL	Jay, FL	Baton Rouge, LA	Stone- ville, MS (A)	Stone- ville, MS (B)	Beau- mont, TX
Braxton	1.5	1.0	2.5	1.0	2.0	1.8	2.0	2.0	2.3
Centennial	1.5	1.0	2.0	1.0	2.0	1.5	2.0	2.0	1.8
D78-4288	1.5	1.0	2.5	1.0	2.0	2.3	2.0	2.0	2.0
D78-4382	1.5	1.0	2.5	2.0	3.0	1.0	2.0	2.0	2.0
D78-4471	1.5	1.0	2.5	1.0	2.0	2.0	2.0	2.0	2.3
D79-10335	1.5	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0
D79-10426	1.5	1.0	2.0	1.0	3.0	1.8	2.0	2.0	1.8
D79-10458	1.5	1.0	2.5	1.0	2.0	2.0	2.0	2.0	2.3
D79-10540	1.5	1.0	2.0	1.0	2.0	1.5	2.0	2.0	2.0
D79-10556	1.5	1.0	2.0	1.0	2.0	1.0	2.0	2.0	1.8
F77-2020	1.5	1.0	1.5	1.0	2.0	1.5	2.0	2.0	1.5
F77-2039	1.5	1.0	2.0	1.0	2.0	1.0	2.0	2.0	1.5
F77-2122	1.5	1.0	2.0	1.0	2.0	1.8	2.0	2.0	1.5
F77-6790	1.5	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0
F78-6808	1.5	1.0	1.5	1.0	2.0	1.5	2.0	2.0	2.0
F79-3998	1.5	1.0	2.0	1.0	3.0	1.0	2.0	2.0	1.8
F79-4092	1.5	1.0	1.5	1.0	2.0	1.0	2.0	2.0	1.5
F79-4117	1.5	1.0	2.0	1.0	2.0	1.0	2.0	2.0	1.8
F79-4252	1.5	1.0	2.0	1.0	2.0	1.3	2.0	2.0	1.8
Ga78-625	1.5	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.3
Ga78-2485	1.5	1.0	2.0	1.0	2.0	1.0	2.0	2.0	1.8
Ga78-2517	1.5	1.0	2.0	1.0	3.0	1.5	2.0	2.0	1.8
Ga78-2708	1.5	1.0	2.0	1.0	2.0	1.0	2.0	2.0	2.0
Ga78-2710	1.5	1.0	2.0	1.0	3.0	2.3	2.0	2.0	2.0
GaT79-151	1.5	1.0	1.5	1.0	2.0	2.3	2.0	2.0	2.0
GaT79-168	1.5	1.0	2.0	1.0	3.0	1.3	2.0	2.0	1.8
GaT79-177	1.5	1.0	2.5	1.0	3.0	3.0	2.0	2.0	2.8
La79-4656	1.5	1.0	2.0	1.0	2.0	1.0	2.0	2.0	1.5
N79-782	1.5	1.0	2.5	1.0	3.0	2.3	2.0	2.0	2.0
N79-856	1.5	1.0	2.5	1.0	2.0	2.5	2.0	2.0	2.0
N79-872	1.5	1.0	2.5	1.0	2.0	2.8	2.0	2.0	2.0
N79-930	1.5	1.0	2.0	1.0	2.0	1.0	2.0	2.0	2.3
N79-1304	1.5	1.0	2.5	1.0	3.0	2.3	2.0	2.0	2.0
N79-4047	1.5	1.0	2.5	1.0	2.0	2.5	2.0	2.0	1.8
N79-4097	1.5	1.0	2.0	1.0	2.0	1.5	2.0	2.0	1.8
N80-5023	1.5	1.0	2.0	1.0	2.0	1.8	2.0	2.0	2.0

UNIFORM GROUP VIII

1981

<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. Foster (F76-8827)	Centennial X [Forrest X (Cobb X D68-216)]	F ₅
4. N76-1507	N70-2173 X Hutton	F ₅
5. F77-1790	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
6. F77-1797	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
7. F77-1840	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
8. F77-1995	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
9. N77-1602	Hutton X N70-2205	F ₆
10. Co79-501	Co71-211 X Centennial	F ₅
11. F77-1793	Centennial X [Forrest X (Cobb X D68-216)]	F ₅
12. F77-7450	Forrest X (Cobb X D68-216)	F ₅

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.

N70-2205 is a selection from Hampton X Ransom.

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

Results of 17 Uniform Group VIII nurseries are summarized in Tables 57 through 63. Table 57 gives a general summary of performance of the strains included in these plantings.

The strain F76-8827 has been released as Foster. Foster is the first strain of Group VIII maturity to have resistance to SCN race 3. It has good resistance to M. incognita and moderate resistance to M. arenaria. F77-1797 also has resistance to SCN race 3, resistance to M. incognita and good resistance to M. arenaria. F77-1797 has a two year mean yield 4.2 bushels per acre greater than that for Cobb and 2.7 bushels per acre higher than that for Foster. This strain is being increased for release. It will provide a productive variety with good resistance to SCN race 3, M. incognita and M. arenaria.

Differences among strains for seed yield were significant (.05 level of confidence) at 15 of the locations. The combined analysis of variance for seed yield also showed differences among strains to be significant. Two strains, N76-1507 and N77-1602, had mean seed yields significantly greater than that for Hutton. These two strains were the two earliest maturing in the group.

Seven strains were considered to be resistant to SCN race 3 and one strain appeared to be segregating. Complete information was not obtained for reaction to the two root-knot nematodes. All strains were severely damaged by soybean looper in the field cage studies at Stoneville.

