

**UNIFORM SOYBEAN TESTS
SOUTHERN STATES
1991**

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

THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

1991

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INTRODUCTION

The Soybean Production Research Program has been directed toward the development of improved strains of soybeans and the obtaining of fundamental information necessary to the efficient breeding of strains to meet specific needs. Breeding lines are developed and evaluated in the several federal and state research programs. As breeding lines demonstrate specific qualities in the individual programs, they are advanced to the preliminary and southern uniform regional tests, conducted in cooperation with research workers in the southern 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 best 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: Delsoy 4210, Manoken, Essex, Walters, Leflore, Sharkey, Stonewall, Kirby and Perrin. 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: Delsoy 4210, September 6; Essex, September 29; Walters, October 1; Leflore, October 16; Stonewall, October 23; and Kirby, November 4.

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 loessial 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 (S) 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:

- Au - Alabama Agricultural Experiment Station, Auburn
- D - Delta Branch Experiment Station and USDA-ARS
- F - Florida Agricultural Experiment Station and USDA-ARS
- G - Georgia Agricultural Experiment Station
- K - Kansas Agricultural Experiment Station
- Ky - Kentucky Agricultural Experiment Station
- L - Illinois Agricultural Experiment Station and USDA-ARS
- LS - Southern Illinois University, Carbondale
- 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
- SC - Clemson Agricultural Experiment Station
- Tn - Tennessee Agricultural Experiment Station
- TsB - Texas Agricultural Experiment Station, Beaumont, Texas
- V - Virginia Agricultural Experiment Station

* 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 con- *
* tain statements which may or may not be verified by subse- *
* quent experiments. The fact that any statement has been *
* made herein does not necessarily constitute publication. *
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* report should not be published unless permission has been *
* granted previously by those concerned. *

LOCATION OF SOYBEAN NURSERIES ALONG WITH SOIL TYPE

LOCATION	IV	V	VI	VII	VIII	SOIL	Highest yielding variety	Yield
East Coast								
Queenstown, MD	1*	1				Matapeake silt loam	Essex	51.3
Georgetown, DEL		1					Essex	51.9
Warsaw, VA	1*	1*	1			Kempsville loam	Hartwig	53.8
Plymouth, NC		1*	1*			Portsmouth s.l.	Essex	48.9
Kinston, NC			1	1*		Norfolk sandy loam	Stonewall	48.6
Clinton, NC			1	1		Norfolk sandy loam	Cook	54.0
Florence, SC (A)			1	1	1	Goldsboro sandy loam	Hagood	45.2
Florence, SC (B)				1	1	Rains fine sandy loam	Cook	28.1
Southeast								
Blackville, SC			1	1*	1*	Norfolk sandy loam	Sharkey	38.8
Tifton, GA			1	1	1	Tifton sandy loam	Cook	60.0
Tallahassee, AL			1*	1*	1	Cahaba f.s.l.	Cook	59.3
Gainesville, FL				1	1*	Arredonda f. sand	Perrin	31.2
Quincy, FL			1	1	1*	Norfolk sandy loam	Hagood	49.1
Jay, FL			1*	1*	1*	Red Bay f.s.l.	Stonewall	46.0
Fairhope, AL			1	1	1	Malbis f.s.l.	Stonewall	48.7
Baton Rouge, LA	1	1	1	1	1	Olivier silt loam	Stonewall	51.1
Upper & Central South								
Orange, VA	1	1				Starr silt clay	Essex	61.4
Clemson, SC		1	1	1		Cecil sandy loam	Essex	55.0
Calhoun, GA		1	1	1		Cedarbluff silt loam	Walters	61.1
Athens, GA		1	1*	1*		Cecil coarse s. l.	Cook	37.6
Belle Mina, AL		1	1			Decatur clay loam	Sharkey	32.4
Knoxville, TN	1	1				Sequatchie silt loam	Manoken	73.1
Cora, IL	1*	1				Stoy silt loam	Manoken	80.6
Villa Ridge, IL	1	1					Delsoy4210	57.0
Princeton, KY	1*	1				Crider silt loam	Manoken	53.9
Martin, TN	1	1				Falaja silt loam	Manoken	34.4
Jackson, TN		1	1			Lexington silt loam	Walters	52.7
Verona, MS		*				Tuscumbia silt loam	Epps	40.5

LOCATION	IV	V	VI	VII	VIII	SOIL	Highest yielding variety	Yield
Delta								
Portageville,MO(A)	1*	1*	1			Tiptonville s. l.	Hartwig	65.4
Portageville,MO(B)	1	1	1			Sharkey clay	Delsoy4710	51.1
Keiser, AR	1*	1*	1*			Sharkey clay	Manoken	57.7
Jonesboro, AR	1	1	1			Calloway silt loam	Delsoy4210	46.6
Pine Tree, AR	1	1	1			Calloway silt loam	Leflore	46.4
Stoneville,MS(A)	1	1*	1*	1*	1	Bosket f. s. l.	Walters	49.7
Stoneville,MS(B)	1*	1*	1*	1*	1*	Sharkey clay	Walters	48.4
Rohwer, AR			1	1*		Perry clay	Stonewall	49.5
St. Joseph, LA		1	1	1		Sharkey clay	Stonewall	59.3
West								
Ottawa, KS	1*	1				Woodson s. loam	Manoken	30.0
Pittsburg, KS	1	1*				Parsons silt loam	-	-
Chanute, KS	1	1				Parsons silt loam	Manoken	44.1
Bixby, OK	1	1	1			Reinach silt loam	Walters	61.0
Stuttgart, AR		1	1	1		Crowley silt loam	Stonewall	52.3
Bossier City, LA	1	1	1			Norwood v.f.s.l.	Stonewall	61.0
Beaumont, TX		1	1	1*	1*	Beranard-Morey s.c.l.	Stonewall	43.0
Lubbock TX	1	1				Acuff loam	Manoken	43.4
Bushland, TX	1					Pullman clay loam	Delsoy4210	65.1

* 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 6 to 8 locations.

Planting rate - all strains were packeted for planting at the rate of 9 seeds per foot, in 36-inch rows.

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, Manoken; Group V, Essex; Group VI, Leflore; Group VII, Stonewall; and Group VIII, Kirby.

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

1 - very good; 2 - good; 3 - fair; 4 - poor; 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 1990.

Plantings were made in the greenhouse at Athens, Georgia for *Meloidogyne incognita* and *M. arenaria* ratings and in the field near Blackville, South Carolina for *M. arenaria* ratings.

Plantings were made in the greenhouse at Jackson, Tennessee in soil infested with the soybean cyst nematode. Separate plantings were made to evaluate strains for reaction to SCN race 3 and 4.

Plantings were made in the field cage at Stoneville to evaluate for feeding by soybean looper. Plantings were made in single hills spaced 18 inches in the row with rows spaced 30 inches. Two replications were grown. A heavy population of moths were released at the time plants were in about the fourth to fifth trifoliolate state.

Statistical analyses - yield data are analyzed by analysis of variance. Differences necessary to indicate difference among strains (odds 19:1) are reported for each locations. 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
1991

VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1. MANOKEN	L707L-3048 X D78-7424	F5
2. DELSOY 4210	(WILLIAMS X PI 88788) X (UNION X DOUGLAS)	F6
3. DELSOY 4710	L77-443 X L77-906	F5
4. LS82-3646	FORREST X (DORMAN X WILL)	F5
5. S86-4499	L77-443 X L77-906	F5
6. K1170	PERSHING X RIPLEY	F5
7. LS84-0920	LS-78-N245 X FAYETTE	F5
8. V85-3336	ESSEX X R77-576	F5
9. K1192	SHERMAN X BAY	F5
10. LS86-1922	PYRAMID X LS78-W124-1	F5
11. MD87-5602	PERSHING X D77-5169	F7
12. S88-1458	S82-1044 X S79-4246	F6

Background of lines used as parents:

L70L-3048 is a selection from L15 (Wayne Rps) X D64-31146.
D74-7824 is a selection from Forrest X D70-3001. D70-3001 is of the same parentage as Centennial.
L77-443 is a selection from union X L75-8020. L75-8020 is a Corsoy type resistant to phytophthora rot.
L77-906 Williams X PI 209332.
LS78-N245 is a selection from L71L-436 X 574-5.
574-5 is a SCN race 4 resistant parentage same as Bedford.
R75-576 is a selection from Forrest X Mack.
LS78-W124 is a release from Franklin X J74-5. J74-5 is closely related to Bedford.
D77-5169 is a selection from Centennial X J74-47.
J74-47 has a parentage similar to Bedford.
S82-1044 is a selection from Cumberland X Forrest.
S79-4246 is a selection from Bedford X Crawford.

UNIFORM GROUP IV-S

1991

Uniform Group IV-S nurseries were planted at 21 locations. Results from from 20 of these locations are summarized in Tables 1-7. Table 1 gives a general summary of information including three year means for seed yield, oil and protein. Tables 2 - 6 report data from individual locations.

The cultivar Manoken recently released by the Maryland Agriculture Experiment Station had a mean seed yield of 50 bushels per acre for the twenty locations. Manoken is of late 4 S maturity. The breeding line K1192 had a mean seed yield of 49.1 bushel per acre and is 10 days earlier in maturity.

The two highest yielding entries Manoken and K1192 had the highest percentage of seed coat mottling in the planting at Orange, Virginia. Manoken had 27% of the seed showing mottling and K1192 had 8%. All other entries were 5% to 0. The seed coat mottling is assumed to be associated with soybean mosaic virus infection. All strains were rated for reaction to soybean cyst nematode races 3 and 4 in the greenhouse at Jackson, Tn. Results are reported as resistant or susceptible. All entries were also evaluated for feeding by soybean looper in the field cage at Stoneville. All were susceptible to feeding.

TABLE 1 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP IV-S, 1991

	NO. OF LOCATIONS	MANOKEN	DELLOY 4210	DELLOY 4710	LS82- 3646	LS86- 4499
Seed Yield - 1991						
East Coast	2	41.9	41.2	44.1	42.5	43.0
Upper and Central South	6	57.5	45.5	47.3	52.4	45.9
Delta	7	49.0	45.2	45.6	43.6	44.6
West	5	45.5	40.9	44.0	43.3	43.3
1990						
East Coast		46.9		44.2	47.3	48.1
Upper and Central South		53.5		43.2	48.0	43.6
Delta		47.6		40.9	41.9	41.2
West		42.0		40.5	39.5	40.1
1989-91						
East Coast		47.1		45.7	47.4	48.3
Upper & Central South		51.2		43.1	47.7	44.1
Delta		49.9		43.9	44.8	44.6
West		41.2		41.4	38.2	38.6
Oil Content - 1991						
		21.2	21.5	21.2	20.9	21.6
	1990-91	21.1		21.3	20.5	21.4
	1989-91	21.1		21.1	20.6	21.4
Protein Content - 1991						
		39.2	40.9	39.2	41.2	38.8
	1990-91	38.9		38.5	41.0	38.9
	1989-91	38.9		38.9	40.9	39.1
Seed size		14.2	18.5	17.8	15.2	18.3
Maturity index		10-06	-11	-6	-3	-8
Height		28	35	36	29	36
Seed quality		2.1	1.9	2.6	1.5	1.9
M. incognita		2.2	1.8	2.9	4.0	3.8
M. arenaria		2.5	3.8	2.6	4.0	2.8
SCN race 3		R	R	R	R	R
SCN race 4		S	R	R	S	R
SBL feeding		3	4	3	4	3
% mottled seed		27	1	5	0	2
Flower color		W	W	P	P	P
Pubescence color		T	T	T	T	T
Pod wall color		T	T	T	T	T

TABLE 1 - (continued)

	K1170	LS84- 0920	V85- 3336	K1192	LS86 1922	MD87- 5602	S88- 1458
Seed Yield - 1991							
East Coast	39.2	40.9	42.1	48.8	40.9	44.0	42.9
Upper and Central South	50.8	47.6	52.1	52.3	44.4	52.4	44.7
Delta	41.1	44.9	44.6	48.6	44.3	45.2	45.8
West	45.7	45.1	44.6	46.0	42.7	44.7	36.8
1990-91							
East Coast	45.6	44.7	46.9				
Upper and Central South	48.4	46.3	48.5				
Delta	40.8	42.8	42.5				
West	41.3	40.2	39.5				
1989-91							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1991							
	21.0	20.5	20.2	21.0	21.5	20.5	21.4
1990-91	20.7	20.3	20.1				
1989-91							
Protein Content -							
1991	40.1	41.1	41.4	41.3	39.6	40.9	41.5
1990-91	40.0	40.9	41.3				
1989-91							
Seed size	13.3	17.4	14.2	14.3	16.4	15.1	18.6
Maturity index	-0	-6	+0	-3	-10	-3	-8
Height	24	25	28	37	39	25	38
Seed quality	2.6	2.2	1.6	1.8	1.6	1.9	1.8
M. incognita	4.8	1.9	1.5	4.5	2.5	2.2	3.8
M. arenaria	4.8	4.1	3.5	2.9	3.5	3.8	4.0
SCN race 3	S	R	S	S	R	R	R
SCN race 4	S	R	S	S	R	R	R
SBL feeding	3	3	3	3	3	3	3
% mottled seed	1	6	1	8	3	4	1
Flower color	W	W	P	P	P	W	W
Pubescence color	G	T	T	G	T	T	T
Pod wall color	T	T	T	T	T	T	T

TABLE 2 - SEED YIELD, IN BUSHEL PER ACRE, FOR THE STRAINS IN UNIFORM GROUP IV-S, 1991

LOCATION	MANOKEN	DELSOY 4210	DELSOY 4710	LS82- 3646	LS86- 4499	K1170
EAST COAST						
QUEENSTOWN, MD	39.1	40.0	42.6	42.0	41.4	41.7
WARSAW, VA	44.6	42.3	45.5	43.0	44.5	36.7
MEAN	41.9	41.2	44.1	42.5	43.0	39.2
UPPER AND CENTRAL SOUTH						
ORANGE, VA	51.8	54.6	56.6	63.6	67.7	61.3
VILLA RIDGE, IL	51.3	57.0	49.1	50.6	49.9	44.6
CARBONDALE, IL	80.6	53.2	55.2	70.0	51.5	61.4
PRINCETON, KY	53.9	43.2	42.1	46.9	45.4	53.6
KNOXVILLE, TN	73.1	39.3	48.6	57.1	40.8	47.0
MARTIN, TN	34.4	25.4	32.2	26.3	20.4	36.6
MEAN	57.5	45.5	47.3	52.4	45.9	50.8
DELTA						
PORTAGEVILLE, MO(A)	51.2	56.3	54.1	48.7	52.7	39.6
PORTAGEVILLE, MO(B)	48.1	40.5	51.1	47.0	42.2	43.5
KEISER, AR	57.7	51.2	51.5	48.1	52.4	50.6
JONESBORO, AR	44.4	46.6	40.8	43.0	44.6	42.3
PINE TREE, AR	47.3	44.9	44.8	41.3	46.7	31.9
STONEVILLE, MS(A)	42.5	37.3	30.0	34.8	30.9	35.0
STONEVILLE, MS(B)	52.0	39.8	44.8	42.5	42.8	44.6
MEAN	49.0	45.2	45.3	43.6	44.6	41.1
WEST						
CHANUTE, KS	44.1	38.0	34.4	40.4	35.8	42.1
BIXBY, OK	54.1	37.7	45.2	42.9	39.8	47.4
BUSHLAND, TX	56.1	65.3	61.7	58.4	64.7	57.4
LUBBOCK, TX	43.4	38.8	51.8	45.7	48.9	52.4
OTTAWA, KS	30.0	24.9	27.1	29.0	27.1	29.0
MEAN	45.5	40.9	44.0	43.3	43.3	45.7

TABLE 2 - (continued)

LOCATION	LS84- 0920	V85- 3336	K1192	LS86- 1922	MD87- 5602	S88- 1458	L.S.D. (.05)	C.V. (%)
EAST COAST								
QUEENSTOWN, MD	36.7	40.7	49.7	39.0	41.4	38.4	5.7	8.2
WARSAW, VA	45.1	43.5	47.8	42.8	46.5	47.4	.	8.1
MEAN	40.9	42.1	48.8	40.9	44.0	42.9		
UPPER AND CENTRAL SOUTH								
ORANGE, VA	35.5	51.8	52.5	57.2	47.0	50.2	13.7	15.0
VILLA RIDGE, IL	49.1	47.0	55.3	45.5	52.1	41.1	8.4	10.1
CARBONDALE, IL	61.5	66.7	59.9	54.4	71.8	52.0	7.4	7.2
PRINCETON, KY	52.5	56.2	53.4	43.1	52.1	45.6	8.1	9.7
KNOXVILLE, TN	51.1	62.2	61.1	44.1	60.6	57.2	10.5	11.6
MARTIN, TN	35.6	29.0	31.8	21.8	30.5	22.2	13.9	27.8
MEAN	47.6	52.1	52.3	44.4	52.4	44.7		
DELTA								
PORTAGEVILLE, MO(A)	50.9	42.1	48.2	51.5	47.7	49.8	5.6	6.7
PORTAGEVILLE, MO(B)	53.5	51.9	48.9	43.2	49.9	50.5	8.1	10.1
JONESBORO, AR	45.2	44.8	45.2	43.6	44.7	45.3	.	14.3
KEISER, AR	52.3	52.6	53.8	50.6	51.6	47.2	6.1	7.0
PINE TREE, AR	38.9	44.9	47.0	41.4	36.8	37.3	.	20.2
STONEVILLE, MS(A)	35.9	27.3	48.1	40.8	40.7	47.3	9.6	15.0
STONEVILLE, MS(B)	37.7	48.5	49.2	39.1	45.1	42.9	6.4	8.6
MEAN	44.9	44.6	48.6	44.3	45.2	45.8		
WEST								
CHANUTE, KS	46.5	40.7	42.1	39.6	44.2	37.4	3.0	5.1
OTTAWA, KS	27.8	28.1	29.4	30.0	29.4	25.8	3.6	9.0
BIXBY, OK	41.2	52.3	48.4	40.1	47.7	37.9	6.1	8.1
BUSHLAND, TX	63.1	60.8	53.7	63.7	52.5	47.0	10.7	10.8
LUBBOCK, TX	47.1	41.0	56.5	40.0	49.6	36.0	11.8	15.1
MEAN	45.1	44.6	46.0	42.7	44.7	36.8		