Hutton produced a mean seed yield of 16.5 bushels per acre in the planting at Tallassee, Alabama, while Cobb had a mean seed yield of 35.5 bushels per acre. The low seed yield for Hutton and for some of the other strains in this planting was attributed to susceptibility to stem canker. Hutton was rated as being mature approximately one month earlier than its normal date of maturity. Cobb, F77-1797, F77-1840 and F77-1995 appear to have a good level of resistance to stem canker.

Table 57 - General summary of performance for the strains in Uniform Group VIII, 1981

	No. of locations	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797
Seed Yield - 1981	17	32.2	31.3	32.6	36.1+	34.7	35.5+
1980-81		31.6	31.4	32.9	34.6	34.1	35.6
1979-81		34.4	33.9	35.2	37.4		
Oil Content - 1981		18.6	19.8+	19.5+	20.2+	19.3+	19.4+
1980-81		19.0	20.1	19.8	20.3	19.5	19.7
1979-81		19.3	20.1	19.9	20.1		
Protein Content - 1981		45.0	41.8-	42.3-	41.0-	43.6-	42.8-
1980-81		45.0	42.1	42.4	42.4	44.1	43.3
1979-81		44.3	41.5	41.8	42.0		
Seed size		15.5	13.0-	12.4-	15.1	12.7-	12.5-
Maturity index		10-22	+6	+2	-3	+2	+2
Height		36	40	38	32	37	36
Seed quality		1.6	1.6	1.5	1.6	1.6	1.6
SCN race 3 ¹		S	S	R	S	R	R
Soybean looper ²		5	5	5	5	5	5
Flower color		P	W	P	P	P	P
Pubescence color		T	G	G	T	T	T
Pod wall color		T	T	T	T	T	T

¹Field ratings at Ames Plantation, TN.

²Field cage readings at Stoneville, MS.

Table 57 - (continued)

	F77-T840	F77-1995	N77-1602	Co79-501	F77-1793	F77-7450
Seed Yield - 1981	33.0	34.3	37.2+	36.0+	33.5	36.2+
1980-81	33.4	33.7	35.1			
1979-81						
Oil Content - 1981	19.1	19.3+	19.5+	19.4+	19.1	19.4+
1980-81	19.5	19.6	19.8			
1979-81						
Protein Content - 1981	41.0-	41.7-	43.2-	42.1-	42.6-	42.6-
1980-81	42.1	42.4	43.8			
1979-81						
Seed size	11.5-	10.8-	16.3	13.5-	12.5-	11.9-
Maturity index	-1	+1	-3	0	+3	0
Height	37	35	35	37	37	35
Seed quality	1.5	1.4	1.6	1.4	1.6	1.5
SCN race 3 ¹	R	R	S	R	seg.	R
Soybean looper ²	5	5	5	5	5	5
Flower color	W	W	P	W	P	W
Pubescence color	T	G	T	G	T	T
Pod wall color	T	T	T	T	T	T

Table 58 - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1981

Location	Hutton	Cobb	Foster	N76-1507	N77-1790	F77-1797	F77-1840
Clinton, NC	30.6	26.2	29.2	42.8+	40.1	44.9+	40.2
Florence, SC	44.4	42.9	42.9	51.3	44.9	46.7	42.4
Hartsville, SC (A)	24.8	26.4	24.0	33.7+	29.1	26.6	22.4
Hartsville, SC (B)	36.8	15.1-	26.1-	35.6	36.4	34.4	30.3
Blackville, SC (A)	31.5	31.2	30.1	36.8	32.0	31.7	32.1
Blackville, SC (B)	23.1	15.0-	19.8-	24.5	19.2-	19.7-	17.5-
Athens, GA	25.5	33.1	27.7	32.2	31.8	29.4	26.5
Tallassee, AL	16.5	35.5+	33.1+	24.1+	24.5+	33.8+	30.3+
Tifton, GA	56.4	43.7-	41.8-	51.8	45.9-	54.8	42.8-
Gainesville, FL	33.5	42.7+	39.2	40.3	38.2	42.0+	44.3+
Quincy, FL	38.5	34.6	37.4	39.6	39.5	34.3	35.6
Jay, FL	32.0	30.3	37.0	34.3	47.7+	46.6+	45.0+
Fairhope, AL	30.0	28.6	31.6	34.1+	30.3	26.8	22.7-
Poplarville, MS	24.4	27.6	29.0	23.9	28.8	29.9	26.6
Stoneville, MS (B)	30.1	35.5+	34.6	34.5	36.0+	38.7+	32.8
Beaumont, TX	33.4	29.4	30.2	36.5	32.1	27.1	31.8
Uvalde, TX	35.3	34.3	40.6	37.4	33.4	35.3	36.7
Mean	32.2	31.3	32.6	36.1	34.7	35.5	32.9

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

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

Table 58 - (continued)

Location	F77-1995	N77-1602	Co79-501	F77-1793	F77-7450	L.S.D. (.05)	C.V. %
Clinton, NC	33.9	49.7+	41.1	44.7+	40.2	9.6	15
Florence, SC	42.1	49.5	47.0	46.2	47.0	N.S.	7
Hartsville, SC (A)	35.2+	34.7+	32.4+	30.1	31.4+	6.1	12
Hartsville, SC (B)	34.1	34.3	38.4	33.9	39.0	8.4	15
Blackville, SC (A)	31.3	39.2	34.9	33.9	34.9	N.S.	12
Blackville, SC (B)	19.1-	27.3+	21.6	21.0	21.0	2.6	11
Athens, GA	27.6	29.3	29.5	29.5	27.6	7.9	16
Tallassee, AL	34.2+	20.5	25.4+	20.2	23.3	7.5	16
Tifton, GA	44.0-	55.8	52.1	45.1-	49.3	9.0	11
Gainesville, FL	35.4	44.9+	35.3	33.6	42.0+	7.6	11
Quincy, FL	34.5	40.2	46.6+	38.5	47.2+	7.1	11
Jay, FL	47.0+	39.0	47.3+	46.7+	45.7+	7.6	11
Fairhope, AL	30.1	33.6	25.7-	26.5	28.8	3.9	8
Poplarville, MS	27.6	29.9	28.9	23.9	27.1	N.S.	14
Stoneville, MS (B)	32.1	32.9	31.3	37.4+	36.0+	5.2	9
Beaumont, TX	41.6	31.6	37.8	30.0	40.0	11.1	20
Uvalde, TX	32.6	40.8	35.8	28.6	34.6	N.S.	15
Mean	34.3	37.2	35.9	33.5	36.2	2.6	

Table 59 - Chemical composition and seed size for the strains in Uniform Group VIII, 1981

Location	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797	F77-1840
<u>OIL PERCENTAGE</u>							
Hartsville, SC (A)	17.8	17.9	18.3	19.3	18.5	18.9	18.5
Blackville, SC (B)	18.7	18.9	18.7	19.0	19.0	18.2	18.6
Tallassee, AL	18.6	19.9	19.6	21.6	18.8	18.7	18.1
Tifton, GA	18.8	19.8	20.3	20.7	19.8	20.3	19.3
Gainesville, FL	18.2	20.3	19.9	20.6	19.7	19.9	19.7
Jay, FL	19.0	20.9	19.9	20.7	19.9	20.5	20.0
Stoneville, MS (B)	18.8	20.3	19.4	19.8	19.4	18.7	19.2
Beaumont, TX	19.2	20.2	19.8	19.8	19.6	19.6	19.6
Mean	18.6	19.8+	19.5+	20.2+	19.3+	19.4+	19.1
<u>PROTEIN PERCENTAGE</u>							
Hartsville, SC (A)	42.5	38.8	40.0	39.7	43.0	39.8	38.8
Blackville, SC (B)	44.1	40.1	42.2	38.7	43.1	41.6	40.9
Tallassee, AL	44.2	44.1	42.0	41.3	44.3	45.3	42.4
Tifton, GA	45.5	43.9	43.4	39.3	44.6	44.8	42.4
Gainesville, FL	46.7	41.0	42.2	41.7	44.6	42.8	40.8
Jay, FL	46.7	43.2	44.2	42.7	43.8	43.7	41.6
Stoneville, MS (B)	45.6	40.6	41.2	41.3	42.5	42.7	39.7
Beaumont, TX	44.9	42.4	43.2	43.2	43.1	41.6	41.6
Mean	45.0	41.8-	42.3-	41.0-	43.6-	42.8-	41.0-
<u>GRAMS PER 100 SEEDS</u>							
Hartsville, SC (A)	14.4	12.1	11.0	12.7	10.9	10.6	9.5
Blackville, SC (B)	10.0	11.1	10.3	9.7	9.8	12.1	11.4
Tifton, GA	19.7	14.9	14.8	18.9	14.2	13.5	12.8
Gainesville, FL	15.4	14.0	13.2	16.6	13.2	13.7	12.7
Jay, FL	19.0	15.0	14.0	19.0	17.0	15.0	13.0
Stoneville, MS (B)	14.0	11.8	11.2	14.4	11.0	11.4	9.8
Beaumont, TX	15.7	12.0	12.0	14.7	12.8	11.5	11.3
Mean	15.5	13.0-	12.4-	15.1	12.7-	12.5-	11.5-

Table 59 - (continued)

Location	F77-1995	N77-1602	Co79-501	F77-1793	F77-7450	L.S.D. (.05)
<u>OIL PERCENTAGE</u>						
Hartsville, SC (A)	18.1	18.8	18.0	18.2	19.0	
Blackville, SC (B)	18.9	19.2	18.3	18.1	18.0	
Tallassee, AL	18.2	19.4	18.3	18.8	19.4	
Tifton, GA	20.0	20.5	21.2	19.6	19.6	
Gainesville, FL	20.0	20.1	20.2	19.9	20.0	
Jay, FL	19.9	19.0	20.5	19.5	20.0	
Stoneville, MS (B)	19.5	18.5	18.8	19.5	19.5	
Beaumont, TX	19.7	20.6	19.7	19.2	19.6	
Mean	19.3+	19.5+	19.4+	19.1	19.4+	0.5
<u>PROTEIN PERCENTAGE</u>						
Hartsville, SC (A)	39.4	42.5	40.7	37.9	40.2	
Blackville, SC (B)	42.0	43.1	40.0	43.6	42.4	
Tallassee, AL	43.5	44.0	42.0	42.8	43.5	
Tifton, GA	42.6	41.8	42.5	42.6	44.5	
Gainesville, FL	41.1	44.2	42.2	46.0	43.0	
Jay, FL	42.1	46.5	43.6	44.8	43.0	
Stoneville, MS (B)	40.7	43.1	42.4	40.7	40.8	
Beaumont, TX	42.2	40.5	43.0	42.5	43.5	
Mean	41.7-	43.2-	42.1-	42.6-	42.6-	1.1
<u>GRAMS PER 100 SEEDS</u>						
Hartsville, SC (A)	9.8	15.0	12.5	11.2	10.1	
Blackville, SC (B)	9.6	11.1	12.8	10.6	9.2	
Tifton, GA	11.5	20.2	14.8	13.9	13.3	
Gainesville, FL	10.9	18.4	13.4	13.6	13.3	
Jay, FL	12.0	19.0	17.0	15.0	15.0	
Stoneville, MS (B)	9.8	14.2	11.0	11.0	10.4	
Beaumont, TX	11.9	16.4	13.1	12.3	12.2	
Mean	10.8-	16.3	13.5-	12.5-	11.9-	1.2