TABLE 3 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP IV-S, 1991

LOCATION	MANOKEN	DELLOY 4210	DELLOY 4710	LS82- 3646	LS86- 4499	K1170
OIL PERCENTAGE						
CARBONDALE, IL	22.0	22.4	22.0	21.3	22.4	22.1
CHANUTE, KS	20.6	19.7	19.5	20.4	20.3	20.0
QUEENSTOWN, MD	20.0	20.1	20.4	18.9	19.4	18.2
WARSAW, VA	21.1	22.0	21.1	21.2	21.9	21.3
ORANGE, VA	22.4	22.0	21.8	21.5	22.5	21.9
PRINCETON, KY	21.6	22.8	21.0	21.6	21.8	21.6
PORTAGEVILLE, MO(A)	21.7	21.5	21.9	20.9	22.0	21.6
KEISER, AR	21.2	22.6	21.4	20.6	21.8	21.0
KNOXVILLE, TN	20.0	20.3	21.0	20.9	21.6	21.7
LUBBOCK, TX	21.5	21.6	21.4	21.8	21.9	21.0
MEAN	21.2	21.5	21.2	20.9	21.6	21.0
PROTEIN PERCENTAGE						
QUEENSTOWN, MD	39.9	42.1	38.4	41.8	40.2	42.3
WARSAW, VA	39.5	39.9	39.0	41.0	38.3	39.2
ORANGE, VA	36.6	40.3	38.3	40.5	37.3	38.9
CARBONDALE, IL	38.1	40.0	38.9	41.3	37.7	38.9
PRINCETON, KY	38.1	39.7	38.1	40.2	38.5	39.1
KNOXVILLE, TN	42.5	43.7	42.6	42.9	40.9	43.8
PORTAGEVILLE, MO(A)	39.1	41.2	38.0	40.6	39.0	39.1
KEISER, AR	40.8	40.6	40.3	42.5	40.3	41.0
LUBBOCK, TX	38.6	42.6	38.5	40.0	38.5	40.1
CHANUTE, KS	38.7	39.3	40.2	41.6	37.1	38.2
MEAN	39.2	40.9	39.2	41.2	38.8	40.1
GRAMS PER 100 SEED						
QUEENSTOWN, MD	14.3	13.7	16.3	13.8	13.0	16.3
WARSAW, VA	16.1	14.2	17.4	15.2	13.6	19.0
ORANGE, VA	13.8	14.8	16.6	15.1	14.6	17.7
VILLA RIDGE, IL	13.2	12.6	14.2	12.7	12.2	16.0
PRINCETON, KY	11.1	13.6	16.4	12.8	13.7	14.1
PORTAGEVILLE, MO(A)	12.6	13.6	14.8	12.8	12.5	15.9
KEISER, AR	14.0	14.0	16.0	15.0	14.0	17.0
LUBBOCK, TX	13.9	14.3	16.1	14.4	14.5	16.4
MEAN	13.6	13.9	16.0	14.0	13.5	16.6

TABLE 3.- (continued)

LOCATION	LS84- 0920	V85- 3336	K1192	LS86- 1922	MD87- 5602	S88- 1458
OIL PERCENTAGE						
QUEENSTOWN, MD	18.6	19.0	20.7	19.4	18.6	19.7
WARSAW, VA	20.7	21.1	21.8	21.2	20.9	21.8
ORANGE, VA	20.5	20.9	22.2	22.5	21.7	21.6
CARBONDALE, IL	21.4	21.2	21.4	22.5	20.9	22.5
PRINCETON, KY	21.0	20.6	20.7	21.5	21.4	22.0
KNOXVILLE, TN	19.8	19.9	21.4	22.3	21.2	21.5
PORTAGEVILLE, MO(A)	20.8	19.9	20.6	22.1	20.5	21.6
KEISER, AR	21.3	19.5	20.7	21.4	20.1	21.7
LUBBOCK, TX	21.1	20.1	21.2	21.5	20.5	21.4
CHANUTE, KS	19.7	19.3	19.0	20.1	19.0	20.5
MEAN	20.5	20.2	21.0	21.5	20.5	21.4
PROTEIN PERCENTAGE						
QUEENSTOWN, MD	42.9	42.0	41.5	41.7	42.9	43.3
WARSAW, VA	40.5	40.5	40.2	40.0	41.5	41.0
ORANGE, VA	40.7	41.6	40.5	37.1	38.7	40.9
CARBONDALE, IL	39.8	40.3	41.5	38.3	40.7	40.5
PRINCETON, KY	39.8	39.2	40.5	38.6	38.5	40.7
KNOXVILLE, TN	44.0	43.8	40.5	42.8	41.1	41.4
PORTAGEVILLE, MO(A)	40.7	42.0	42.4	38.1	41.5	42.2
KEISER, AR	40.9	43.0	42.1	40.3	42.5	42.6
LUBBOCK, TX	40.9	40.9	41.5	40.4	41.3	42.2
CHANUTE, KS	40.3	40.4	42.3	38.8	40.3	40.1
MEAN	41.1	41.4	41.3	39.6	40.9	41.5
GRAMS PER 100 SEED						
QUEENSTOWN, MD	16.4	13.9	15.6	12.6	15.7	12.9
WARSAW, VA	18.7	13.1	15.6	13.2	17.4	13.7
ORANGE, VA	17.0	14.2	16.5	13.5	17.8	14.3
VILLA RIDGE, IL	14.8	12.5	14.9	11.6	12.3	12.7
PRINCETON, KY	11.0	13.6	14.0	13.4	15.4	12.3
PORTAGEVILLE, MO(A)	14.9	11.8	14.5	11.3	13.9	11.3
KEISER, AR	15.5	14.0	14.0	12.5	16.5	14.0
LUBBOCK, TX	14.4	14.7	16.0	13.1	16.3	15.0
MEAN	15.3	13.5	15.1	12.7	15.7	13.3

TABLE 4 - RELATIVE MATURITY DATA, DAYS EARLIER (-) OR LATER (+) THAN MANOKEN FOR THE STRAINS IN UNIFORM GROUP IV-S, 1991

LOCATION	MANOKEN	DELROY 4210	DELROY 4710	LS82- 3646	LS86- 4499	K1170
EAST COAST						
QUEENSTOWN, MD	10/07	-9	-4	+0	-6	-1
WARSAW, VA	10/07	-10	-6	-5	-7	-1
MEAN	10/07	-9	-5	-2	-6	-1
UPPER AND CENTRAL SOUTH						
ORANGE, VA	10/05	-10	-6	-1	-6	+0
CARBONDALE, IL	10/01	-16	-4	-2	-1	+0
VILLA RIDGE, IL	10/04	-10	-6	-3	-9	-1
PRINCETON, KY	10/06	-7	-3	+1	-5	+0
KNOXVILLE, TN	10/01	-22	-8	-6	-12	-2
MEAN	10/03	-13	-5	-2	-6	+0
DELTA						
PORTAGEVILLE, MO (A)	10/08	-13	-11	-5	-9	-2
PORTAGEVILLE, MO (B)	10/16	-7	-6	-5	-6	+0
KEISER, AR	10/07	-9	-4	-2	-8	+1
JONESBORO, AR	10/04	-11	-7	-1	-7	+1
PINE TREE, AR	10/01	-9	-8	-6	-9	-1
STONEVILLE, MS (A)	09/16	-9	-1	-3	-3	+2
STONEVILLE, MS (B)	09/28	-7	-5	-4	-8	+1
MEAN	10/03	-9	-6	-4	-7	+0
WEST						
BIXBY, OK	10/21	-10	-10	-10	-10	+0
LUBBOCK, TX	10/04	-20	-11	-5	-15	+2
BUSHLAND, TX	10/07	-17	-13	-9	-18	-7
MEAN	10/11	-16	-12	-8	-15	-2

TABLE 4 - (continued)

LOCATION	LS84- 0920	V85- 3336	K1192	LS86- 1922	MD87- 5602	S88- 1458
EAST COAST						
QUEENSTOWN, MD	-1	+4	+0	-8	-1	-8
WARSAW, VA	-6	-2	-4	-9	-3	-7
MEAN	-3	+1	-2	-8	-2	-7
UPPER AND CENTRAL SOUTH						
ORANGE, VA	-5	+0	-3	-11	-3	-4
VILLA RIDGE, IL	-6	-1	-2	-10	-2	-8
CARBONDALE, IL	-4	+1	-4	-15	-1	-4
PRINCETON, KY	-1	-1	+0	-6	-1	-6
KNOXVILLE, TN	-11	+0	-4	-14	-3	-5
MEAN	-5	+0	-2	-11	-2	-5
DELTA						
PORTAGEVILLE, MO(A)	-8	-4	-2	-12	-6	-7
PORTAGEVILLE, MO(B)	-5	+1	-1	-10	-2	-7
KEISER, AR	-2	+0	-1	-8	-2	-7
JONESBORO, AR	-6	+2	-7	-10	-2	-7
PINE TREE, AR	-7	+0	-10	-10	-5	-13
STONEVILLE, MS(A)	-6	+3	+0	-7	-3	-4
STONEVILLE, MS(B)	-2	+1	-2	-9	-1	-9
MEAN	-5	+0	-3	-10	-3	-8
WEST						
BIXBY, OK	-10	+0	-10	-10	-10	-10
LUBBOCK, TX	-10	+3	-2	-14	-2	-22
BUSHLAND, TX	-20	+1	-13	-21	-10	-16
MEAN	-14	+1	-9	-15	-8	-16

TABLE 5 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP IV-S, 1991

LOCATION	MANOKEN	DELSOY 4210	DELSOY 4710	LS82- 3646	LS86- 4499	K1170
EAST COAST						
QUEENSTOWN, MD	31	39	41	34	41	25
WARSAW, VA	23	33	34	22	33	19
MEAN	27	36	38	28	37	22
UPPER AND CENTRAL SOUTH						
ORANGE, VA	41	53	56	37	53	37
VILLA RIDGE, IL	32	45	43	31	42	25
CARBONDALE, IL	40	45	49	40	46	35
PRINCETON, KY	38	39	39	39	37	31
MARTIN, TN	29	27	30	28	29	23
KNOXVILLE, TN	26	35	40	27	39	22
MEAN	34	41	43	34	41	29
DELTA						
PORTAGEVILLE, MO(A)	28	36	33	35	34	16
PORTAGEVILLE, MO(B)	20	24	29	22	28	21
KEISER, AR	25	37	36	27	39	19
PINE TREE, AR	20	32	34	24	35	17
STONEVILLE, MS(A)	22	35	35	23	34	18
STONEVILLE, MS(B)	23	33	34	25	32	21
JONESBORO, AR	34	41	41	33	42	28
MEAN	25	34	35	27	35	20
WEST						
CHANUTE, KS	29	34	34	29	34	22
OTTAWA, KS	30	31	28	32	31	24
BIXBY, OK	30	33	36	30	37	25
BUSHLAND, TX	21	21	24	20	27	21
LUBBOCK, TX	25	26	29	24	31	25
MEAN	27	29	30	27	32	23

TABLE 5 - (continued)

LOCATION	LS84- 0920	V85- 3336	K1192	LS86- 1922	MD87- 5602	S88- 1458
EAST COAST						
QUEENSTOWN, MD	31	27	41	43	26	40
WARSAW, VA	20	28	32	37	19	35
MEAN	26	28	37	40	23	38
UPPER AND CENTRAL SOUTH						
ORANGE, VA	36	39	50	57	34	56
VILLA RIDGE, IL	27	30	41	46	27	45
CARBONDALE, IL	43	39	53	50	37	52
PRINCETON, KY	31	33	40	45	32	42
MARTIN, TN	25	24	29	29	24	33
KNOXVILLE, TN	21	26	37	44	24	43
MEAN	31	32	42	45	30	45
DELTA						
PORTAGEVILLE, MO(A)	12	16	38	38	19	44
PORTAGEVILLE, MO(B)	21	23	28	32	21	30
KEISER, AR	24	28	39	39	24	38
PINE TREE, AR	21	23	29	36	19	32
STONEVILLE, MS(A)	19	20	41	37	19	42
STONEVILLE, MS(B)	21	26	34	38	22	37
JONESBORO, AR	30	33	47	47	27	44
MEAN	21	24	37	38	22	38
WEST						
CHANUTE, KS	30	27	31	37	24	33
OTTAWA, KS	27	29	27	34	25	29
BIXBY, OK	25	30	37	35	29	37
BUSHLAND, TX	19	25	31	29	20	25
LUBBOCK, TX	20	26	34	27	22	30
MEAN	24	27	32	32	24	31

TABLE 6 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP IV-S, 1991

LOCATION	MANOKEN	DELLOY 4210	DELLOY 4710	LS82- 3646	LS86- 4499	K1170
EAST COAST						
QUEENSTOWN, MD	3.5	3.3	3.5	3.3	3.5	2.0
WARSAW, VA	1.3	1.5	1.9	1.0	1.5	1.0
UPPER AND CENTRAL SOUTH						
ORANGE, VA	3.3	2.7	3.3	2.0	3.3	1.3
CARBONDALE, IL	2.1	2.2	2.3	2.1	2.2	1.0
PRINCETON, KY	1.0	1.0	1.0	1.0	1.0	1.0
KNOXVILLE, TN	1.3	2.3	3.7	1.0	3.7	1.0
DELTA						
PORTAGEVILLE, MO(A)	1.0	1.0	1.5	1.0	1.0	1.0
PORTAGEVILLE, MO(B)	1.0	1.0	1.0	1.0	1.0	1.0
KEISER, AR	1.0	1.3	1.2	1.0	1.3	1.0
PINE TREE, AR	1.0	1.0	1.0	1.0	1.0	1.0
STONEVILLE, MS(A)	2.0	2.0	2.0	2.0	2.0	2.0
STONEVILLE, MS(B)	2.0	2.0	2.0	2.0	2.3	2.0
JONESBORO, AR	1.0	1.0	1.0	1.0	1.0	1.0
WEST						
CHANUTE, KS	2.3	1.7	1.3	2.0	2.0	1.0
OTTAWA, KS	2.0	1.0	1.0	2.0	1.0	1.0
BIXBY, OK	1.0	0.0	0.0	0.0	0.0	0.0
BUSHLAND, TX	5.0	4.0	3.2	3.0	2.5	1.7
LUBBOCK, TX	2.5	2.5	2.5	1.5	2.5	1.5

TABLE 6 - (continued)

LOCATION	LS84- 0920	V85- 3336	K1192	LS86- 1922	MD87- 5602	S88- 1458
EAST COAST						
QUEENSTOWN, MD	3.3	2.8	3.3	3.3	2.3	3.2
WARSAW, VA	1.0	1.7	1.2	1.8	1.0	1.3
UPPER AND CENTRAL SOUTH						
ORANGE, VA	2.7	2.7	2.7	2.7	1.3	3.0
CARBONDALE, IL	1.1	1.3	1.8	1.9	1.2	2.3
PRINCETON, KY	1.0	1.0	1.0	1.0	1.0	1.0
KNOXVILLE, TN	1.2	1.0	1.7	2.8	1.0	3.8
DELTA						
PORTAGEVILLE, MO(A)	1.0	1.0	1.0	1.0	1.0	1.0
PORTAGEVILLE, MO(B)	1.0	1.0	1.0	1.0	1.0	1.0
KEISER, AR	1.0	1.0	1.0	1.3	1.0	1.3
PINE TREE, AR	1.0	1.0	1.0	1.0	1.0	1.0
STONEVILLE, MS(A)	2.0	2.0	2.3	2.0	2.0	2.0
STONEVILLE, MS(B)	2.0	2.0	2.0	2.3	2.0	3.0
JONESBORO, AR	1.0	1.0	1.0	1.0	1.0	1.0
WEST						
CHANUTE, KS	1.0	2.0	1.3	2.0	1.0	2.0
OTTAWA, KS	2.0	1.3	1.0	2.0	1.0	1.0
BIXBY, OK	0.0	1.0	0.0	0.0	0.0	0.0
BUSHLAND, TX	1.0	2.7	1.0	2.5	3.7	2.0
LUBBOCK, TX	1.5	1.7	2.5	2.7	2.0	2.5

TABLE 7 - SEED QUALITY SCORES FOR THE STRAINS IN UNIFORM GROUP IV-S, 1991

LOCATION	MANOKEN	DELLOY 4210	DELLOY 4710	LS82- 3646	LS86- 4499	K1170
EAST COAST						
QUEENSTOWN, MD	1.3	1.7	1.7	1.2	2.0	1.0
WARSAW, VA	1.2	1.5	1.8	1.8	1.5	1.0
UPPER AND CENTRAL SOUTH						
ORANGE, VA	1.0	1.0	1.3	1.0	1.0	1.0
VILLA RIDGE, IL	1.0	2.0	2.0	1.5	1.5	1.0
CARBONDALE, IL	2.0	3.0	3.0	2.0	3.0	1.0
KNOXVILLE, TN	1.5	3.8	3.5	2.0	3.8	1.2
DELTA						
PORTAGEVILLE, MO(A)	2.0	2.5	2.5	1.5	3.0	1.5
PORTAGEVILLE, MO(B)	2.0	2.0	2.0	1.5	2.0	1.5
KEISER, AR	2.0	3.0	2.0	1.0	2.5	1.5
PINE TREE, AR	2.0	3.0	3.0	2.3	3.0	2.0
STONEVILLE, MS(A)	2.0	2.0	2.3	2.0	2.0	2.0
STONEVILLE, MS(B)	2.0	2.0	2.0	2.0	2.0	2.0
JONESBORO, AR	2.0	2.3	2.7	2.7	2.7	2.0
WEST						
CHANUTE, KS	2.0	2.0	3.0	2.0	3.0	2.0
OTTAWA, KS	2.0	2.0	2.0	2.0	3.0	2.0
BUSHLAND, TX	1.7	2.0	1.7	2.0	2.0	1.7
LUBBOCK, TX	1.5	2.5	2.0	2.0	2.2	1.5

TABLE 7 - (continued)

LOCATION	LS84- 0920	V85- 3336	K1192	LS86- 1922	MD87- 5602	S88- 1458
EAST COAST						
QUEENSTOWN, MD	1.8	1.3	1.3	1.0	1.0	1.3
WARSAW, VA	1.2	1.0	1.0	1.8	1.2	1.5
UPPER AND CENTRAL SOUTH						
ORANGE, VA	1.0	1.0	1.0	1.0	1.0	1.0
VILLA RIDGE, IL	2.0	1.5	1.5	2.0	1.0	2.0
CARBONDALE, IL	2.0	1.0	2.0	3.0	1.0	3.0
KNOXVILLE, TN	3.5	2.5	2.0	3.2	2.7	2.2
DELTA						
PORTAGEVILLE, MO(A)	3.0	2.5	2.0	3.0	2.0	2.5
PORTAGEVILLE, MO(B)	1.5	2.0	1.5	2.0	1.5	1.0
KEISER, AR	1.0	1.5	2.0	2.5	1.0	2.0
PINE TREE, AR	2.0	2.3	2.3	2.7	2.0	2.0
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
JONESBORO, AR	2.0	2.3	2.0	2.7	2.0	2.0
WEST						
CHANUTE, KS	2.0	2.0	2.0	2.0	2.0	2.0
OTTAWA, KS	3.0	2.0	2.0	3.0	2.0	2.0
BUSHLAND, TX	2.0	1.5	1.0	1.7	1.5	2.0
LUBBOCK, TX	2.0	1.7	1.5	2.5	1.5	2.0

PRELIMINARY GROUP IV-S

1991

Preliminary Group IV-S nurseries, which included Delsoy 4210, Manoken, 31 experimental entries, and three Chinese varieties were grown at 8 locations. Data was obtained from seven of the locations. The parentage for each of the entries is reported in Table 8. Table 9 gives a general summary of performance and Tables 10-14 report data from the individual locations.