Table 60 - Relative maturity, days earlier (-) or later (+) than Hutton, for strains in Uniform Group VIII, 1981

Location	Date planted	Hutton matured	Cobb	Foster	N76-1507	F77-1790	F77-1797
Clinton, NC	5-20	11-4	0	0	-7	0	0
Hartsville, SC (A)	6-2	10-20	+6	+2	0	+3	+3
Hartsville, SC (B)	6-8	10-23	0	+2	0	+2	+1
Athens, GA	5-25	10-23	+7	+1	-2	+5	+6
*Tallassee, AL	5-14	9-26	+23	+19	+7	+17	+23
Tifton, GA	5-11	10-8	+1	-1	-9	-2	-3
Gainesville, FL	6-8	10-21	+5	+3	-4	+2	+3
Quincy, FL	6-16	10-16	+4	+4	-1	+4	+3
Jay, FL	6-5	10-23	+1	-1	-2	-2	-2
Fairhope, AL	6-5	10-9	+3	+3	-3	+1	0
Stoneville, MS (B)	6-4	10-25	+12	+10	-1	+10	+8
Beaumont, TX	5-29	10-28	+31	+2	-5	+3	+5
Uvalde, TX	6-10	11-7	+1	+2	0	+1	+5
Mean		10-22	+6	+2	-3	+2	+2

*Not included in mean.

Table 60 - (continued)

Location	F77-1840	F77-1995	N77-1602	Co79-501	F77-1793	F77-7450
Clinton, NC	-7	0	-7	-7	-7	0
Hartsville, SC (A)	-2	0	-9	-1	+3	-2
Hartsville, SC (B)	+1	0	-2	+2	+1	0
Athens, GA	0	+5	-3	-1	+7	-1
Tallassee, AL	+29	+15	0	+13	+17	+12
Tifton, GA	-2	-3	-3	-3	-2	-2
Gainesville, FL	0	-1	-3	-2	+3	0
Quincy, FL	-1	0	+3	+3	+4	+3
Jay, FL	-1	-4	-3	-2	0	0
Fairhope, AL	0	+3	-3	+3	+1	-1
Stoneville, MS (B)	+1	+10	0	+2	+10	+6
Beaumont, TX	-1	+1	-2	-1	+6	+1
Uvalde, TX	+2	+2	0	+2	+5	0
Mean	-1	+1	-3	0	+3	0

Table 61 - Plant height for the strains in Uniform Group VIII, 1981

Location	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797
Clinton, NC	48	52	53	42	49	49
Hartsville, SC (A)	44	46	44	39	44	43
Hartsville, SC (B)	41	41	41	41	41	40
Blackville, SC (A)	46	49	48	39	49	46
Blackville, SC (B)	28	38	35	33	31	29
Athens, GA	30	29	25	25	30	31
Tallassee, AL	32	38	34	28	29	34
Tifton, GA	39	40	37	26	33	31
Gainesville, FL	34	40	36	28	36	34
Quincy, FL	33	37	35	34	40	37
Jay, FL	34	36	37	27	35	34
Fairhope, AL	46	49	50	42	46	43
Poplarville, MS	29	32	31	25	33	30
Stoneville, MS (B)	39	43	41	37	43	41
Beaumont, TX	28	32	33	27	28	30
Uvalde, TX	26	31	29	23	25	24
Mean	36	40	38	32	37	36

Table 61 - (continued)

Location	F77-1840	F77-1995	N77-1602	Co79-501	F77-1793	F77-7450
Clinton, NC	49	49	46	51	46	50
Hartsville, SC (A)	45	43	45	45	44	42
Hartsville, SC (B)	43	42	44	43	39	39
Blackville, SC (A)	46	47	47	46	47	45
Blackville, SC (B)	34	36	31	34	34	34
Athens, GA	30	28	29	28	30	31
Tallassee, AL	35	34	28	31	31	31
Tifton, GA	34	31	32	33	36	31
Gainesville, FL	36	32	32	32	30	32
Quincy, FL	38	34	35	33	41	35
Jay, FL	35	34	34	34	37	28
Fairhope, AL	44	44	44	48	47	45
Poplarville, MS	31	27	29	33	31	27
Stoneville, MS (B)	40	39	39	41	43	39
Beaumont, TX	28	29	27	32	29	26
Uvalde, TX	26	14	25	22	19	22
Mean	37	35	35	37	37	35

Table 62 - Lodging scores for the strains in Uniform Group VIII, 1981

Location	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797
Clinton, NC	4.0	3.7	4.0	4.0	4.0	3.3
Florence, SC	3.0	3.0	3.0	2.0	3.0	3.0
Hartsville, SC (A)	2.2	2.5	2.7	1.5	2.0	2.0
Hartsville, SC (B)	3.0	3.8	3.5	2.3	2.5	2.2
Blackville, SC (A)	4.0	3.0	4.0	2.0	1.0	1.0
Blackville, SC (B)	1.0	3.0	3.0	1.0	2.0	2.0
Athens, GA	1.3	1.3	1.2	1.2	1.3	1.3
Tallassee, AL	1.2	1.2	1.0	1.0	1.0	1.0
Tifton, GA	1.0	1.5	1.0	1.0	1.0	1.5
Gainesville, FL	1.0	1.7	1.3	1.0	1.0	1.0
Quincy, FL	1.0	1.0	1.0	1.0	2.0	1.0
Jay, FL	1.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.3	2.0	2.0	2.7	2.0
Beaumont, TX	1.6	2.4	2.4	1.5	1.5	1.5
Uvalde, TX	1.5	2.0	1.5	1.5	1.5	1.7

Table 62 - (continued)

Location	F77-1840	F77-1995	N77-1602	Co79-501	F77-1793	F77-7450
Clinton, NC	3.0	3.0	3.3	3.0	4.0	3.3
Florence, SC	3.0	3.0	3.0	3.0	3.0	2.0
Hartsville, SC (A)	2.3	2.5	2.0	2.0	2.0	2.8
Hartsville, SC (B)	2.8	3.3	2.2	2.5	2.2	3.3
Blackville, SC (A)	1.0	3.0	3.0	2.0	2.0	2.0
Blackville, SC (B)	3.0	2.0	1.0	2.0	2.0	2.0
Athens, GA	1.5	1.2	1.0	1.2	1.5	1.5
Tallassee, AL	1.0	1.3	1.0	1.0	1.0	1.0
Tifton, GA	1.5	1.0	1.0	1.0	1.0	1.0
Gainesville, FL	1.3	1.3	1.0	1.0	1.0	1.0
Quincy, FL	2.0	2.0	1.0	1.0	1.0	2.0
Jay, FL	2.0	2.0	1.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.3	2.0
Beaumont, TX	1.7	2.5	1.4	1.8	1.5	1.6
Uvalde, TX	2.0	1.2	1.5	1.5	1.0	1.7

Table 63 - Seed quality scores for the strains in Uniform Group VIII, 1981

Location	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Hartsville, SC (A)	1.5	1.5	1.0	1.5	1.5	2.0
Blackville, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Blackville, SC (B)	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.5
Tallassee, AL	1.5	1.0	1.0	1.0	1.0	1.0
Tifton, GA	2.0	2.0	2.0	2.5	2.0	1.5
Gainesville, FL	1.7	1.0	1.0	1.7	1.0	1.0
Quincy, FL	1.0	3.0	2.0	1.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	2.0	2.0	1.8	2.0	2.2	2.2

Table 63 - (continued)

Location	F77-1840	F77-1995	N77-1602	Co79-501	F77-1793	F77-7450
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Hartsville, SC (A)	2.0	1.0	2.0	1.0	1.5	1.5
Blackville, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Blackville, SC (B)	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.5
Tallassee, AL	1.0	1.5	1.5	1.0	1.0	1.0
Tifton, GA	1.5	1.5	2.0	1.5	2.0	2.0
Gainesville, FL	1.0	1.3	1.7	1.7	1.7	1.0
Quincy, FL	2.0	1.0	1.0	1.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.8	1.8	2.3	1.5	2.3	1.8

PRELIMINARY GROUP VIII

1981

Six Preliminary Group VIII nurseries, including thirty-four experimental strains along with Cobb and Braxton, were grown. Parentage for each of the strains is reported in Table 64. Performance data are summarized in Tables 64 through 70.

Differences among strains for seed yield were significant (.05 level of confidence) at 5 of the 6 locations. The combined analysis of variance for seed yield also showed differences among strains to be significant. The mean seed yield for Cobb was 32.0 bushels per acre and for Braxton 32.9 bushels per acre. There were no strains having an overall mean seed yield significantly greater than that for Cobb. There were 2 strains having a mean seed yield significantly lower than that for Cobb. There were 11 strains classified as having an average maturity date earlier than that for Braxton and thus should be classified as being of Group VII maturity.

Nine strains were rated as being resistant to SCN race 3. There were no strains with resistance to SCN race 4. Data were not obtained on reaction to root-knot nematodes. Five strains were resistant to soybean looper feeding in the field cage studies at Stoneville. One of these, D79-10496, yielded as well as the check varieties and is also resistant to SCN race 3.