Manoken had an overall mean seed yield of 49.6 bushels per acre, ranked highest in seed yield. Delsoy 4210 had a mean seed yield of 43.7 bushels per acre. Five lines yielded significantly less than Delsoy. The three Chinese varieties also yielded significantly less than Delsoy 4210. Two of the lower yielding lines were high protein low oil entries, but the third high protein entry MD87L-0918 had an overall mean yield of 41.3 bushels per acre, 51% protein and 14.1% oil. It's mean seed yield was only slightly below that for Delsoy 4210.

All entries were screened for reaction to cyst nematode races 3 and 4 in the greenhouse at Jackson, Tennessee. Thirteen of the experimental lines were rated resistant to SCN race 3. Five of these were also rated resistant to race 4, while three additional lines were considered heterogeneous in reaction to race 4.

TABLE 8 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP IV-S, 1991

VARIETY OR STRAIN	PARENTAGE
1. DELSOY 4210	(WILLIAMS S PI 88788) X (UNION X DOUGLAS)
2. MD83-5008	L70L-3048 X D74-7824
3. K1215	K1099 X A5149
4. K1216	K1099 X PERSHING
5. K1217	MD79-5043 X HUTCHESON
6. K1218	PIONEER 5482 X A3127
7. K1219	V75-315 X A83-371012
8. K1220	V75-315 X A83-371012
9. KY88-1216	K1099 X HUTCHESON
10. KY88-1344	PENNYRILE X A5149
11. KY88-4080	K1099 X HUTCHESON
12. KY88-6029	FFR561 X RIPLEY
13. L83-3804	L78-8694 X L78L-449
14. LS86-743	ESSEX X LS78-124-1
15. LS86-1517	PYRAMID X DOUGLAS
16. LS86-2835	LS78-124-1 X DOUGLAS
17. LS87-815	LS78-815 X LS79-220
18. LS88-213	LS79-220 X FAYETTE
19. LS88-519	LS79-330 X FAYETTE
20. LS88-604	LS79-330 X FAYETTE
21. LS88-916	LS79-330 X FAYETTE
22. LS88-1043	LS79-330 X FAYETTE
23. MD87-5669	L80-4349 X PYRAMID
24. MD88-5360	MD-MBB 80-79 X MORGAN
25. MD87L-0051	CX792-21 X D76-8070
26. MD87L-0198	CX792-21 X D80-6931
27. MD87L-0309	CX792-21 X NC-2-62
28. S88-1152	FAYETTE X LS78-248
29. S88-1154	FAYETTE X LS78-248
30. S88-19561	FORREST(3) X PI 437654
31. S89-2448	S81-2524 X D82-3298
32. S89-2581	CENTENNIAL X (FORREST X PI 437654)
33. V87-299	ESSEX X V79-2856
34. YOUNBIAN 30	CHINESE VARIETY
35. YUEJIN NO.5	CHINESE VARIETY
36. XUDOU NO.2	CHINESE VARIETY

TABLE 9 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP IVS, 1991

STRAIN	SEED YIELD	MAT. INDEX	-----PERCENT-----			SCN 3	SCN 4
			HT.	OIL	PROTEIN		
DELROY 4210	43.7	09/24	36	21.4	41.8	R	R
MANOKEN	49.6	10+	27	20.7	40.1	R	S
K1215	46.8	9+	21	20.9	41.6	S	S
K1216	48.2	10+	25	20.0	42.0	S	S
K1217	44.5	7+	21	20.6	41.1	S	S
K1218	48.2	9+	23	21.4	39.8-	S	S
K1219	44.4	9+	23	21.0	40.9	S	S
K1220	44.2	9+	23	21.2	40.8	S	S
KY88-1216	45.3	8+	19	20.6	40.9	S	S
KY88-1344	45.2	6+	37	21.4	42.1	S	S
KY88-4080	47.0	10+	22	21.1	41.1	S	S
KY88-6029	41.8	5+	21	20.7	41.7		
L83-3804	45.6	8+	28	21.4	41.1	S	S
LS86-743	40.0	4+	27	20.0	41.4	S	S
LS86-1517	47.0	2+	39	20.2	42.5	R	R
LS86-2835	42.9	3+	36	19.8	42.6	R	R
LS87-815	40.0	5+	27	20.0	40.3	R	S
LS88-213	45.8	0	26	21.1	40.2	R	S
LS88-519	44.9	4+	27	20.5	40.4	R	R
LS88-604	43.6	6+	30	21.4	40.1	R	S
LS88-916	38.5	6+	28	20.9	41.2	S	S
LS88-1043	41.0	6+	26	20.5	41.4	R	S
MD87-5669	45.1	5+	29	19.7	41.7	R	S
MD88-5360	45.1	10+	22	20.7	41.2	S	S
MD87L-0051	32.5-	5-	31	16.4-	50.7+	S	S
MD87L-0198	41.4	7+	27	14.1-	51.0+	S	S
MD87L-0309	33.6-	11+	45	13.8-	54.2+	S	S
S88-1152	43.4	7+	24	19.5	43.2	R	R
S88-1154	43.1	7+	25	19.1	43.5	R	R
S88-19561	45.4	11+	42	20.1	41.1	R	H
S89-2448	48.1	9+	30	20.0	39.7-	R	H
S89-2581	44.3	9+	33	18.2-	40.7	R	H
V87-299	48.1	5+	39	20.6	42.1	S	S
YOUBIAN 30	27.1-	1+	29	21.7	41.1	S	S
YUEJIN NO.5	30.4-	2+	24	19.3	42.5	S	S
XUDOU NO.2	31.5-	3+	42	18.7	44.1+	S	S
LSD (.05)	5.9			2.9	1.9		
C.V.	13%			1%	.%		

+ or - designations refer to differences Delsoy 4210

TABLE 10 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1991

STRAIN	QUEENS-TOWN, MD	KEISER, AR	PORTAGE-VILLE, MO	WARSAW, VA	CARBON-DALE, IL	OTTAWA, KS	PRINCE-TON, KY	STONE-VILLE, MS (B)
DELSOY4210	37.9	48.9	50.6	55.5	53.2	23.7	.	36.2
MANOKEN	39.6	56.2	55.9	46.0	71.0+	31.0+	.	47.5+
K1215	44.6+	50.9	40.1-	51.7	64.2+	31.5+	.	44.9+
K1216	46.1+	53.2	45.4	51.7	66.5+	29.0+	.	45.5+
K1217	43.3	53.5	26.0-	51.0	63.4+	32.0+	.	42.2+
K1218	46.2+	55.1	44.2	57.3	60.7	31.0+	.	43.0+
K1219	39.6	55.8	38.5-	51.7	56.6	31.0+	.	37.3
K1220	38.6	55.1	40.0-	53.0	55.0	30.0+	.	37.6
KY88-1216	42.8	53.6	34.1-	49.7	68.8+	31.0+	.	36.8
KY88-1344	48.2+	54.9	37.2-	43.6-	52.5	28.6+	.	51.1+
KY88-4080	49.3+	55.6	39.0-	52.9	67.6+	28.1+	.	36.7
KY88-6029	41.2	49.2	28.0-	45.9	60.1	31.0+	.	37.3
L83-3804	45.5+	57.3	29.6-	52.2	59.9	24.7	.	50.0+
LS86-743	37.2	42.5	34.1-	47.0	56.5	25.7	.	36.7
LS86-1517	36.5	54.8	50.2	38.8-	66.5+	29.5+	.	52.8+
LS2835	39.0	50.2	49.7	49.5	45.1	23.3	.	43.8+
LS87-815	33.1	43.9	43.0	48.1	55.2	25.7	.	30.8-
LS88-213	42.7	45.3	46.8	54.6	67.2+	28.1+	.	36.2
LS88-519	37.8	50.5	46.2	46.7	67.8+	29.0+	.	36.4
LS88-604	41.7	50.3	42.1-	46.3	58.5	27.1	.	39.2
LS88-916	36.4	43.3	32.1-	43.1-	52.0	26.7	.	35.8
LS88-1043	40.8	47.1	38.3-	45.2	55.5	26.2	.	34.2
MD87-5669	37.7	53.3	40.7-	53.7	59.6	29.5+	.	40.9
MD88-5360	38.5	58.6	29.8-	51.4	66.9+	27.6+	.	43.1+
MD87L-005	34.5	36.8	36.1-	38.0-	40.2-	15.0-	.	27.0-
MD87L-019	40.6	48.9	35.9-	40.0-	56.2	21.8	.	46.6+
MD87L-030	35.3	39.3	42.2-	31.4-	32.6-	15.5-	.	38.9
S88-11522	38.0	45.2	51.5	45.2	57.2	28.1+	.	38.9
S88-1154	36.9	48.3	47.6	40.7-	58.0	28.1+	.	41.9+
S88-19561	46.9+	57.0	54.0	46.7	46.1	23.3	.	44.1+
S89-2448	42.1	51.0	54.5	45.5	69.4+	26.2	.	48.1+
S89-2581	35.4	48.0	47.9	51.6	65.0+	20.8	.	41.2+
V87-299	47.0+	57.1	51.6	47.3	58.0	27.6+	.	48.1+
YOUBIAN 30	23.7-	35.7	25.4-	28.9-	24.6-	22.3	.	29.2-
YUEJIN 5	27.0-	38.6	29.6-	38.8-	26.6-	21.3	.	31.1-
XUDOU 2	25.8-	39.1	26.8-	37.4-	33.7-	18.4-	.	39.2
LSD (.05)	5.9	.	7.7	10.4	8.8	3.5	.	5.0
C.V.	7%	%	9%	10%	8%	8%	%	6%

TABLE 11 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1991

STRAIN	QUEENS-TOWN, MD	KEISER, AR	PORTAGE-VILLE, MO	WARSAW, VA	CORA, IL
DELLOY 4210	19.6	21.9	21.9	21.8	22.7
MANOKEN	20.1	20.4	21.5	20.9	22.2
K1215	19.4	21.0	20.3	21.7	22.7
K1216	17.9	21.5	21.6	20.2	20.5
K1217	19.8	20.9	21.0	20.9	22.2
K1218	20.4	21.6	22.1	21.9	22.2
K1219	19.2	20.8	22.0	21.3	22.4
K1220	19.7	21.1	21.4	21.9	22.9
KY88-1216	19.1	19.2	21.9	21.6	21.6
KY88-1344	21.7	21.9	21.9	21.7	22.2
KY88-4080	20.3	20.8	21.0	21.9	22.4
KY88-6029	19.2	20.8	20.2	21.6	21.8
L83-3804	20.4	21.2	21.8	22.0	22.3
LS86-743	18.0	20.2	20.7	21.1	21.3
LS86-1517	19.6	20.2	20.7	20.6	21.7
LS2835	19.1	20.0	19.7	20.0	21.5
LS87-815	18.5	20.7	20.2	20.1	21.2
LS88-213	20.1	20.9	21.3	20.8	22.5
LS88-519	19.3	20.4	20.8	21.2	21.5
LS88-604	21.1	21.6	20.9	21.6	22.9
LS88-916	20.0	21.1	21.4	20.7	22.4
LS88-1043	19.7	20.4	20.7	21.1	21.1
MD87-5669	18.5	19.9	20.0	20.3	20.9
MD88-5360	19.1	20.8	21.2	21.1	21.9
MD87L-005	16.5	16.9	16.0	16.3	17.5
MD87L-019	12.6	14.7	13.4	14.2	14.8
MD87L-030	14.5	12.7	14.2	13.8	15.1
S88-11522	18.4	19.9	19.6	19.8	21.2
S88-1154	18.4	19.4	18.8	18.9	20.2
S88-19561	19.8	20.2	19.5	20.9	21.6
S89-2448	19.9	19.4	21.0	20.2	20.9
S89-2581	18.8	17.6	18.3	18.6	18.7
V87-299	19.9	20.8	20.4	21.0	21.7
YOUBIAN 30	22.2	22.2	21.9	21.7	22.1
YUEJIN 5	18.6	19.1	19.6	19.9	20.4
XUDOU 2	18.5	19.0	17.9	19.6	19.6

TABLE 12 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1991

STRAIN	QUEENS-TOWN, MD	KEISER, AR	PORTAGE-VILLE, MO	WARSAW, VA	CORA, IL
DELSOY 4210	42.1	41.6	40.7	41.9	40.0
MANOKEN	40.0	41.0	40.0	40.5	38.0
K1215	42.3	42.1	41.0	41.4	39.9
K1216	42.7	41.1	41.2	42.3	40.7
K1217	41.0	41.7	40.5	41.2	38.7
K1218	39.6	40.0	40.0	39.3	39.0
K1219	41.1	41.7	40.1	41.1	38.7
K1220	41.1	41.5	40.5	40.2	38.3
KY88-1216	41.4	42.5	39.6	40.3	39.7
KY88-1344	40.6	41.3	41.3	43.0	41.1
KY88-4080	40.9	41.1	41.6	40.7	39.7
KY88-6029	42.0	41.7	42.1	41.5	40.0
L83-3804	41.5	40.9	40.7	41.2	40.6
LS86-743	42.5	41.8	41.7	40.7	39.5
LS86-1517	42.6	42.5	41.7	43.1	40.4
LS2835	42.2	43.4	42.2	42.5	39.9
LS87-815	40.9	40.9	40.6	40.7	37.7
LS88-213	40.8	41.5	40.6	40.6	37.3
LS88-519	41.2	40.8	40.0	39.5	38.7
LS88-604	39.3	40.5	41.8	39.9	38.0
LS88-916	41.0	42.0	41.2	42.0	38.1
LS88-1043	40.9	42.1	42.1	41.0	39.7
MD87-5669	42.7	41.6	42.0	41.0	39.9
MD88-5360	42.3	40.5	41.2	41.6	39.6
MD87L-005	48.7	50.1	50.7	52.4	48.9
MD87L-019	50.8	50.8	52.2	51.7	49.2
MD87L-030	52.5	56.9	53.4	55.3	52.0
S88-11522	43.2	43.7	43.7	43.3	40.1
S88-1154	43.8	43.8	43.4	44.7	41.1
S88-19561	40.1	41.4	41.5	41.6	38.8
S89-2448	39.0	41.3	40.1	40.1	37.8
S89-2581	40.3	41.8	41.2	40.6	39.0
V87-299	42.8	41.4	42.5	42.0	39.7
YOUBIAN 30	39.9	41.0	40.5	41.4	39.7
YUEJIN 5	43.0	42.7	42.5	42.1	40.1
XUDOU 2	42.6	43.6	45.7	43.6	41.9