Table 64 - Parentage of strains in Preliminary Group VIII, 1981

Variety or strain		Parentage	Generation composited
1.	Cobb		
2.	Braxton		
3.	Co79-682	Centennial X Co76-86	
4.	Co79-697	Centennial X (Co71-211 X Hutton)	
5.	Co79-734	Centennial X (Co71-211 X Hutton)	
6.	Co79-760	Co73-473 X Centennial	
7.	D73-9356	Govan(2) X (Hill X PI 274454)	F5
8.	D79-10470	J74-39 X D75-10169	F5
9.	D79-10483	J74-39 X D75-10169	F5
10.	D79-10496	J74-39 X D75-10169	F5
11.	D79-10530	J74-39 X D75-10169	F5
12.	D79-10633	D71-9241 X D75-10169	F5
13.	F76-1102	Hill X (Davis X Cobb)	F6
14.	F77-2666	D68-201 X [D67-10507(2) X Hampton]	F7
15.	F77-6268	Cobb X Davis	F6
16.	F77-6271	Cobb X Davis	F6
17.	F77-8423	Cobb X Bragg	F6
18.	F77-9350	Cobb X D69-6344	F5
19.	F77-9418	Cobb X D69-6344	F5
20.	F77-9556	Cobb X D69-6344	F5
21.	F79-5929	Cobb X Bragg	F6
22.	F79-4308	Centennial X [Forrest X (Cobb X D68-216)]	F8
23.	Ga77-1114	Jackson X Lee	F6
24.	Ga78-1003	Forrest X Hutton	F6
25.	Ga78-2488	Hutton X Ga70-276	F4
26.	Ga78-2523	Hutton X Ga70-276	F4
27.	Ga78-2526	Hutton X Ga70-276	F4
28.	GaT79-186	Hale 3 X F67-4153	
29.	GaT79-191	(Hutton X Davis) X (R67-141 X Forrest)	
30.	GaT79-194	(Hutton X Davis) X (R67-141 X Forrest)	
31.	GaT79-204	Hampton 266A X F67-3673	
32.	N79-749	N72-40 X N72-1014	F6
33.	N79-833	Essex X N70-3037	F6
34.	N79-1101	N70-1501 X Ransom	F6
35.	N79-1230	N70-1501 X Ransom	F6
36.	N79-1296	N73-520-2 X Ransom	F6

Table 65 - General summary of performance for the strains in Preliminary Group VIII, 1981

Strain	Seed yield	Maturity index	Ht.	Percent		SCN race 3	Soybean looper
				Oil	Protein		
Cobb	32.0	10-28	39	19.7	42.3	S	5
Braxton	32.9	-6	35	19.5	43.8	S	5
Co79-682	34.6	-8	35	19.2	41.8	R	5
Co79-697	34.7	-4	37	19.0	43.2	R	5
Co79-734	34.5	-6	31	19.2	43.1	R	5
Co79-760	36.6	-7	34	20.3	42.2	R	5
D73-9356	28.3	+8	43	18.2-	43.8	S	5
D79-10470	30.7	-4	30	18.0-	45.2+	R	1
D79-10483	31.7	+1	41	18.5-	41.7	S	2
D79-10496	32.1	-5	38	19.3	44.5	R	2
D79-10530	28.8	0	29	18.5-	45.0+	S	2
D79-10633	24.4-	-3	33	17.7-	43.6	S	2
F76-1102	32.6	-8	37	20.1	41.0	S	5
F77-2666	32.1	-4	31	19.9	40.6	R	4
F77-6268	34.3	+3	42	20.5+	39.5-	S	5
F77-6271	32.3	+4	45	20.7+	39.2-	S	5
F77-8423	30.7	-2	37	20.0	39.9-	S	5
F77-9350	33.9	-8	30	19.9	41.2	S	4
F77-9418	31.7	-5	32	19.2	40.8	S	4
F77-9556	34.1	0	28	19.8	40.9	S	5
F79-5929	29.0	+1	37	19.2	43.1	S	4
F79-4308	35.0	-3	34	19.5	42.2	R	5
Ga77-1114	31.3	-8	32	18.9-	42.0	S	5
Ga78-1003	32.8	-7	32	18.8-	44.7+	S	4
Ga78-2488	34.1	-4	36	18.9-	44.0	S	5
Ga78-2523	33.2	-3	35	18.9-	43.9	S	5
Ga78-2526	30.8	-2	37	19.0	44.0	S	4
GaT79-186	31.2	-9	35	19.6	42.4	S	4
GaT79-191	30.2	-2	35	19.3	40.9	S	4
GaT79-194	30.9	-6	45	20.3	40.0-	S	5
GaT79-204	33.7	-2	37	20.1	43.0	S	5
N79-749	29.7	-12	36	19.3	46.7+	S	4
N79-833	31.0	-12	30	19.9	44.1	S	5
N79-1101	34.2	-12	27	19.4	44.7+	R	5
N79-1230	32.8	-10	29	20.5+	42.4	S	4
N79-1296	32.4	-11	29	20.7+	44.2+	S	5
L.S.D. (.05)	5.1			0.7	1.8		
L.S.D. (.01)	6.7			1.0	2.3		