TABLE 13 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1991

STRAIN	QUEENS-TOWN, MD	KEISER, AR	PORTAGE-VILLE, MO	WARSAW, VA	CARBON-DALE, IL	OTTAWA, KS	PRINCE-TON, KY	STONE-VILLE, MS (B)
DELLOY4210	40.0	36.0	34.0	38.0	43.0	28.0	.	34.0
MANOKEN	34.0	24.0	18.0	28.0	39.0	28.0	.	21.0
K1215	24.0	19.0	14.0	17.0	32.0	23.0	.	17.0
K1216	28.0	23.0	16.0	26.0	37.0	26.0	.	19.0
K1217	25.0	20.0	13.0	17.0	32.0	21.0	.	17.0
K1218	27.0	21.0	12.0	21.0	34.0	26.0	.	19.0
K1219	31.0	18.0	13.0	19.0	40.0	24.0	.	15.0
K1220	28.0	17.0	19.0	19.0	37.0	24.0	.	17.0
KY88-1216	20.0	19.0	11.0	19.0	30.0	21.0	.	16.0
KY88-1344	42.0	38.0	31.0	36.0	52.0	30.0	.	33.0
KY88-4080	23.0	21.0	15.0	20.0	33.0	27.0	.	17.0
KY88-6029	25.0	18.0	14.0	18.0	31.0	25.0	.	15.0
L83-3804	33.0	24.0	22.0	27.0	37.0	34.0	.	22.0
LS86-743	31.0	23.0	15.0	28.0	37.0	28.0	.	24.0
LS86-1517	41.0	43.0	41.0	34.0	50.0	29.0	.	36.0
LS2835	37.0	38.0	34.0	36.0	48.0	28.0	.	33.0
LS87-815	35.0	24.0	18.0	25.0	40.0	29.0	.	18.0
LS88-213	36.0	18.0	14.0	26.0	37.0	32.0	.	18.0
LS88-519	32.0	24.0	22.0	26.0	39.0	27.0	.	20.0
LS88-604	34.0	26.0	23.0	29.0	42.0	30.0	.	23.0
LS88-916	31.0	25.0	21.0	26.0	41.0	28.0	.	23.0
LS88-1043	31.0	23.0	18.0	24.0	38.0	30.0	.	21.0
MD87-5669	34.0	26.0	18.0	30.0	44.0	30.0	.	22.0
MD88-5360	28.0	19.0	14.0	23.0	31.0	23.0	.	18.0
MD87L-005	34.0	29.0	25.0	34.0	40.0	30.0	.	26.0
MD87L-019	28.0	26.0	17.0	25.0	40.0	27.0	.	23.0
MD87L-030	44.0	47.0	43.0	48.0	58.0	31.0	.	44.0
S88-11522	29.0	22.0	16.0	21.0	33.0	30.0	.	18.0
S88-1154	30.0	20.0	18.0	24.0	34.0	28.0	.	19.0
S88-19561	42.0	42.0	40.0	42.0	55.0	31.0	.	39.0
S89-2448	30.0	32.0	20.0	31.0	40.0	33.0	.	26.0
S89-2581	34.0	31.0	30.0	33.0	44.0	38.0	.	24.0
V87-299	42.0	36.0	40.0	36.0	50.0	35.0	.	34.0
YUBIAN 30	27.0	28.0	22.0	27.0	38.0	28.0	.	32.0
YUEJIN 5	24.0	19.0	28.0	22.0	28.0	26.0	.	19.0
XUDOU 2	40.0	48.0	33.0	38.0	53.0	34.0	.	45.0

TABLE 14 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1991

STRAIN	QUEENS-TOWN, MD	KEISER, AR	PORTAGE-VILLE, MO	WARSAW, VA	CARBON-DALE, IL	OTTAWA, KS	STONE-VILLE, MS (B)
DELROY 4210	2.0	3.0	2.5	2.0	3.0	4.0	2.0
MANOKEN	1.5	1.5	2.0	1.2	2.0	2.0	2.0
K1215	1.5	1.0	3.0	1.5	2.0	3.0	2.0
K1216	1.0	1.0	1.5	1.0	1.0	3.0	2.0
K1217	1.0	1.5	2.0	1.0	1.0	3.0	2.0
K1218	1.5	1.0	1.5	1.2	2.0	2.0	2.0
K1219	2.0	1.0	1.5	1.5	2.0	2.0	2.0
K1220	1.5	1.0	2.0	1.2	2.0	3.0	2.0
KY88-1216	1.3	1.0	2.0	1.0	2.0	2.0	2.0
KY88-1344	1.5	1.0	2.0	1.8	2.0	3.0	2.0
KY88-4080	1.5	1.0	1.5	1.5	1.0	3.0	2.0
KY88-6029	1.5	2.0	1.5	1.5	2.0	3.0	2.0
L83-3804	1.8	1.5	3.0	1.2	3.0	2.0	2.0
LS86-743	2.0	1.0	1.5	1.5	2.0	2.0	2.0
LS86-1517	2.0	2.5	4.0	2.2	3.0	3.0	2.0
LS2835	2.3	2.0	2.5	1.8	3.0	3.0	2.0
LS87-815	1.3	2.0	2.0	1.0	2.0	2.0	2.0
LS88-213	1.8	2.5	2.0	1.5	3.0	3.0	2.0
LS88-519	2.3	1.5	2.0	2.2	2.0	2.0	2.0
LS88-604	2.3	2.0	3.0	1.8	2.0	2.0	2.0
LS88-916	1.5	2.0	2.5	2.0	2.0	3.0	2.0
LS88-1043	2.0	1.5	1.0	1.0	2.0	2.0	2.0
MD87-5669	1.3	2.0	2.0	1.2	2.0	3.0	2.0
MD88-5360	1.3	1.0	1.5	1.0	2.0	3.0	2.0
MD87L-005	2.0	2.0	2.0	2.3	3.0	3.0	2.0
MD87L-019	1.3	1.5	2.0	1.2	1.0	2.0	2.0
MD87L-030	1.3	1.5	1.5	1.8	2.0	2.0	2.0
S88-11522	1.8	1.5	2.0	1.5	2.0	2.0	2.0
S88-1154	1.8	1.0	2.0	1.2	2.0	2.0	2.0
S88-19561	3.0	1.5	2.5	2.2	4.0	2.0	2.0
S89-2448	1.5	1.0	1.5	1.2	2.0	2.0	2.0
S89-2581	2.0	2.0	2.0	1.8	2.0	2.0	2.0
V87-299	2.0	1.5	2.0	1.5	3.0	3.0	2.0
YOUBIAN 30	2.8	1.5	2.0	1.8	3.0	4.0	2.0
YUEJIN 5	2.0	1.5	2.5	1.2	3.0	3.0	2.0
XUDOU 2	2.0	2.0	2.0	2.0	3.0	4.0	2.0

UNIFORM GROUP V
1991

VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1. ESSEX	LEE X S55-7075	F5
2. WALTERS	FORREST X NAROW	F5
3. HARTWIG	FORREST(3) X PI 437654	F5
4. N86-7687	N77-114 X PIXIE	F5
5. TN85-157	D72-8927 X TN80-83	F5
6. KY85-11020	ESSEX X ELF	F5
7. N87-325	N77-114 X N77-179	F5
8. D88-5522	D82-3298 X D77-6056	F5
9. N86-7682	N77-114 X PIXIE	F5
10. S86-1474	S79-4240 X ESSEX	F6
11. S86-2469	S79-4296 X D77-5169	F6
12. S88-1855	ESSEX(2) X PI 90763	F6

Background of lines used as parents:

S55-7075 is a selection from N48-1248 X Perry which was grown in Uniform Group VI. N48-1248 has the same parentage as Hood.

N77-114 is a selection from Essex X N70-2173. N70-2173 was grown in Uniform Group VI in 1980.

D72-8927 is a selection from D66-12392 X (Hill(2) X PI 90763).

Tn80-83 is a selection from Essex X J74-40.

N77-179 is a selection from N70-1549 X N77-3213 was grown in Uniform Group V in 1982.

D82-3298 is a selection from Bedford X sel (Forrest X D75-10169) grown in Uniform Group V in 1985.

D77-6056 is a selection from Centennial X J74-47 grown in Uniform Group V in 1982-84.

S79-4240 is a selection from D70-3045 X Bedford. D70-3045 is the same parentage as Centennial.

S79-4296 is a selection from Bedford X Crawford.

D77-5169 is a selection from Centennial X J74-47. J74-47 is of the same parentage as Bedford.

UNIFORM GROUP V

1991

Uniform Group V nurseries were planted at 32 locations. Results from twenty-nine of these locations are summarized in Tables 15-21. Table 15 gives a general summary of performance including three year mean seed yield and oil and protein percentages. Data are also presented for pest reaction and agronomic characteristics. Data from individual locations are summarized in Tables 16-21.

The overall mean seed yields for name varieties were Essex 41.3 bushels per acre, Walters 44.6 bushels per acre and Hartwig 42.2 bushels per acre. The highest yielding entry was N87-325 with a mean seed yield of 48 bushels per acre.

All entries were rated for reaction to the two root knot nematodes *Meloidigyne incognita* and *M. arenaria* in the greenhouse at Athens, Georgia. Each pot was infested with a specific number of eggs. Ratings were on a 1 to 5 basis, with 1 being highly resistance. Relative to field performance a rating of 2.5 would be considered a fairly good level of resistance for *M. arenaria*. Entries were also rated for reaction to soybean cyst nematode races 3 and 4 in the greenhouse at Jackson, Tennessee. The variety Hartwig has a broad range resistance to the soybean cyst nematode which gives it resistance to all recognized biotypes. It also has good resistance to *M. incognita*, but is susceptible to *M. arenaria*. D88-5522 has resistance to both root knot nematodes and to races 3 and 4 of the soybean cyst nematode. TN85-157 is resistance to SCN race 5.

Stem canker ratings were made in the field at Beaumont, Texas. Ratings were made on a 0 to 9 basis. Seed coat mottling ratings were made from harvest at Orange, Virginia with actual percentages reported. Ratings for soybean looper feeding were made in the field cage at Stoneville with ratings made on a 1 to 5 basis, with 5 indicating very severe feeding.

TABLE 15 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP V, 1991

	NO. OF LOCATIONS	ESSEX	WALTERS	HARTWIG	N86- 7687	TN85- 157
Seed Yield - 1991						
East Coast	4	40.4	45.2	44.7	45.9	41.7
Upper and Central South	10	43.3	44.5	42.1	46.4	46.1
Delta	9	44.8	46.3	44.2	50.2	44.8
West	7	33.6	42.1	37.8	41.6	38.7
1990-91						
East Coast		50.3	49.5	47.1	52.8	45.9
Upper and Central South		42.2	42.9	40.1	45.1	43.6
Delta		44.9	47.2	44.6	49.7	44.7
West		35.9	41.9	37.1	43.3	37.7
1989-91						
East Coast		48.9	48.9		51.3	45.3
Upper & Central South		43.2	42.4		45.5	43.8
Delta		44.6	44.6		49.2	44.1
West		36.2	39.1		42.7	35.8
Oil Content - 1991						
		20.6	20.2	20.4	21.7	20.0
	1990-91	20.6	20.4	20.4	21.7	19.9
	1989-91	20.5	20.3		21.7	19.9
Protein Content - 1991						
		42.4	40.1	39.8	39.4	39.3
	1990-91	42.2	39.8	39.5	39.4	39.1
	1989-91	42.0	39.8		39.2	39.1
Seed size		14.4	13.9	13.1	15.0	11.0
Maturity index		10-06	+3	+2	+3	+3
Height		22	30	29	29	32
Seed quality		1.5	1.7	1.8	1.6	1.7
M. incognita		4.6	1.8	1.0	4.2	5.0
M. arenaria		3.0	3.0	4.2	4.7	3.5
SCN race 3		S	R	R	S	R
SCN race 4		S	S	R	S	S
SBL Feeding		3	3	4	3	3
% Mottled Seed		6	9	9	.	0
Flower color		P	P	W	P	W
Pubescence color		G	T	T	G	G
Pod wall color		T	T	T	T	T
Stem Canker		0.7	3.0	3.0	2.0	0.7

TABLE 15 - (continued)

	KY85- 11020	N87- 325	D88- 5522	N86- 7682	S86- 1474	S86- 2469	S88- 1855
Seed Yield - 1991							
East Coast	45.1	48.1	42.8	47.5	50.2	45.2	45.5
Upper and Central South	47.9	48.5	45.2	48.9	47.2	46.5	48.5
Delta	45.2	50.5	48.0	49.6	48.5	48.3	49.6
West	40.2	43.5	39.3	42.3	39.4	41.9	40.5
1990-91							
East Coast	51.9	55.2					
Upper and Central South	45.2	46.7					
Delta	45.6	51.0					
West	40.1	43.5					
1989-91							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1991							
	21.0	21.0	19.6	21.7	19.9	20.4	21.2
1990-91	21.0	21.0					
1989-91							
Protein Content - 1991							
	40.9	39.9	39.9	39.4	41.2	40.6	39.7
1990-91	40.8	40.0					
1989-91							
Seed size	16.0	17.2	13.3	15.1	14.1	15.1	15.1
Maturity index	10-09	+2	+3	+4	+5	+5	+5
Height	26	27	31	30	31	29	31
Seed quality	1.4	1.8	1.6	1.6	1.7	1.9	2.0
M. incognita	4.5	4.5	1.0	4.8	4.2	4.9	5.0
M. arenaria	4.0	4.8	2.2	3.5	3.0	2.8	2.8
SCN race 3	S	S	R	S	R	R	R
SCN race 4	S	S	R	S	R	R	S
SBL Feeding	3	3	2	3	3	4	2.5
% Mottled Seed	40	0	0	4	1	13	10
Flower color	P	P	W	P	P	W	W
Pubescence color	G	T	T	G	G	T	G
Pod wall color	T	T	T	T	T	T	T
Stem Canker	2.0	4.0	3.3	1.3	2.0	0	0.7

TABLE 16 - SEED YIELD, IN BUSHEL PER ACRE, FOR THE STRAINS IN UNIFORM GROUP V, 1991

LOCATION	ESSEX	WALTERS	HARTWIG	N86- 7687	TN85- 157	KY85- 11020
EAST COAST						
QUEENSTOWN, MD	51.3	46.2	39.5	43.6	39.1	48.0
GEORGETOWN, DE	17.4	35.1	38.9	38.0	35.3	37.6
WARSAW, VA	44.0	51.7	53.8	51.8	49.1	41.7
PLYMOUTH, NC	48.9	47.9	46.7	50.2	43.2	53.0
MEAN	40.4	45.2	44.7	45.9	41.7	45.1
UPPER AND CENTRAL SOUTH						
ORANGE, VA	61.4	46.3	53.9	61.1	59.8	66.0
KNOXVILLE, TN	57.7	47.8	58.0	54.6	61.0	60.5
CLEMSON, SC	55.0	53.2	52.4	58.5	55.3	62.2
CALHOUN, GA	47.5	61.5	46.1	58.8	51.1	57.7
ATHENS, GA	33.1	36.0	25.9	37.3	33.5	35.9
VILLA RIDGE, IL	47.2	37.2	43.2	50.2	45.7	51.8
PRINCETON, KY	40.4	40.5	38.8	42.8	39.1	38.7
MARTIN, TN	32.4	42.7	37.7	41.4	37.7	44.9
JACKSON, TN	46.3	52.7	45.1	37.1	45.0	46.3
BELLE MINA, AL	12.1	26.7	20.2	22.4	32.5	14.6
MEAN	43.3	44.5	42.1	46.4	46.1	47.9
DELTA						
PORTAGEVILLE, MO(A)	52.9	56.3	65.4	58.2	51.0	55.2
PORTAGEVILLE, MO(B)	59.3	48.2	40.7	49.2	44.0	49.6
KEISER, AR	56.0	53.5	54.6	58.8	48.5	56.2
JONESBORO, AR	30.9	33.7	26.2	40.3	28.5	35.3
PINE TREE, AR	31.5	43.4	31.1	33.0	40.1	25.3
STONEVILLE, MS(A)	37.3	49.7	43.3	47.6	48.2	45.8
STONEVILLE, MS(B)	44.5	48.9	40.8	41.4	48.2	44.1
ST. JOSEPH, LA	49.2	31.7	56.6	66.5	52.8	57.8
BATON ROUGH, LA	41.2	51.0	39.3	57.1	41.8	37.4
MEAN	44.8	46.3	44.2	50.2	44.8	45.2
WEST						
CHANUTE, KS	39.0	32.5	37.4	39.8	34.1	39.4
MCCUNE, KS	26.1	30.0	28.1	29.4	29.3	27.4
STUTTGART, AR	30.1	49.3	44.7	50.3	43.7	43.6
BOSSIER CITY, LA*	51.4	54.3	27.9	40.7	35.9	44.0
BIXBY, OK	44.0	61.0	50.8	49.3	54.5	47.7
LUBBOCK, TX	39.2	41.1	38.9	47.9	39.8	55.9
BEAUMONT, TX	23.0	38.8	26.7	33.1	30.5	27.3
MEAN	33.6	42.1	37.8	41.6	38.7	40.2

*Not included in mean.

TABLE 16 - (continued)

LOCATION	N87- 325	D88- 5522	N86- 7682	S86- 1474	S86- 2469	S88- 1855	L.S.D. (.05)	C.V. (%)
EAST COAST								
QUEENSTOWN, MD	57.3	43.8	46.6	45.4	40.2	46.9	6.0	7.8
GEORGETOWN, DE	34.2	31.1	35.9	51.9	42.4	36.1	9.9	16.1
WARSAW, VA	43.6	47.1	53.2	53.9	50.1	50.3	7.7	9.3
PLYMOUTH, NC	57.4	49.1	54.3	49.5	48.0	48.6	4.7	5.6
MEAN	48.1	42.8	47.5	50.2	45.2	45.5		
UPPER AND CENTRAL SOUTH								
ORANGE, VA	67.3	57.6	76.0	54.6	55.5	61.2	.	13.9
KNOXVILLE, TN	62.5	52.8	56.3	62.6	56.1	59.9	9.6	9.9
CLEMSON, SC	64.8	54.1	61.8	60.4	55.6	54.5	7.5	7.7
CALHOUN, GA	58.3	51.1	56.8	52.6	55.3	54.4	7.1	7.7
ATHENS, GA	34.1	32.0	33.7	33.8	37.0	41.5	7.1	12.1
VILLA RIDGE, IL	52.4	45.9	45.0	47.9	40.9	51.4	6.0	7.7
PRINCETON, KY	38.0	37.6	43.6	38.7	40.6	43.0	4.8	7.2
MARTIN, TN	36.9	37.4	42.8	35.3	39.2	32.4	11.3	17.4
JACKSON, TN	41.7	49.4	43.8	51.3	48.2	51.6	.	14.5
BELLE MINA, AL	28.7	33.8	29.0	34.8	36.8	35.3	7.1	12.1
MEAN	48.5	45.2	48.9	47.2	46.5	48.5		
DELTA								
PORTAGEVILLE, MO(A)	62.3	55.1	61.4	59.3	56.1	52.0	4.2	4.4
PORTAGEVILLE, MO(B)	52.3	43.8	50.7	50.6	49.2	51.1	6.2	7.4
KEISER, AR	60.1	52.9	57.0	56.7	47.9	51.8	4.7	5.2
JONESBORO, AR	39.8	31.7	36.7	32.6	39.5	42.7	.	17.5
PINE TREE, AR	31.6	44.7	45.4	38.9	49.0	40.9	.	25.3
STONEVILLE, MS(A)	49.7	53.5	47.0	51.9	40.4	56.7	5.1	6.3
STONEVILLE, MS(B)	47.8	51.5	37.6	44.0	40.0	45.9	9.6	12.7
ST. JOSEPH, LA	66.4	57.8	64.9	62.7	58.1	59.9	6.6	7.1
BATON ROUGE, LA	44.8	40.8	45.7	39.9	54.3	45.3	6.2	7.1
MEAN	50.5	48.0	49.6	48.5	48.3	49.6		
WEST								
CHANUTE, KS	41.3	34.2	41.5	33.9	35.8	31.0	2.7	5.0
MCCUNE, KS	30.3	30.6	29.0	28.4	29.4	29.3	2.9	7.5
STUTTGART, AR	51.2	44.0	52.3	47.0	50.1	49.2	6.8	8.7
BOSSIER CITY, LA*	50.6	42.6	50.8	48.9	39.0	35.5	26.6	26.1
BIXBY, OK	55.6	56.7	49.7	52.3	56.1	54.6	7.1	8.0
LUBBOCK, TX	52.1	36.8	48.3	41.8	47.1	43.9	9.4	12.4
BEAUMONT, TX	30.4	33.2	33.0	32.8	32.7	35.1	8.4	15.8
MEAN	43.5	39.3	42.3	39.4	41.9	40.5		

*Not included in mean.