Table 66 - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1981

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	26.8	33.6	36.0	28.0	31.6	36.2
Braxton	37.1	34.6	36.2	31.5	26.8	31.2
Co79-682	34.4	32.1	38.7	42.5+	27.6	32.3
Co79-697	34.0	36.6	32.9	40.5+	32.7	31.8
Co79-734	36.1	33.3	39.8	39.5+	32.6	25.6-
Co79-760	32.2	35.5	41.1	47.5+	31.8	31.3
D73-9356	20.5	25.0	35.3	31.5	33.3	24.4-
D79-10470	33.9	28.1	34.4	39.5+	22.4	25.8-
D79-10483	23.2	35.5	37.8	28.5	34.2	30.8
D79-10496	33.4	30.9	30.6	45.5+	24.8	27.2-
D79-10530	26.0	29.0	25.2-	30.0	34.1	28.6-
D79-10633	22.8	25.5	23.7-	30.0	20.6-	24.2-
F76-1102	34.3	32.5	35.5	36.5	29.2	28.0-
F77-2666	28.4	32.5	43.4+	42.5+	23.0	22.8-
F77-6268	28.5	37.3	36.9	30.0	39.7	33.4
F77-6271	33.0	33.9	35.1	26.5	33.4	32.1
F77-8423	32.5	36.9	31.2	28.0	23.4	32.2
F77-9350	35.3	34.5	31.9	32.5	36.1	33.2
F77-9418	32.3	34.5	37.0	28.0	23.4	35.2
F77-9556	34.3	30.2	37.6	37.5	31.8	33.1
F79-5929	23.1	33.3	35.6	30.0	25.2	27.0-
F79-4308	26.8	36.2	37.1	44.0+	30.2	35.9
Ga77-1114	37.3+	35.2	35.5	30.0	19.8-	30.3-
Ga78-1003	32.6	34.8	41.7	31.0	29.0	27.6-
Ga78-2488	35.2	36.1	33.7	36.5	34.8	28.3-
Ga78-2523	31.8	41.2	30.6	34.5	28.3	32.9
Ga78-2526	33.4	26.4	35.6	31.5	33.1	24.8-
GaT79-186	30.8	35.6	33.6	30.5	30.1	26.3-
GaT79-191	34.4	33.3	31.8	32.5	22.5	26.8-
GaT79-194	29.2	34.2	37.4	35.0	20.0-	29.7-
GaT79-204	39.0+	36.9	31.6	35.5	36.5	22.9-
N79-749	32.5	22.1	34.5	34.5	25.4	29.1-
N79-833	29.9	31.1	37.2	29.5	30.3	27.8-
N79-1101	40.1+	23.8	39.4	36.0	32.6	33.2
N79-1230	38.4+	31.0	30.9	40.5+	21.9	34.0
N79-1296	35.0	32.6	36.9	41.0+	21.7	27.4-
L.S.D. (.05)	10.3	N.S.	7.1	11.0	10.9	5.4
C.V.	16%	14%	10%	16%	19%	9%

Table 67 - Oil percentages for the strains in Preliminary Group VIII, 1981

Strain	Blackville, SC	Gainesville, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	18.1	19.5	20.6	20.2	20.1
Braxton	18.7	19.1	20.2	20.4	19.0
Co79-682	17.9	19.7	19.5	20.1	18.9
Co79-697	17.7	19.3	19.4	20.2	18.3
Co79-734	18.3	19.9	19.5	20.3	18.2
Co79-760	18.9	20.8	20.6	21.4	19.6
D73-9356	17.0	18.2	18.3	18.5	19.1
D79-10470	17.0	18.2	18.4	18.9	17.5
D79-10483	17.7	19.2	17.8	19.6	18.1
D79-10496	17.9	19.8	19.8	20.3	18.7
D79-10530	17.8	18.8	18.2	19.3	18.2
D79-10633	17.0	17.7	18.4	18.3	17.2
F76-1102	19.0	19.8	20.5	20.9	20.3
F77-2666	18.7	20.6	20.3	21.3	18.6
F77-6268	17.8	21.0	21.3	22.1	20.1
F77-6271	18.4	20.8	21.6	22.3	20.5
F77-8423	18.9	21.5	19.7	20.6	19.5
F77-9350	18.6	20.3	20.4	21.2	18.9
F77-9418	17.9	18.9	19.6	20.1	19.5
F77-9556	17.9	20.3	20.6	20.4	19.7
F79-5929	17.1	20.2	19.4	20.2	18.9
F79-4308	18.2	19.9	20.1	20.8	18.4
Ga77-1114	18.2	19.5	19.2	19.1	18.3
Ga78-1003	18.6	19.3	18.8	19.2	18.0
Ga78-2488	17.5	18.9	19.7	19.2	19.1
Ga78-2523	17.2	19.4	19.6	19.5	18.8
Ga78-2526	18.1	19.2	19.0	20.0	18.7
GaT79-186	18.6	19.7	20.0	20.6	18.9
GaT79-191	18.9	19.6	19.6	19.2	19.4
GaT79-194	18.4	21.0	20.9	21.3	19.8
GaT79-204	19.0	21.2	20.2	20.5	19.5
N79-749	20.5	19.0	19.5	19.6	17.9
N79-833	18.5	20.6	20.8	20.3	19.2
N79-1101	20.3	19.5	19.7	19.6	18.1
N79-1230	20.6	19.9	21.2	20.9	20.0
N79-1296	19.7	21.7	21.6	20.7	19.9

Table 68 - Protein percentages for the strains in Preliminary Group VIII, 1981

Strain	Blackville, SC	Gainesville, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	41.9	42.4	43.1	42.7	41.6
Braxton	41.9	43.4	43.4	44.8	45.5
Co79-682	40.8	43.4	41.3	42.3	41.1
Co79-697	42.3	43.9	42.2	43.2	44.5
Co79-734	40.7	44.6	46.0	43.1	41.3
Co79-760	38.7	43.1	43.9	42.8	42.7
D73-9356	41.1	44.2	46.5	43.6	43.8
D79-10470	43.9	47.0	45.1	44.4	45.4
D79-10483	40.9	42.5	40.6	42.7	41.9
D79-10496	42.8	45.0	43.2	45.9	45.4
D79-10530	44.8	47.0	44.3	44.6	44.2
D79-10633	42.8	44.7	44.3	42.8	43.2
F76-1102	40.3	41.9	41.0	41.1	40.6
F77-2666	41.2	40.5	40.4	39.3	41.8
F77-6268	40.2	41.5	39.0	38.5	38.4
F77-6271	37.9	41.5	38.6	38.3	39.7
F77-8423	39.2	42.7	42.3	39.7	35.8
F77-9350	38.8	42.5	41.1	42.6	40.9
F77-9418	39.2	41.4	40.9	41.6	40.8
F77-9556	41.4	40.8	42.2	39.9	40.2
F79-5929	42.0	44.6	43.2	42.2	43.5
F79-4308	40.3	42.5	41.5	45.0	41.6
Ga77-1114	42.9	42.8	42.4	40.9	40.8
Ga78-1003	42.7	44.4	44.9	45.7	45.8
Ga78-2488	42.6	45.3	45.0	43.4	43.6
Ga78-2523	44.1	44.4	44.2	43.7	43.3
Ga78-2526	39.5	45.1	45.8	45.0	44.5
GaT79-186	40.9	43.0	42.1	42.0	43.8
GaT79-191	36.4	42.1	41.3	43.0	41.5
GaT79-194	42.2	39.9	36.4	40.4	41.0
GaT79-204	45.8	43.2	44.3	41.2	40.6
N79-749	45.1	46.5	45.5	47.6	48.9
N79-833	45.3	43.5	44.6	43.0	43.9
N79-1101	43.4	45.6	44.9	43.5	46.3
N79-1230	44.2	42.7	43.1	39.7	42.5
N79-1296	41.5	44.7	42.9	46.3	45.4