TABLE 17 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP V, 1991

LOCATION	ESSEX	WALTERS	HARTWIG	N86- 7687	TN85- 157	KY85- 11020
OIL PERCENTAGE						
QUEENSTOWN, MD	20.0	19.5	19.3	20.7	18.7	20.5
WARSAW, VA	20.8	20.4	20.5	21.6	19.7	21.7
PLYMOUTH, NC	19.7	19.6	20.0	20.6	19.2	19.9
ORANGE, VA	20.5	21.1	20.9	22.2	19.7	20.9
PORTAGEVILLE, MO(A)	20.1	19.3	19.4	21.4	19.7	20.9
KEISER, AR	20.2	19.5	20.2	21.8	19.6	20.6
STONEVILLE, MS(B)	21.0	21.0	21.3	23.2	21.0	22.0
STUTTGART, AR	21.3	21.0	21.3	22.0	21.7	21.8
ATHENS, GA	21.2	20.8	21.2	22.2	20.9	21.5
CHANUTE, KS	19.9	18.9	18.9	20.3	18.9	19.5
MARTIN, TN	21.4	21.5	21.1	22.3	20.7	21.9
MEAN	20.6	20.2	20.4	21.7	20.0	21.0
PROTEIN PERCENTAGE						
QUEENSTOWN, MD	41.9	40.0	39.6	39.1	38.0	39.8
WARSAW, VA	41.7	40.0	39.6	38.6	39.1	39.6
PLYMOUTH, NC	44.4	42.6	41.8	41.3	42.0	43.5
ORANGE, VA	42.4	38.1	37.8	38.1	38.9	40.6
PORTAGEVILLE, MO(A)	42.8	40.8	40.3	39.4	39.9	40.4
KEISER, AR	43.0	42.0	41.0	39.8	39.7	41.8
STONEVILLE, MS(B)	43.1	40.8	41.0	38.7	40.5	41.5
STUTTGART, AR	42.2	40.6	40.0	40.3	38.8	41.1
ATHENS, GA	43.1	40.0	40.5	39.3	38.8	41.3
CHANUTE, KS	40.8	38.1	38.0	39.0	37.6	40.0
MARTIN, TN	41.1	37.9	38.5	39.3	39.5	40.4
MEAN	42.4	40.1	39.8	39.4	39.3	40.9
GRAMS PER 100 SEED						
QUEENSTOWN, MD	13.7	14.1	14.5	13.0	15.2	12.6
WARSAW, VA	14.7	13.9	16.1	13.5	16.4	12.9
PLYMOUTH, NC	16.1	14.0	16.7	14.8	15.9	13.4
ORANGE, VA	14.5	13.1	14.8	13.6	15.4	12.3
PORTAGEVILLE, MO(A)	13.0	12.4	14.3	10.8	13.8	11.3
KEISER, AR	16.5	15.0	17.5	13.5	16.5	14.5
STONEVILLE, MS(A)	13.8	12.9	16.3	13.7	14.7	12.4
STUTTGART, AR	15.0	12.1	15.3	13.2	12.6	12.7
ATHENS, GA	13.5	13.9	14.9	14.5	15.1	12.9
MEAN	14.5	13.5	15.6	13.4	15.1	12.8

TABLE 17 - (continued)

LOCATION	N87- 325	D88- 5522	N86- 7682	S86- 1474	S86- 2469	S88- 1855
OIL PERCENTAGE						
QUEENSTOWN, MD	20.0	19.4	20.4	19.1	20.0	20.4
WARSAW, VA	21.2	20.6	22.1	20.4	21.4	21.5
PLYMOUTH, NC	20.4	18.4	20.6	19.1	20.1	20.3
ORANGE, VA	21.3	19.9	22.1	19.4	20.8	20.7
PORTAGEVILLE, MO(A)	20.7	18.0	21.4	19.3	19.8	21.1
KEISER, AR	21.1	18.6	21.9	19.6	19.5	20.9
STONEVILLE, MS(B)	22.0	19.2	22.9	20.6	19.9	21.9
STUTTGART, AR	21.9	21.1	22.7	21.2	20.8	22.4
ATHENS, GA	21.8	20.6	22.1	20.1	21.5	22.7
CHANUTE, KS	19.8	18.6	20.5	18.2	19.4	19.1
MARTIN, TN	21.1	20.9	22.5	21.4	21.6	21.9
MEAN	21.0	19.6	21.7	19.9	20.4	21.2
PROTEIN PERCENTAGE						
QUEENSTOWN, MD	39.6	37.7	39.0	40.0	39.3	38.8
WARSAW, VA	39.1	38.6	38.3	40.7	38.7	38.8
PLYMOUTH, NC	41.4	42.5	41.5	43.2	41.8	42.6
ORANGE, VA	38.5	38.4	38.4	41.5	39.5	39.2
PORTAGEVILLE, MO(A)	39.9	41.0	39.3	41.2	40.8	38.9
KEISER, AR	40.5	42.0	40.0	42.4	42.6	41.6
STONEVILLE, MS(B)	40.3	42.8	38.8	41.8	43.8	41.0
STUTTGART, AR	40.5	39.5	40.0	40.5	42.5	40.8
ATHENS, GA	39.6	39.5	39.7	42.2	39.3	37.2
CHANUTE, KS	38.7	37.0	39.2	40.0	38.5	38.6
MARTIN, TN	41.0	40.0	39.4	39.9	39.8	39.0
MEAN	39.9	39.9	39.4	41.2	40.6	39.7
GRAMS PER 100 SEED						
QUEENSTOWN, MD	14.3	11.5	15.2	15.6	17.0	13.3
WARSAW, VA	15.4	11.5	13.7	16.4	18.1	13.2
PLYMOUTH, NC	15.8	11.7	14.1	16.9	19.0	13.4
ORANGE, VA	14.5	11.6	14.0	15.9	17.5	12.6
PORTAGEVILLE, MO(A)	13.8	11.5	12.6	14.6	16.5	11.7
KEISER, AR	17.5	12.0	14.0	17.5	18.0	13.5
STONEVILLE, MS(A)	14.5	10.9	12.7	15.3	18.1	12.4
STUTTGART, AR	15.8	9.6	12.1	16.2	17.7	11.0
ATHENS, GA	14.7	12.8	14.3	16.1	17.1	12.6
MEAN	15.1	11.5	13.6	16.1	17.7	12.6

TABLE 18 - RELATIVE MATURITY DATA, DAYS EARLIER (-) OR LATER (+) THAN ESSEX,
FOR THE STRAINS IN UNIFORM GROUP V, 1991

LOCATION	ESSEX	WALTERS	HARTWIG	N86- 7687	TN85 157	KY85- 11020
EAST COAST						
QUEENSTOWN, MD	10/10	+12	+9	+4	+7	+1
WARSAW, VA	10/10	+7	+3	+2	+3	+1
PLYMOUTH, NC	10/16	+0	-2	+0	-6	+4
MEAN	10/12	+6	+3	+2	+1	+2
UPPER AND CENTRAL SOUTH						
ORANGE, VA	10/17	+3	+1	+1	+1	+2
KNOXVILLE, TN	09/29	+3	-3	+8	+5	+2
CLEMSON, SC	10/05	-1	-1	+2	+1	+3
CALHOUN, GA	09/28	+3	+2	+4	+6	+2
ATHENS, GA	09/25	-1	-1	+2	-2	-1
VILLA RIDGE, IL	10/08	+4	+4	+4	+4	+3
PRINCETON, KY	10/07	+0	+1	+0	+1	+0
BELLE MINA, AL	09/10	+12	+3	+1	+9	+3
JACKSON, TN	10/10	+0	+0	+1	+0	+0
MEAN	10/02	+3	+1	+3	+3	+2
DELTA						
PORTAGEVILLE, MO (A)	10/07	+7	+5	+7	+7	+2
PORTAGEVILLE, MO (B)	10/18	+0	-3	+1	-1	-2
KEISER, AR	10/10	+3	+3	+4	+0	-1
JONESBORO, AR	10/07	+1	+3	+1	+2	+2
PINE TREE, AR	10/02	+0	+1	+2	+3	+0
STONEVILLE, MS (A)	09/19	+8	+4	+5	+6	+2
STONEVILLE, MS (B)	10/01	+2	+2	+1	+0	+2
ST. JOSEPH, LA	09/24	+5	-1	+5	+1	-1
MEAN	10/04	+3	+1	+3	+2	+0
WEST						
STUTTGART, AR	09/20	+10	+9	+12	+9	+7
BEAUMONT, TX	09/30	+2	+0	+2	-1	+0
BIXBY, OK	10/24	-4	-4	+4	-1	-1
LUBBOCK, TX	10/09	+3	+5	+1	+8	-1
MEAN	10/06	+3	+2	+5	+4	+1

TABLE 18 - (continued)

LOCATION	N87- 325	D88- 5522	N86- 7682	S86- 1474	S86- 2469	S88- 1855
EAST COAST						
QUEENSTOWN, MD	+5	+12	+6	+8	+10	+11
WARSAW, VA	+0	+5	+2	+3	+8	+5
PLYMOUTH, NC	+2	+2	+6	+2	+0	+6
MEAN	+2	+6	+5	+4	+6	+7
UPPER AND CENTRAL SOUTH						
ORANGE, VA	+0	+2	+2	+3	+1	+4
KNOXVILLE, TN	+7	+4	+9	+11	+6	+10
CLEMSON, SC	+1	+0	+4	+9	+3	+4
CALHOUN, GA	+9	+3	+4	+3	+2	+3
ATHENS, GA	-2	+0	+0	+2	+3	+2
VILLA RIDGE, IL	+2	+4	+4	+4	+5	+3
PRINCETON, KY	+0	-1	+1	+1	+1	+1
JACKSON, TN	+0	+0	+0	+0	+0	+0
BELLE MINA, AL	+2	+10	+4	+17	+17	+13
MEAN	+2	+3	+3	+6	+4	+5
DELTA						
PORTAGEVILLE, MO(A)	+2	+4	+7	+7	+8	+6
PORTAGEVILLE, MO(B)	-1	-1	+0	+2	+5	+1
KEISER, AR	+3	+0	+5	+0	+4	+4
JONESBORO, AR	+2	+2	+2	+3	+6	+5
PINE TREE, AR	+2	+2	+4	+3	+4	+3
STONEVILLE, MS(A)	+4	+6	+5	+7	+6	+9
STONEVILLE, MS(B)	-1	+3	+1	+4	+3	+3
ST. JOSEPH, LA	+4	+3	+5	+2	+4	+1
MEAN	+1	+2	+3	+3	+5	+4
WEST						
STUTTGART, AR	+10	+10	+12	+10	+11	+9
BIXBY, OK	+4	-1	+4	-1	-1	-4
LUBBOCK, TX	-1	+7	+1	+5	+5	+7
BEAUMONT, TX	+1	+4	+2	+7	+8	+3
MEAN	+3	+5	+5	+5	+6	+4

TABLE 19 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP V, 1991

LOCATION	ESSEX	WALTERS	HARTWIG	N86- 7687	TN85- 157	KY85- 11020
EAST COAST						
QUEENSTOWN, VA	25	32	33	35	31	31
GEORGETOWN, DE	18	28	26	26	32	30
WARSAW, VA	17	30	27	25	29	17
PLYMOUTH, VA	32	39	37	39	38	33
MEAN	23	32	31	31	33	28
UPPER AND CENTRAL SOUTH						
ORANGE, VA	38	41	41	42	43	38
KNOXVILLE, TN	22	33	30	26	39	26
CLEMSON, SC	19	31	30	27	34	24
CALHOUN, GA	25	32	28	31	32	29
ATHENS, GA	23	32	30	27	32	27
VILLA RIDGE, IL	25	32	39	33	36	33
PRINCETON, KY	24	33	34	32	36	26
MARTIN, TN	23	28	30	29	30	26
JACKSON, TN	28	40	36	37	40	30
BELLE MINA, AL	15	22	17	19	24	17
MEAN	24	32	31	30	35	28
DELTA						
PORTAGEVILLE, MO(A)	13	25	24	25	26	16
PORTAGEVILLE, MO(B)	17	26	24	25	27	21
KEISER, AR	23	33	33	32	33	30
JONESBORO, AR	25	34	30	32	35	28
PINE TREE, AR	16	23	22	18	25	18
STONEVILLE, MS(A)	19	27	26	29	31	23
STONEVILLE, MS(B)	22	25	23	24	29	25
ST. JOSEPH, LA	23	30	31	35	38	29
BATON ROUGE, LA	18	26	25	27	31	19
MEAN	20	28	26	27	31	23
WEST						
CHANUTE, KS	25	32	34	34	35	29
MCCUNE, KS	26	31	30	31	32	27
STUTTGART, AR	15	23	20	21	26	19
BOSSIER CITY, LA*	15	21	20	21	17	16
BIXBY, OK	24	32	28	33	36	27
LUBBOCK, TX	23	31	27	28	34	26
BEAUMONT, TX	15	25	19	19	25	19
MEAN	21	29	26	28	31	25

*Not included in mean.

TABLE 19 - (continued)

LOCATION	N87- 325	D88- 5522	N86- 7682	S86- 1474	S86- 2469	S88- 1855
EAST COAST						
QUEENSTOWN, MD	31	32	37	32	30	32
GEORGETOWN, DE	25	27	31	33	28	25
WARSAW, VA	18	27	25	30	25	27
PLYMOUTH, NC	36	39	39	37	35	41
MEAN	28	31	33	33	30	31
UPPER AND CENTRAL SOUTH						
ORANGE, VA	39	40	42	42	40	43
KNOXVILLE, TN	26	34	32	30	31	35
CLEMSON, SC	27	31	28	28	29	28
CALHOUN, GA	33	31	31	23	30	30
ATHENS, GA	26	32	28	30	31	30
VILLA RIDGE, IL	34	33	35	35	32	37
PRINCETON, KY	25	35	32	34	30	31
MARTIN, TN	25	28	31	31	29	30
JACKSON, TN	34	37	36	40	37	38
BELL MINA, AL	19	22	20	24	21	20
MEAN	29	32	32	32	31	32
DELTA						
PORTAGEVILLE, MO (A)	20	19	24	26	23	27
PORTAGEVILLE, MO (B)	24	25	25	29	27	27
KEISER, AR	29	33	33	34	31	38
JONESBORO, AR	31	36	30	33	30	37
PINE TREE, AR	17	26	20	25	25	27
STONEVILLE, MS (A)	25	29	26	29	27	35
STONEVILLE, MS (B)	23	26	26	30	26	32
ST. JOSEPH, LA	29	37	33	33	32	40
BATON ROUGE, LA	20	30	26	25	25	28
MEAN	24	29	27	29	27	32
WEST						
CHANUTE, KS	30	36	32	35	31	34
MCCUNE, KS	27	32	30	35	30	29
STUTTGART, AR	20	24	22	25	23	26
BOSSIER CITY, LA*	21	18	21	17	22	19
BIXBY, OK	28	33	34	34	32	30
LUBBOCK, TX	28	28	29	27	26	30
BEAUMONT, TX	20	26	19	25	20	24
MEAN	26	30	28	30	27	29

*Not included in mean.

TABLE 20 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP V, 1991

LOCATION	ESSEX	WALTERS	HARTWIG	N86- 7687	TN85- 157	KY85- 11020
EAST COAST						
QUEENSTOWN, MD	2.2	3.3	3.6	3.5	3.0	3.5
GEORGETOWN, DE	1.7	2.3	1.7	3.0	2.0	1.3
WARSAW, VA	1.0	1.5	1.3	1.0	1.2	1.1
PLYMOUTH, NC	2.0	3.0	3.0	3.0	2.0	3.0
UPPER AND CENTRAL SOUTH						
ORANGE, VA	2.0	2.3	2.7	2.7	2.0	2.3
KNOXVILLE, TN	1.0	3.2	1.5	1.2	2.8	1.3
BELLE MINA, AL	1.0	1.0	1.0	1.0	1.0	1.0
CALHOUN, GA	1.0	1.5	1.3	1.2	1.5	1.7
ATHENS, GA	1.3	1.7	1.7	1.5	1.7	1.5
VILLA RIDGE, IL	1.0	3.0	3.0	1.2	1.3	1.1
PRINCETON, KY	1.0	1.0	1.0	1.0	1.0	1.0
JACKSON, TN	1.0	3.0	3.0	2.0	2.0	1.0
DELTA						
PORTAGEVILLE, MO(A)	1.0	1.0	1.0	1.0	1.0	1.0
PORTAGEVILLE, MO(B)	1.0	1.0	1.0	1.0	1.0	1.0
KEISER, AR	1.0	1.0	1.0	1.0	1.0	1.0
JONESBORO, AR	1.0	1.0	1.0	1.0	1.0	1.0
PINE TREE, AR	1.0	1.0	1.0	1.0	1.0	1.0
STONEVILLE, MS(A)	2.0	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	1.3	2.1	1.8	1.8	1.5	1.4
BATON ROUGE, LA	1.0	1.0	1.0	1.0	1.0	1.0
WEST						
CHANUTE, KS	1.7	2.0	2.0	2.0	2.0	1.3
MCCUNE, KS	1.0	1.0	1.3	1.0	1.0	1.0
STUTTGART, AR	1.0	2.0	1.0	1.0	1.0	1.0
BOSSIER CITY, LA*	1.0	1.0	1.0	1.0	1.0	1.0
BIXBY, OK	0.0	2.0	1.0	0.0	0.0	0.0
LUBBOCK, TX	2.2	2.2	2.5	2.0	1.7	2.2
BEAUMONT, TX	1.0	1.0	1.0	1.0	1.0	1.0

*Not included in mean.

TABLE 20 - (continued)

LOCATION	N87- 325	D88- 5522	N86- 7682	S86- 1474	S86- 2469	S88- 1855
EAST COAST						
QUEENSTOWN, MD	3.4	3.2	3.4	3.5	3.3	3.3
GEORGETOWN, DE	1.0	2.0	1.7	2.0	3.0	2.0
WARSAW, VA	1.2	1.3	1.0	1.7	1.4	1.3
PLYMOUTH, NC	2.0	3.0	3.0	4.0	3.0	3.0
UPPER AND CENTRAL SOUTH						
ORANGE, VA	2.3	2.3	2.7	3.0	2.7	2.3
KNOXVILLE, TN	1.2	2.2	1.2	1.5	1.8	1.8
BELLE MINA, AL	1.0	1.0	1.0	1.0	1.0	1.0
CALHOUN, GA	1.5	1.2	1.3	1.5	1.0	1.8
ATHENS, GA	1.5	1.5	1.5	1.7	1.5	1.5
VILLA RIDGE, IL	1.2	2.3	1.0	2.2	1.8	1.0
PRINCETON, KY	1.0	1.0	1.0	1.0	1.0	1.0
JACKSON, TN	2.0	2.0	2.0	2.0	2.0	1.0
DELTA						
PORTAGEVILLE, MO(A)	1.0	1.0	1.0	1.0	1.0	1.0
PORTAGEVILLE, MO(B)	1.0	1.0	1.0	1.0	1.0	1.0
KEISER, AR	1.0	1.0	1.0	1.0	1.0	1.0
JONESBORO, AR	1.0	1.0	1.0	1.0	1.0	1.0
PINE TREE, AR	1.0	1.0	1.0	1.0	1.0	1.0
STONEVILLE, MS(A)	2.0	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	1.6	1.5	1.7	1.8	1.8	1.6
BATON ROUGE, LA	1.0	3.0	2.0	2.0	2.0	3.0
WEST						
CHANUTE, KS	2.0	2.3	2.0	2.3	2.0	1.7
MCCUNE, KS	1.0	1.7	1.0	1.7	1.0	1.0
STUTTGART, AR	1.0	1.0	1.0	2.0	1.0	1.0
BOSSIER CITY, LA*	1.0	1.3	1.0	1.0	1.0	1.0
BIXBY, OK	0.0	1.0	1.0	1.0	1.0	0.0
LUBBOCK, TX	2.2	2.0	2.2	2.5	1.5	2.0
BEAUMONT, TX	1.0	1.0	1.0	1.0	1.0	1.0

*Not included in mean.

TABLE 21 - SEED QUALITY FOR THE STRAINS IN UNIFORM GROUP V, 1991

LOCATION	ESSEX	WALTERS	HARTWIG	N86- 7687	TN85- 157	KY85- 11020
EAST COAST						
QUEENSTOWN, MD	1.0	1.0	2.0	1.5	1.3	1.7
GEORGETOWN, DE	1.0	1.0	1.0	1.0	1.0	1.0
WARSAW, VA	1.0	1.2	1.5	1.5	1.0	1.5
PLYMOUTH, NC	2.5	2.0	2.0	2.0	2.0	2.0
UPPER AND CENTRAL SOUTH						
ORANGE, VA	1.0	1.0	1.0	1.0	1.0	1.0
KNOXVILLE, TN	1.7	2.0	2.0	2.3	1.3	2.5
CALHOUN, GA	1.0	1.0	1.5	1.0	1.2	1.0
ATHENS, GA	1.5	1.5	1.7	2.0	1.5	1.8
VILLA RIDGE, IL	2.0	2.0	2.5	1.0	2.0	1.0
JACKSON, TN	1.2	2.0	2.2	1.8	1.7	1.6
DELTA						
PORTAGEVILLE, MO(A)	2.0	2.0	2.0	2.0	1.5	1.5
PORTAGEVILLE, MO(B)	1.5	2.0	2.0	2.0	1.5	2.0
KEISER, AR	1.5	1.5	1.5	1.0	1.0	1.5
JONESBORO, AR	2.0	2.3	2.0	2.0	2.0	2.0
PINE TREE, AR	2.3	2.0	2.7	2.0	2.3	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	2.4	2.7	2.1	2.2	2.3	2.0
WEST						
CHANUTE, KS	2.0	1.0	2.0	2.0	3.0	1.0
MCCUNE, KS	2.0	1.0	2.0	2.0	2.0	2.0
STUTTGART, AR	1.3	1.0	1.0	3.0	1.3	2.0
LUBBOCK, TX	1.2	1.5	2.0	2.0	1.0	1.5
BEAUMONT, TX	2.3	2.3	2.5	2.2	1.8	2.3
BOSSIER CITY, LA*	2.0	2.3	2.0	2.3	2.0	1.7

*Not included in mean.

TABLE 21 - (continued)

LOCATION	N87- 325	D88- 5522	N86- 7682	S86- 1474	S86- 2469	S88- 1855
EAST COAST						
QUEENSTOWN, MD	1.8	1.8	1.8	2.0	1.8	1.3
GEORGETOWN, DE	1.0	1.0	1.0	1.0	1.0	1.0
WARSAW, VA	1.0	1.2	1.0	1.5	1.2	1.0
PLYMOUTH, NC	2.5	2.0	2.0	2.0	2.0	2.0
UPPER AND CENTRAL SOUTH						
ORANGE, VA	1.0	1.0	1.0	1.0	1.0	1.0
KNOXVILLE, TN	2.5	1.7	2.7	2.3	1.5	1.2
CALHOUN, GA	2.2	1.0	1.2	1.2	1.3	1.0
ATHENS, GA	1.8	1.5	2.0	1.5	1.5	1.5
VILLA RIDGE, IL	1.0	1.0	1.0	1.0	1.0	2.0
JACKSON, TN	2.0	1.4	1.8	1.8	2.0	1.3
DELTA						
PORTAGEVILLE, MO(A)	2.0	1.5	2.0	2.0	2.0	1.5
PORTAGEVILLE, MO(B)	1.5	1.5	2.0	2.0	1.5	1.0
KEISER, AR	1.0	1.0	1.5	1.5	1.5	1.0
JONESBORO, AR	2.0	2.0	2.3	2.0	3.3	2.0
PINE TREE, AR	2.0	2.3	2.3	2.3	2.7	2.0
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	1.7	2.2	2.5	2.1	1.7
WEST						
CHANUTE, KS	2.0	2.0	2.0	3.0	2.0	2.0
MCCUNE, KS	1.0	1.0	1.0	2.0	1.0	2.0
STUTTGART, AR	3.0	2.0	3.0	2.0	2.0	1.0
LUBBOCK, TX	2.0	1.7	2.0	1.7	2.0	1.2
BEAUMONT, TX	2.3	2.5	1.8	2.3	2.0	1.8
BOSSIER CITY, LA*	2.3	2.3	2.3	2.0	2.3	1.3

*Not included in mean.

PRELIMINARY GROUP V

1991

Preliminary Group V nurseries, which included Forrest and Manoken, along with 34 experimental strains were grown at 8 locations. The parentage of each of the entries is reported in Table 22. A general summary of performance is reported in Table 23. Data from individual locations are reported in Tables 24-28.

Forrest had an overall mean seed yield of 45.9 bushels per acre and Manoken an overall seed mean yield of 49.2 bushels per acre. There were no experimental entries having a mean seed yield significantly higher than that for Forrest and there were two strains having a mean seed yield significantly lower than that for Forrest. D88-5547 with an overall mean seed yield of 51 bushels per acre was rated resistance to SCN race 3 and 4 and was also rated resistance to feeding by soybean looper.

MD87L-0287 had a protein percentage of 55.2 and an oil percentage of 14.6. It's yield was relatively low, but this was in part related to its susceptibility to phytophthora rot. Phytophthora rot was considered a factor in the plantings at Plymouth and on Stoneville clay. In Replication 1, on Stoneville clay, the high protein line was adjacent to Forrest and yields were nearly similar. However, in Rep 2, MD87L-0285 was badly damaged by phytophthora rot.

In the greenhouse evaluation for soybean cyst nematode at Jackson, Tennessee seventeen of the experimental entries were rated resistant to race 3 and 12 of these were rated resistant or heterogeneous for reaction to race 4. Four lines S88-1934, S88-1988-4, S88-2331, and S88-7166 have the broad range of SCN resistance similar to that of Hartwig.

TABLE 22 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP V, 1991

VARIETY OR STRAIN	PARENTAGE
1. FORREST	DYER X BRAGG
2. MANOKEN	L70L-3048 X D78-7824
3. D88-5547	D82-3298 X D77-6056
4. D88-5727	D82-3298 X D82-5173
5. D89-6776	EPPS X D65-2262
6. D89-7077	CORDELL X D77-6056
7. K1221	A5149 X V75-314
8. K1222	HUTCHESON X A5149
9. K1223	PIIONEER 5482 X ESSEX
10. K1224	K1099 X PENNYRILE
11. KY88-1081	CX415 X FFR561
12. KY88-1702	FFR561 X K1099
13. KY88-3081	FFR561 X K1099
14. KY88-9047	FFR561 X K1099
15. LS87-315	LS77-952 X FAYETTE
16. LS87-1570	LS77-952 X NATHAN
17. LS88-950	LS79-350 X FAYETTE
18. LS88-1138	LS79-330 X FAYETTE
19. MD87L-0285	CX792-21 X NC-2-62
20. MD88-5434	K1103 X PERSHING
21. N89-374	YOUNG X NCR-V157
22. N89-490	YOUNG X NCR84-V206
23. N89-931	N83-1014 X N85-2124
24. N89-960	ESSEX X C1640
25. R89-332	PERSHING X NAROW
26. R89-746	(PERSHING X EPPS) X (EPPS X NAROW)
27. R89-959	FORREST X (NAROW X NATHAN)
28. R89-3207	WALTERS X (LLOYD X NAROW)
29. R89-3211	WALTERS X (LLOYD X NAROW)
30. S88-1934	FORREST(3) X PI 437654
31. S88-1986-4	FORREST(3) X PI 437654
32. S88-2331	FORREST(3) X PI 437654
33. S88-7166	FORREST(3) X PI 437654
34. S89-1347	HUTCHESON X D77-6056
35. V87-396	ESSEX X LS79-330
36. V87-1457	N77-114 X A5474

TABLE 23 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP V, 1991

STRAIN	SEED YIELD	MAT. INDEX	HT.	----PERCENT----		SCN 3	SCN 4	SBL
				OIL	PROTEIN			
FORREST	45.9	10/10	29	20.3	40.2	R	S	4
MANOKEN	49.2	6-	26	21.1+	40.1	R	S	3
D88-5547	51.0	2-	30	20.1	41.6+	R	R	2
D88-5727	46.5	1+	29	20.1	42.1+	MR	MR	1
D89-6776	47.7	0	30	18.6-	44.0+	MR	MR	5
D89-7077	49.0	1-	33	19.7-	39.8	R	S	4
K1221	48.5	4-	23	22.9+	39.4	S	S	5
K1222	47.2	0	24	22.3+	39.6	S	S	5
K1223	47.5	2-	24	21.2+	40.3	S	S	4
K1224	46.6	6-	23	20.8	40.3	S	S	4
KY88-1081	45.6	2-	22	18.9-	42.6+	S	S	3
KY88-1702	49.2	2-	26	20.9	39.5	S	S	4
KY88-3081	44.0	4-	19	20.9	41.6+	S	S	3
KY88-9047	45.4	3-	23	21.1+	40.4	S	S	4
LS87-315	41.9	12-	25	20.4	40.1	R	R	5
LS87-1570	44.6	7-	29	20.7	40.6	R	R	5
LS88-950	37.9-	7-	26	21.0+	41.2	S	S	4
LS88-1138	41.6	7-	26	21.0+	41.1	R	S	5
MD87L-0285	33.7-	5-	22	14.6-	55.2+	S	S	3
MD88-5434	45.7	4-	23	20.8	40.6	S	S	3
N89-374	43.2	5+	41	19.8	41.4+	S	S	4
N89-490	43.2	3-	31	21.0+	40.5	S	S	4
N89-931	42.7	7+	30	19.6-	41.4+	S	S	3
N89-960	45.8	1-	40	21.3+	40.8	S	S	4
R89-332	50.5	2-	24	20.5	39.8	H	S	3
R89-746	45.8	4-	25	20.9	41.7+	R	S	3
R89-959	44.5	1-	29	20.8	40.9	R	S	4
R89-3207	47.3	3+	32	19.0-	43.1+	R	H	4
R89-3211	45.0	4+	34	19.0-	43.4+	R	H	5
S88-1934	47.9	1+	35	19.2-	39.3	R	R	5
S88-1986-4	44.5	2-	29	20.1	40.4	R	R	4
S88-2331	47.3	1+	33	19.4-	41.6+	R	R	4
S88-7166	48.1	0	31	20.1	40.1	R	R	4
S89-1347	46.9	5+	37	20.3	39.6	R	H	4
V87-396	50.2	0	28	20.2	43.5+	S	S	3
V87-1457	50.4	6-	27	20.9	40.0	S	S	3
LSD (.05)	5.4			0.6	1.1			
C.V.	11%			2%	2%			

+ or - designations refer to differences from Forrest

TABLE 24 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP V, 1991

STRAIN	PLY-MOUTH, NC	KEISER, AR	PORTAGE-VILLE, MO	WARSAW, VA	PITTS-BURG, KS	VERONA, MS	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)
FORREST	44.1	56.7	51.9	55.2	.	24.0	44.2	45.4
MANOKEN	55.6	60.7	54.1	51.7	.	26.2	51.1	45.1
D88-5547	48.8	54.9	50.6	54.0	.	40.1+	55.7+	52.9
D88-5727	45.7	49.4	50.6	42.9-	.	31.9	56.3+	48.6
D89-6776	49.6	51.8	51.3	53.6	.	29.7	49.3	48.3
D89-7077	45.6	51.7	57.2	53.8	.	25.8	57.6+	51.0
K1221	42.7	63.0	49.1	58.4	.	29.4	51.5	45.2
K1222	53.5	51.9	50.5	53.9	.	21.5	53.1+	45.7
K1223	45.1	56.0	50.3	57.9	.	30.8	44.3	48.3
K1224	48.2	55.9	47.0	52.9	.	29.7	45.3	46.9
KY88-1081	46.7	58.6	53.3	47.8-	.	12.9	46.7	52.9
KY88-1702	53.4	57.3	50.5	58.0	.	30.5	46.7	48.3
KY88-3081	43.2	54.5	51.6	50.1	.	24.0	47.0	37.6
KY88-9047	49.1	58.2	55.2	52.1	.	24.0	36.5-	42.9
LS87-315	51.6	54.1	46.9	41.9-	.	16.8	39.9	42.3
LS87-1570	42.5	57.5	53.3	50.9	.	25.8	39.8	42.6
LS88-950	38.5	48.1	44.0-	48.0-	.	18.3	28.2-	39.9
LS88-1138	47.3	52.1	46.2	44.4-	.	22.9	39.5	38.7
MD87L-028	18.7-	37.4	38.6-	45.6-	.	25.4	31.6-	38.7
MD88-5434	41.1	54.7	54.1	50.4	.	29.7	39.3	50.6
N89-374	50.1	44.5	42.5-	45.8-	.	39.8+	37.3	42.6
N89-490	49.7	49.0	49.0	46.4-	.	21.5	42.9	43.6
N89-931	49.6	40.1	49.5	50.0	.	42.3+	29.8-	37.7
N89-960	44.2	54.6	51.4	52.7	.	28.7	47.6	41.2
R89-332	49.9	58.1	55.4	58.2	.	25.8	57.7+	48.3
R89-746	39.7	55.1	52.0	54.6	.	22.6	49.9	46.7
R89-959	47.0	47.9	49.8	54.3	.	27.6	44.6	40.0
R89-3207	44.6	47.4	46.0	61.5+	.	39.8+	46.7	45.1
R89-3211	37.3	43.5	53.9	56.9	.	37.3	46.5	39.3
S88-1934	48.1	53.7	51.8	54.1	.	34.4	44.3	48.7
S88-1986-	34.8	56.7	50.5	50.9	.	24.0	46.9	47.9
S88-2331	38.8	49.6	55.1	56.2	.	34.4	53.2+	44.0
S88-7166	43.8	52.6	57.2	53.1	.	35.5	49.8	44.9
S89-1347	50.7	48.4	45.0-	57.1	.	44.1+	41.1	41.9
V87-396	50.3	51.7	49.1	56.3	.	41.2+	52.1+	50.7
V87-1457	55.1	57.7	51.4	57.3	.	33.3	49.1	48.8
LSD (.05)	12.3	.	6.2	5.8	.	13.3	7.3	8.4
C.V.	13%	.*	6%	5%	.*	23%	8%	9%