Table 69 - Plant height for the strains in Preliminary Group VIII, 1981

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	50	33	43	34	32	42
Braxton	50	27	36	34	28	36
Co79-682	47	27	34	35	30	36
Co79-697	51	31	38	36	28	40
Co79-734	45	25	33	26	25	33
Co79-760	45	24	38	31	28	36
D73-9356	49	40	43	42	42	39
D79-10470	42	21	29	30	28	30
D79-10483	57	36	41	38	38	38
D79-10496	46	33	39	34	38	38
D79-10530	47	29	25	34	34	36
D79-10633	48	30	29	32	31	30
F76-1102	49	28	39	34	32	38
F77-2666	40	25	29	32	26	31
F77-6268	57	33	41	38	40	41
F77-6271	63	36	45	40	43	41
F77-8423	51	33	41	34	27	38
F77-9350	42	25	34	27	21	33
F77-9418	41	25	36	28	26	33
F77-9556	48	28	42	38	30	41
F79-5929	51	33	39	32	30	38
F79-4308	45	28	31	32	28	40
Ga77-1114	41	28	34	30	29	32
Ga78-1003	48	24	34	27	27	34
Ga78-2488	44	32	40	34	32	35
Ga78-2523	47	29	36	30	27	38
Ga78-2526	48	29	37	34	35	37
GaT79-186	45	32	41	24	28	38
GaT79-191	49	26	37	34	27	37
GaT79-194	63	39	49	39	38	44
GaT79-204	50	27	39	34	34	37
N79-749	45	29	42	35	30	37
N79-833	40	22	32	28	24	31
N79-1101	39	16	31	22	23	30
N79-1230	37	21	32	26	21	35
N79-1296	36	25	30	25	23	33

Table 70 - Seed quality scores for the strains in Preliminary Group VIII, 1981

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	1.0	1.0	2.0	2.0	2.0	2.0
Braxton	1.0	2.3	2.0	2.0	2.3	2.0
Co79-682	1.0	1.0	1.0	2.0	1.8	2.0
Co79-697	1.0	1.0	2.0	2.0	1.0	2.0
Co79-734	1.0	2.0	1.0	2.0	1.5	2.0
Co79-760	1.0	1.7	1.0	2.0	2.3	2.0
D73-9356	1.0	1.0	2.0	2.0	2.0	2.0
D79-10470	1.0	1.0	2.0	2.0	1.8	2.0
D79-10483	1.0	1.0	2.0	2.0	2.5	2.0
D79-10496	1.0	1.5	1.0	2.0	2.9	2.0
D79-10530	1.0	1.0	2.0	2.0	1.5	2.0
D79-10633	1.0	1.0	3.0	2.0	1.8	2.0
F76-1102	1.0	1.0	1.0	2.0	2.0	2.0
F77-2666	1.0	1.0	3.0	2.0	1.5	2.0
F77-6268	1.0	1.0	1.0	2.0	1.5	2.0
F77-6271	1.0	1.7	1.0	2.0	1.8	2.0
F77-8423	1.0	1.0	3.0	2.0	1.8	2.0
F77-9350	1.0	2.0	2.0	2.0	2.0	2.0
F77-9418	1.0	1.0	1.0	2.0	1.5	2.0
F77-9556	1.0	1.0	1.0	2.0	1.8	2.0
F79-5929	1.0	1.0	2.0	2.0	2.3	2.0
F79-4308	1.0	1.0	2.0	3.0	2.0	2.0
Ga77-1114	1.0	1.0	1.0	3.0	2.3	2.0
Ga78-1003	1.0	1.3	1.0	2.0	1.8	2.0
Ga78-2488	1.0	1.0	2.0	2.0	1.5	2.0
Ga78-2523	1.0	1.0	2.0	2.0	1.8	2.0
Ga78-2526	1.0	1.7	1.0	2.0	2.0	2.0
GaT79-186	1.0	1.7	2.0	2.0	1.8	2.0
GaT79-191	1.0	2.0	1.0	2.0	1.8	2.0
GaT79-194	1.0	1.7	3.0	2.0	2.3	2.0
GaT79-204	1.0	1.7	2.0	2.0	1.8	2.0
N79-749	1.0	1.0	1.0	2.0	1.8	2.0
N79-833	1.0	1.3	1.0	2.0	1.5	2.0
N79-1101	2.0	1.3	1.0	2.0	2.0	2.0
N79-1230	1.0	3.3	3.0	2.0	2.5	2.0
N79-1296	1.0	2.0	3.0	2.0	2.5	2.0