TABLE 25 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP V, 1991

STRAIN	WARSAW, VA	PLY- MOUTH, NC	PORTAGE- VILLE, MO	KEISER, AR	STONE- VILLE, MS (B)
FORREST	21.0	20.4	19.9	18.5	21.5
MANOKEN	20.9	20.9	20.9	21.3	21.7
D88-5547	20.5	20.6	19.8	19.1	20.7
D88-5727	20.7	20.5	19.5	19.4	20.4
D89-6776	19.1	17.5	18.6	17.8	19.9
D89-7077	20.6	20.4	19.0	18.3	20.4
K1221	23.5	22.0	22.4	22.5	24.1
K1222	22.0	22.3	21.3	22.4	23.4
K1223	21.4	20.2	21.2	20.9	22.5
K1224	21.2	20.9	20.8	19.6	21.6
KY88-1081	19.2	18.6	18.4	18.3	20.1
KY88-1702	21.5	20.4	20.6	20.2	22.0
KY88-3081	21.2	20.7	21.0	20.2	21.5
KY88-9047	21.8	20.3	21.3	20.3	21.8
LS87-315	21.1	19.9	20.3	19.8	20.7
LS87-1570	20.9	20.3	20.2	20.2	22.1
LS88-950	20.8	19.8	20.7	21.1	22.7
LS88-1138	21.1	20.1	20.8	21.1	22.0
MD87L-028	14.3	14.3	14.9	13.5	15.8
MD88-5434	20.9	20.7	20.3	19.9	22.3
N89-374	20.1	19.9	19.5	18.6	20.7
N89-490	21.5	21.2	20.4	20.5	21.5
N89-931	19.9	19.1	19.4	19.7	19.9
N89-960	21.1	20.7	21.2	20.8	22.7
R89-332	20.6	19.5	20.0	20.7	21.8
R89-746	20.8	20.4	20.7	20.4	22.2
R89-959	20.8	20.8	20.9	19.7	21.6
R89-3207	19.9	18.9	18.7	17.9	19.4
R89-3211	19.6	19.1	18.8	17.7	19.6
S88-1934	19.0	19.6	18.6	18.1	20.7
S88-1986-	19.7	19.9	20.0	19.2	21.5
S88-2331	19.2	19.3	19.2	18.7	20.5
S88-7166	20.5	21.0	18.5	18.8	21.6
S89-1347	21.8	20.1	19.1	19.5	21.0
V87-396	20.2	20.0	19.8	19.7	21.4
V87-1457	20.8	20.4	20.2	20.9	22.1

TABLE 26 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP V, 1991

STRAIN	WARSAW, VA	PLY- MOUTH, NC	PORTAGE- VILLE, MO	KEISER, AR	STONE- VILLE, MS (B)
FORREST	37.6	41.4	39.7	41.1	41.2
MANOKEN	39.0	41.1	39.7	39.5	41.3
D88-5547	39.0	41.6	41.7	43.1	42.8
D88-5727	39.2	41.5	42.3	43.7	44.0
D89-6776	42.8	46.0	42.1	45.1	43.9
D89-7077	37.5	41.0	39.0	41.8	39.8
K1221	36.5	42.7	38.9	39.5	39.5
K1222	38.3	40.0	39.9	39.5	40.2
K1223	37.9	42.9	39.7	40.4	40.6
K1224	38.2	41.3	39.4	42.0	40.8
KY88-1081	41.4	43.9	42.4	42.8	42.4
KY88-1702	36.2	41.3	39.4	40.3	40.1
KY88-3081	39.6	42.6	40.8	42.6	42.6
KY88-9047	36.3	42.6	39.7	41.9	41.5
LS87-315	36.4	41.8	39.2	42.1	41.1
LS87-1570	38.7	41.9	40.9	41.3	40.2
LS88-950	39.3	44.3	41.0	41.1	40.3
LS88-1138	39.4	43.2	40.5	41.8	40.5
MD87L-028	53.1	57.9	54.0	56.4	54.7
MD88-5434	39.3	42.1	40.0	41.8	39.8
N89-374	39.0	42.5	40.8	43.2	41.5
N89-490	37.4	41.4	39.8	41.8	42.3
N89-931	39.0	43.5	40.6	41.6	42.3
N89-960	39.4	42.0	40.4	42.0	40.0
R89-332	38.3	42.4	38.6	40.2	39.5
R89-746	40.5	44.9	40.8	41.6	40.6
R89-959	39.5	42.2	39.3	41.6	41.7
R89-3207	40.8	44.7	42.0	43.8	44.1
R89-3211	41.5	44.5	41.7	44.7	44.8
S88-1934	36.5	40.8	39.5	40.5	39.1
S88-1986-	38.7	42.0	39.7	41.3	40.3
S88-2331	40.0	43.7	40.5	42.5	41.5
S88-7166	37.3	40.8	39.8	41.8	40.6
S89-1347	34.6	41.3	40.1	41.5	40.6
V87-396	41.0	45.2	42.5	44.5	44.2
V87-1457	36.9	42.4	39.9	40.3	40.4

TABLE 27 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP V, 1991

STRAIN	WARSAW, VA	PLY- MOUTH, NC	PORTAGE- VILLE, MO	KEISER, AR	STONE- VILLE, MS (A)	STONE- VILLE, MS (B)	PITTS- BURG, KS
FORREST	29.0	38.0	30.0	34.0	30.0	25.0	.
MANOKEN	24.0	37.0	19.0	30.0	27.0	25.0	.
D88-5547	31.0	39.0	27.0	32.0	31.0	30.0	.
D88-5727	27.0	35.0	27.0	33.0	30.0	29.0	.
D89-6776	33.0	39.0	26.0	28.0	31.0	28.0	.
D89-7077	36.0	39.0	28.0	34.0	36.0	34.0	.
K1221	22.0	35.0	17.0	30.0	21.0	22.0	.
K1222	23.0	34.0	22.0	25.0	25.0	23.0	.
K1223	24.0	32.0	24.0	26.0	24.0	23.0	.
K1224	20.0	28.0	19.0	29.0	22.0	23.0	.
KY88-1081	16.0	31.0	20.0	26.0	22.0	22.0	.
KY88-1702	21.0	37.0	23.0	26.0	25.0	26.0	.
KY88-3081	15.0	24.0	18.0	21.0	20.0	21.0	.
KY88-9047	21.0	30.0	25.0	26.0	22.0	21.0	.
LS87-315	23.0	36.0	27.0	26.0	22.0	24.0	.
LS87-1570	28.0	42.0	22.0	37.0	30.0	26.0	.
LS88-950	23.0	38.0	27.0	26.0	26.0	25.0	.
LS88-1138	24.0	38.0	25.0	28.0	26.0	24.0	.
MD87L-028	20.0	33.0	17.0	26.0	22.0	20.0	.
MD88-5434	19.0	28.0	26.0	28.0	22.0	23.0	.
N89-374	43.0	50.0	40.0	41.0	42.0	42.0	.
N89-490	32.0	40.0	31.0	34.0	30.0	29.0	.
N89-931	20.0	37.0	30.0	36.0	31.0	26.0	.
N89-960	39.0	49.0	38.0	42.0	48.0	39.0	.
R89-332	24.0	34.0	25.0	26.0	23.0	22.0	.
R89-746	22.0	37.0	20.0	28.0	25.0	24.0	.
R89-959	26.0	39.0	27.0	31.0	31.0	29.0	.
R89-3207	34.0	38.0	29.0	36.0	33.0	30.0	.
R89-3211	37.0	46.0	33.0	35.0	33.0	29.0	.
S88-1934	33.0	43.0	37.0	41.0	35.0	34.0	.
S88-1986-	29.0	34.0	33.0	36.0	27.0	27.0	.
S88-2331	33.0	39.0	33.0	36.0	33.0	33.0	.
S88-7166	32.0	36.0	31.0	35.0	31.0	29.0	.
S89-1347	37.0	42.0	38.0	44.0	37.0	36.0	.
V87-396	23.0	37.0	26.0	34.0	31.0	27.0	.
V87-1457	26.0	38.0	28.0	28.0	27.0	26.0	.

TABLE 28 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP V, 1991

STRAIN	WARSAW, VA	PLY- MOUTH, NC	PORTAGE- VILLE, MO	KEISER, AR	STONE- VILLE, MS (A)	STONE- VILLE, MS (B)	PITTS- BURG, KS
FORREST	1.0	2.0	2.0	2.0	2.0	2.0	.
MANOKEN	1.2	2.0	2.0	2.0	2.0	2.0	.
D88-5547	1.5	2.0	2.0	2.0	2.0	2.0	.
D88-5727	1.0	2.0	2.0	2.0	2.0	2.0	.
D89-6776	1.2	2.0	2.0	2.0	2.0	2.0	.
D89-7077	1.2	2.0	1.5	1.0	2.0	2.0	.
K1221	1.0	2.0	2.5	2.5	2.0	2.0	.
K1222	1.0	2.0	2.5	2.5	2.0	2.0	.
K1223	1.0	2.0	2.0	2.0	2.0	2.0	.
K1224	1.2	2.0	1.5	1.0	2.0	2.0	.
KY88-1081	1.0	2.5	2.5	2.0	2.0	2.0	.
KY88-1702	1.0	2.0	2.0	2.0	2.0	2.0	.
KY88-3081	1.0	2.5	2.0	1.0	2.0	2.0	.
KY88-9047	1.0	2.0	2.0	1.5	2.0	2.0	.
LS87-315	1.5	2.0	2.0	2.5	2.0	2.0	.
LS87-1570	1.8	2.0	2.5	2.0	2.0	2.0	.
LS88-950	1.5	2.5	3.5	2.5	2.0	2.0	.
LS88-1138	1.5	2.0	2.0	2.0	2.0	2.0	.
MD87L-028	1.0	2.0	1.5	1.5	2.0	2.0	.
MD88-5434	1.0	2.0	2.5	1.0	2.0	2.0	.
N89-374	1.5	2.0	2.0	2.5	2.0	2.0	.
N89-490	1.2	2.0	1.5	2.0	2.0	2.0	.
N89-931	1.2	2.0	2.0	2.5	2.0	2.0	.
N89-960	1.0	2.0	2.0	1.0	2.0	2.0	.
R89-332	1.0	2.0	2.0	2.0	2.0	2.0	.
R89-746	1.5	2.0	2.0	2.0	2.0	2.0	.
R89-959	1.0	2.0	2.0	2.0	2.0	2.0	.
R89-3207	1.5	2.0	2.0	1.0	2.0	2.0	.
R89-3211	1.5	2.0	2.0	2.0	2.0	2.0	.
S88-1934	1.8	2.0	2.0	2.0	2.0	2.0	.
S88-1986-	1.8	2.0	2.0	1.0	2.0	2.0	.
S88-2331	1.8	2.0	2.0	2.0	2.0	2.0	.
S88-7166	1.5	2.0	2.0	1.5	2.0	2.0	.
S89-1347	1.0	2.0	2.5	2.0	2.0	2.0	.
V87-396	1.0	2.0	1.5	1.0	2.0	2.0	.
V87-1457	1.2	2.0	2.0	1.0	2.0	2.0	.

UNIFORM GROUP VI
1991

VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1. LEFLORE	CENTENNIAL X J74-47	F5
2. SHARKEY	TRACY X CENTENNIAL	F5
3. N86-397	YOUNG(2) X D76-9665	F5
4. N86-491	N77-1602 X F77-1797	F5
5. AU86-888	CO79-760 X N77-114	F5
6. D87-5870	D82-2218 X LAMAR	F5
7. AU87-727	J80-293 X N81-320	F6
8. D87-4429	SHARKEY X LEFLORE	F5
9. G86-1195	D76-9665 X BRAXTON	F6
10. N88-192	N79-856 X N81-320	F6
11. S87-1551	ESSEX X EPPS	F6
12. SC84-931	CENTENNIAL X YOUNG	F5

Background of lines used as parents:

J74-47 is a SCN race 4 selection of the same parentage as Bedford.
D76-9665 is a selection from Forrest X D70-3001 which was grown in Uniform Group VI 1977-1979. D77-3001 is of the same parentage as Centennial.

N77-1602 is a selection from Hunter X N70-2205. N70-2205 is a selection from Hampton X Ransom.

F77-1797 is a selection from Centennial X (Forrest X (Cobb X D68-216)).
CO 79-760 is a selection from CO 73-473 X Centennial grown in Preliminary Group VIII, 1981.

N77-114 is a selection from Essex X N70-2173. N70-2173 was grown in Uniform Group Vi in 1980.

D82-2218 is a selection from Bedford X Tracey-M.
J80-293 is a selection from J74-39 X Centennial.
J74-39 is of the sme parentage as Bedford.

N81-320 is a selection from N73-40 X N73-520-4 grown in Uniform V, 1984.

N79-856 is a selection from Essex X N70-3037 grown in Preliminary Group VI, 1981.

UNIFORM GROUP VI

1991

Uniform Group VI nurseries were planted at 30 locations. Results from 29 of these plantings are summarized in Tables 29-35. Table 29 gives a general summary of performance including three year means for seed yield, oil, and protein percentages, along with information on reaction to pest and general characteristics. Data from individual locations are reported in Tables 30-35.

Leflore had an overall mean seed yield 42.2 bushels per acre and Sharkey a mean of 42.6 bushels per acre. D87-4429 a selection from Sharkey X Leflore had a mean seed yield of 48.6 bushels per acre which was significantly higher than that for either parent. N86-491 which was being grown a third year had a mean seed yield of 47.3 bushels per acre.

D87-5870 has been evaluated two years and is being considered as a possibility for release for production on the clay soils of the Delta. It is slightly earlier in maturity than Sharkey and has good root knot resistance, along with resistance to SCN race 3. Previously, it was rated resistance to SCN race 4 but in this years rating it was rated susceptible. It also has a moderate level of resistance to feeding by soybean looper and is highly resistant to stem canker.

Ratings for reaction to the two root knot nematode *M. incognita* and *M. arenaria* were made in the greenhouse at the University of Georgia. Ratings for reaction to soybean cyst nematode races 3 and 4 (14) were made in the greenhouse at Jackson, Tennessee. Ratings for feedings by soybean looper were made in the field cage at Stoneville, where a high population of moths were released for egg laying and development of larve on the individual strains. Ratings for stem canker were made in the nursery at Beaumont, Texas with naturally developing disease conditions. Ratings were on a 0 to 9 basis.

TABLE 29 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP VI, 1991

	NO. OF LOCATIONS	LEFLORE	SHARKEY	N86- 397	N86- 491	AU86- 888
Seed Yield - 1991						
East Coast	4	42.0	38.0	44.4	46.3	43.3
Southeast	7	42.5	45.0	49.6	54.6	49.4
Upper and Central South	5	40.1	39.4	42.0	41.1	39.8
Delta	9	42.3	42.7	44.2	45.8	41.4
West	4	44.5	46.5	42.2	46.3	49.5
1990-91						
East Coast		42.8	41.7	45.2	48.2	45.5
Southeast		38.7	39.7	42.7	46.2	43.2
Upper & Central South		41.8	41.7	45.5	44.2	42.1
Delta		42.3	43.2	43.5	44.7	42.0
West		49.4	48.5	45.7	51.1	52.8
1989-91						
East Coast		42.3	42.4	45.3	45.8	
Southeast		38.3	37.5	40.4	44.5	
Upper & Central South		41.3	42.6	46.4	46.1	
Delta		40.4	42.8	43.6	44.7	
West		43.9	45.2	42.7	46.2	
Oil Content - 1991						
		18.4	19.0	19.3	19.9	21.1
1990-91						
		18.9	19.4	20.3	20.2	21.7
1989-91						
		18.8	19.4	20.3	20.1	
Protein Content - 1991						
		41.8	43.3	41.7	40.3	39.7
1990-91						
		41.9	43.3	41.5	40.3	39.6
1989-91						
		41.7	43.1	41.6	40.3	
Seed size		13.0	15.1	14.0	15.1	14.1
Maturity index		10-15	+1	-1	+1	-0
Height		38	41	34	39	33
Seed quality		1.8	2.3	1.7	2.0	1.8
M. incognita		1.0	4.6	2.9	3.4	5.0
M. arenaria		3.6	3.8	4.4	2.5	4.8
SCN race 3		R	R	S	S	S
SCN race 4		R	S	S	S	S
SBL Feeding		3	4	3	3	4
Flower color		P	W	W	P	P
Pubescence color		T	T	G	T	G
Pod wall color		T	T	T	T	T
Stem Canker		1.7	0	3.3	1.7	0.7

TABLE 29 - (continued)

	D87- 5870	AU87- 727	D87- 4429	G86- 1195	N88- 192	S87- 1551	SC84- 931
Seed Yield - 1991							
East Coast	42.2	44.1	45.0	45.0	41.9	43.2	48.2
Southeast	39.9	44.8	49.4	42.9	50.0	37.6	51.2
Upper and Central South	39.9	41.6	44.0	40.4	37.8	43.2	42.0
Delta	43.4	42.7	49.2	42.6	44.0	50.0	47.2
West	47.5	47.2	53.5	47.2	44.9	41.2	42.8
1990-91							
East Coast	44.1						
Southeast	38.2						
Upper & Central South	41.8						
Delta	43.8						
West	49.4						
1989-91							
East Coast							
Southeast							
Upper & Central South							
Delta							
West							
Oil Content - 1991	20.4	21.1	19.5	20.1	20.1	20.0	19.6
1990-91	20.4						
1989-91							
Protein Content - 1991	40.9	40.7	41.3	40.8	43.3	41.6	38.9
1990-91	41.5						
1989-91							
Seed size	1300	14.0	16.0	15.0	16.1	15.0	15.0
Maturity index	-3	-2	-0	+1	-1	-5	-4
Height	30	36	32	35	39	28	33
Seed quality	1.9	1.7	1.8	2.1	1.9	2.1	1.8
M. incognita	1.4	3.0	1.9	2.7	4.2	4.4	2.2
M. arenaria	3.2	2.0	3.0	1.3	4.0	3.8	4.0
SCN race 3	R	R	R	R	S	R	S
SCN race 4	S	S	S	S	S	h	S
SBL Feeding	2.5	4	5	3	4	4	4
Flower color	W	P	P	P	P	P	P
Pubescence color	T	T	T	T	T	G	G
Pod wall color	T	T	T	T	T	T	T
Stem Canker	0.3	0.3	0.3	1.0	1.7	3.7	1.0

TABLE 30 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN UNIFORM GROUP VI, 1991

LOCATION	LEFLORE	SHARKEY	N86- 397	N86- 491	AU86- 888	D87- 5870
EAST COAST						
WARSAW, VA	50.9	46.7	48.5	52.8	54.6	53.7
PLYMOUTH, NC	45.6	37.5	47.3	54.4	40.4	46.8
KINSTON, NC	37.6	40.0	38.7	41.3	35.4	39.8
FLORENCE, SC	33.8	27.6	43.1	36.8	42.6	28.4
MEAN	42.0	38.0	44.4	46.3	43.3	42.2
SOUTHEAST						
BLACKVILLE, SC	33.6	38.8	43.1	38.6	44.8	37.7
TALLASSEE, AL	42.0	53.6	47.0	56.7	46.9	43.2
TIFTON, GA	58.4	52.4	62.8	64.2	55.7	48.7
QUINCY, FL	40.2	39.1	40.8	51.2	43.0	34.4
JAY, FL	29.0	33.0	49.0	55.0	51.0	26.0
FAIRHOPE, AL	53.8	52.0	57.6	63.1	54.4	48.0
BATON ROUGE, LA	40.7	46.3	46.8	53.3	49.9	41.2
MEAN	42.5	45.0	49.6	54.6	49.4	39.9
UPPER AND CENTRAL SOUTH						
ATHENS, GA	29.4	28.3	35.2	38.9	33.3	32.6
CALHOUN, GA	49.4	50.4	64.7	48.7	49.1	50.6
BELLE MINA, AL	32.3	32.4	20.5	28.8	25.2	29.9
CLEMSON, SC	50.9	48.5	55.4	54.4	55.2	51.3
JACKSON, TN	38.6	37.2	34.4	34.9	36.0	35.2
MEAN	40.1	39.4	42.0	41.1	39.8	39.9
DELTA						
PORTAGEVILLE, MO(A)	51.5	47.8	56.4	52.3	45.7	59.0
PORTAGEVILLE, MO(B)	41.8	40.1	55.8	43.0	41.0	40.3
KEISER, AR	41.2	45.5	40.7	40.7	43.1	47.6
JONESBORO, AR	29.3	29.0	26.0	37.8	31.1	33.5
PINE TREE, AR	46.4	44.5	41.9	41.7	43.7	45.6
STONEVILLE, MS(A)	31.0	37.9	28.3	33.5	28.8	38.0
STONEVILLE, MS(B)	37.9	37.2	42.8	46.6	36.7	37.4
ST. JOSEPH, LA	58.3	56.5	57.0	62.4	51.9	52.9
ROHWER, AR	43.4	46.3	48.5	54.0	50.7	36.5
MEAN	42.3	42.7	44.2	45.8	41.4	43.4
WEST						
STUTTGART, AR	47.6	50.6	54.6	42.6	50.3	46.0
BOSSIER CITY, LA	53.4	52.0	38.7	56.4	62.4	58.0
BIXBY, OK	45.9	47.8	46.3	49.3	48.8	45.4
BEAUMONT, TX	31.2	35.6	29.3	37.0	36.5	40.5
MEAN	44.5	46.5	42.2	46.3	49.5	47.5

TABLE 30 - (continued)

LOCATION	AU87- 727	D87- 4429	G86- 1195	N88- 192	S87- 1551	SC84- 931	L.S.D. (.05)	C.V. (%)
EAST COAST								
WARSAW, VA	53.9	54.9	53.3	49.0	54.8	55.7	.	9.4
PLYMOUTH, NC	47.5	44.1	45.6	46.0	47.0	54.7	5.9	7.5
KINSTON, NC	38.1	45.2	42.7	43.2	41.5	42.3	4.3	6.3
FLORENCE, SC	36.8	35.8	38.2	29.2	29.5	40.1	8.9	14.9
MEAN	44.1	45.0	45.0	41.9	43.2	48.2		
SOUTHEAST								
BLACKVILLE, SC	39.0	42.1	38.2	40.9	29.8	45.9	8.2	12.2
TALLASSEE, AL	52.5	53.0	30.0	51.2	45.9	40.2	9.8	12.3
TIFTON, GA	53.8	61.2	52.3	57.6	26.4	60.6	.	.
QUINCY, FL	39.5	35.8	44.0	44.2	39.3	50.4	.	.
JAY, FL	33.0	43.0	34.0	57.0	32.0	55.0	2.2	2.8
FAIRHOPE, AL	56.3	55.6	54.6	57.8	51.9	60.0	8.0	8.6
BATON ROUGE, LA	39.5	55.4	47.0	41.3	38.0	46.2	7.3	8.9
MEAN	44.8	49.4	42.9	50.0	37.6	51.2		
UPPER AND CENTRAL SOUTH								
ATHENS, GA	37.2	34.6	31.5	34.7	36.9	35.7	6.2	10.1
CALHOUN, GA	46.3	54.3	49.8	48.9	55.5	54.5	7.0	8.0
CLEMSON, SC	57.7	54.3	50.7	51.6	61.6	60.9	5.2	5.6
JACKSON, TN	41.5	43.1	39.7	30.4	41.8	39.0	.	11.5
BELLE MINA, AL	25.4	33.6	30.3	23.3	20.2	20.1	5.3	11.6
MEAN	41.6	44.0	40.4	37.8	43.2	42.0		
DELTA								
PORTAGEVILLE, MO(A)	51.4	61.4	62.5	48.1	52.6	56.3	8.8	9.7
PORTAGEVILLE, MO(B)	39.0	44.3	41.8	42.2	50.8	42.0	5.5	7.4
KEISER, AR	46.3	42.7	46.6	45.4	55.0	53.0	4.6	6.0
JONESBORO, AR	31.0	45.2	29.6	33.2	41.9	34.3	.	13.8
PINE TREE, AR	43.1	49.7	42.2	40.2	42.7	40.7	.	7.3
STONEVILLE, MS(A)	30.1	36.5	32.6	41.7	51.5	44.9	5.3	8.7
STONEVILLE, MS(B)	37.5	42.9	39.1	42.6	46.8	47.8	4.2	6.1
ST. JOSEPH, LA	55.7	61.2	59.0	57.7	63.9	61.4	7.7	8.1
ROHWER, AR	49.8	58.7	30.4	44.7	44.4	44.2	10.0	12.8
MEAN	42.7	49.2	42.6	44.0	50.0	47.2		
WEST								
STUTTGART, AR	49.7	57.4	39.9	49.3	50.2	47.0	6.0	7.3
BOSSIER CITY, LA	56.8	59.8	60.5	51.7	40.5	39.7	20.5	13.0
BIXBY, OK	50.1	53.1	52.1	44.6	42.9	50.3	3.4	4.2
BEAUMONT, TX	32.3	43.8	36.2	34.1	31.3	34.3	6.9	11.5
MEAN	47.2	53.5	47.2	44.9	41.2	42.8		

TABLE 31 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP VI, 1991

LOCATION	LEFLORE	SHARKEY	N86- 397	N86- 888	AU86- 491	D87- 5870
OIL PERCENTAGE						
PLYMOUTH, NC	18.0	17.8	19.5	18.9	19.4	19.9
KINSTON, NC	18.2	18.1	20.0	18.9	20.0	20.0
TALLASSEE, AL	19.6	19.9	20.8	19.7	21.9	21.2
ST. JOSEPH, LA	18.6	19.9	20.7	20.2	22.2	20.4
PORTAGEVILLE, MO(A)	17.6	18.0	18.7	19.4	20.6	20.5
KEISER, AR	17.1	18.1	19.7	19.4	20.5	20.1
STONEVILLE, MS(B)	18.1	20.0	20.8	21.1	22.1	20.3
STUTT GART, AR	18.9	20.2	21.1	20.9	21.4	19.9
ATHENS, GA	19.7	19.4	12.6	20.6	21.8	21.4
MEAN	18.4	19.0	19.3	19.9	21.1	20.4
PROTEIN PERCENTAGE						
PLYMOUTH, NC	43.0	44.8	43.6	41.9	41.4	42.2
KINSTON, NC	42.7	44.3	43.1	41.5	41.7	41.5
TALLASSEE, AL	42.3	43.6	42.2	42.0	40.5	40.7
ST JOSEPH, LA	40.1	41.8	40.3	39.7	37.2	40.6
PORTAGEVILLE, MO(A)	41.2	42.4	42.0	38.5	38.6	39.0
KEISER, AR	42.9	44.2	43.5	41.5	40.6	41.6
STONEVILLE, MS(B)	42.3	43.5	40.7	38.9	38.1	41.3
STUTT GART, AR	42.2	42.7	40.3	39.3	40.7	42.0
ATHENS, GA	39.5	42.3	39.6	39.4	38.9	39.5
MEAN	41.8	43.3	41.7	40.3	39.7	40.9
GRAMS PER 100 SEED						
PLYMOUTH, NC	13.6	15.7	11.7	15.7	13.3	15.7
TALLASSEE, AL	11.8	13.6	11.4	16.6	11.8	12.9
JAY, FL	16.0	17.0	13.0	19.0	14.0	18.0
PORTAGEVILLE, MO(A)	13.5	15.3	12.7	14.6	12.6	15.6
KEISER, AR	13.5	16.5	11.5	15.5	11.5	14.5
STONEVILLE, MS(B)	12.4	14.9	12.5	15.5	12.2	14.2
STUTT GART, AR	14.2	15.5	12.5	15.1	11.8	14.5
ATHENS, GA	13.9	17.1	12.5	14.9	13.0	14.7
MEAN	13.6	15.7	12.2	15.9	12.5	15.0

TABLE 31 - (continued)

LOCATION	AU87- 727	D87- 4429	G86- 1195	N88- 192	S87- 1551	SC84- 931
OIL PERCENTAGE						
PLYMOUTH, NC	19.9	19.2	19.5	19.4	19.5	19.5
KINSTON, NC	20.9	19.0	20.7	19.8	19.8	9.8
TALLASSEE, AL	21.9	20.6	20.2	20.7	19.4	20.9
ST. JOSEPH, LA	21.6	19.9	20.1	20.8	20.6	21.1
PORTAGEVILLE, MO(A)	20.6	18.3	18.9	18.6	18.8	19.9
KEISER, AR	20.5	18.4	19.1	19.0	18.9	20.0
STONEVILLE, MS(B)	20.9	19.8	20.9	20.2	20.8	21.2
STUTTGART, AR	20.8	19.8	20.5	20.4	21.1	22.2
ATHENS, GA	22.4	20.9	20.9	21.7	21.2	21.4
MEAN	21.1	19.5	20.1	20.1	20.0	19.6
PROTEIN PERCENTAGE						
PLYMOUTH, NC	43.2	41.8	42.2	45.1	43.3	43.0
KINSTON, NC	40.5	41.3	41.6	44.7	42.3	23.1
TALLASSEE, AL	41.0	42.0	43.3	45.1	44.1	43.7
ST. JOSEPH, LA	38.9	40.5	40.9	40.3	39.3	39.9
PORTAGEVILLE, MO(A)	39.4	40.4	39.8	43.4	40.9	40.1
KEISER, AR	42.5	42.6	40.8	44.7	42.6	41.7
STONEVILLE, MS(B)	41.0	41.5	38.6	42.2	40.4	40.5
STUTTGART, AR	42.3	42.9	40.0	44.2	40.5	39.0
ATHENS, GA	37.6	38.5	39.6	40.1	41.0	39.5
MEAN	40.7	41.3	40.8	43.3	41.6	38.9
GRAMS PER 100 SEED						
PLYMOUTH, NC	15.4	15.8	15.0	14.5	13.5	14.8
TALLASSEE, AL	14.7	12.6	14.1	12.0	11.4	12.1
JAY, FL	16.0	15.0	16.0	15.0	14.0	14.0
PORTAGEVILLE, MO(A)	15.0	13.4	13.1	13.8	13.0	14.1
KEISER, AR	14.0	15.5	14.5	15.0	11.0	15.5
STONEVILLE, MS(A)	13.6	15.1	14.9	13.8	12.8	12.6
STUTTGART, AR	14.0	13.4	15.4	14.7	12.7	14.5
ATHENS, GA	13.9	15.5	13.8	14.5	13.3	13.8
MEAN	14.6	14.5	14.6	14.2	12.7	13.9

TABLE 32 - RELATIVE MATURITY DATA, DAYS EARLIER (-) OR LATER (+) THAN LEFLORE, FOR THE STRAINS IN UNIFORM GROUP VI, 1991

LOCATION	LEFLORE	SHARKEY	N86- 397	N86- 491	AU86- 888	D87- 5870
EAST COAST						
WARSAW, VA	10/26	+2	+3	+0	+0	-2
PLYMOUTH, NC	10/26	+2	-4	+0	+0	-6
KINSTON, NC	10/20	+3	+2	+0	-2	-2
FLORENCE, SC	10/15	+2	+0	+1	+1	-6
MEAN	10/22	+2	+0	+0	+0	-4
SOUTHEAST						
BLACKVILLE, SC	10/13	+2	-2	+1	-2	-3
TIFTON, GA	10/04	+1	+0	+0	+0	-4
FAIRHOPE, AL	10/15	+0	-2	+0	+0	-6
TALLASSEE, AL	10/09	-2	-7	+1	+1	-5
JAY, FL	10/14	+7	+7	+7	+5	-1
MEAN	10/11	+2	-1	+2	+1	-4
UPPER AND CENTRAL SOUTH						
ATHENS, GA	10/08	+1	-5	+3	-1	-6
CALHOUN, GA	10/10	+2	+2	-2	-1	+0
CLEMSON, SC	10/15	+0	+5	+0	-1	-2
JACKSON, TN	10/21	+0	+0	-1	+0	+0
BELLE, MINA, AL	10/11	+0	-3	+5	+5	+0
MEAN	10/13	+1	+0	+1	+0	-2
DELTA						
PORTAGEVILLE, MO(A)	10/21	+2	-1	-1	-4	-3
PORTAGEVILLE, MO(B)	10/25	+1	+1	+1	+1	-3
KEISER, AR	10/22	-2	-3	-3	-3	-5
JONESBORO, AR	10/17	+0	+0	+0	+0	-2
PINE TREE, AR	10/13	+1	+2	+2	+3	-2
STONEVILLE, MS(A)	10/06	+13	-1	+5	+0	+0
STONEVILLE, MS(B)	10/16	-1	-2	+1	+0	-4
ST. JOSEPH, LA	10/10	+0	-6	+1	-1	-4
ROHWER, AR	10/14	-3	-1	+2	+2	-3
MEAN	10/16	+1	-1	+1	+0	-3
WEST						
STUTTGART, AR	10/11	+0	-3	+0	-2	-3
BEAUMONT, TX	10/11	+1	-5	+0	-1	-3
BIXBY, OK	11/01					
MEAN	10/18	-6	-11	-7	-8	-10

TABLE 32 - (continued)

LOCATION	AU87- 727	D87- 4429	G86- 1195	N88- 192	S87- 1551	SC84- 931
EAST COAST						
WARSAW, VA	-4	+0	+1	-2	-12	-5
PLYMOUTH, NC	-6	-2	-2	-3	-6	-4
KINSTON, NC	+2	+0	+3	+2	-10	-8
FLORENCE, SC	-4	+0	+1	-5	-4	-7
MEAN	-3	-1	+1	-2	-8	-6
SOUTHEAST						
BLACKVILLE, SC	-1	+0	-4	-4	+0	-3
TIFTON, GA	-6	+1	+2	-6	+8	-2
FAIRHOPE, AL	-6	-1	+1	-4	-12	-7
TALLASSEE, AL	-5	-1	+2	-5	-16	-13
JAY, FL	-4	+0	+8	+7	+21	+0
MEAN	-4	+0	+2	-2	+0	-5
UPPER AND CENTRAL SOUTH						
ATHENS, GA	-1	-2	+1	-1	-9	-7
CALHOUN, GA	-3	-2	+2	-1	-5	-3
CLEMSON, SC	-2	-2	+2	-2	-5	-2
JACKSON, TN	+0	+0	+0	+0	-7	+0
BELLE MINA, AL	-2	+0	+3	+0	-3	-3
MEAN	-2	-1	+2	-1	-6	-3
DELTA						
PORTAGEVILLE, MO(A)	-3	-1	+1	-2	-7	-2
PORTAGEVILLE, MO(B)	-2	+0	+2	-1	-4	+2
KEISER, AR	-5	+0	-2	-4	-9	-5
JONESBORO, AR	-7	+0	-1	-1	-8	-4
PINE TREE, AR	-1	+1	+2	-1	-6	-2
STONEVILLE, MS(A)	-1	+0	+1	+0	-8	-1
STONEVILLE, MS(B)	-1	-1	+0	+1	-11	-6
ST. JOSEPH, LA	-5	-3	+2	-4	-5	-8
ROHWER, AR	+0	-3	+2	-3	-3	-1
MEAN	-3	-1	+1	-2	-7	-3
WEST						
STUTTGART, AR	-1	-3	+0	-2	-10	-8
BIXBY, OK						
BEAUMONT, TX	+0	+4	+0	-1	-6	-4
MEAN	-7	-6	-7	-8	-15	-13

TABLE 33 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP VI, 1991

LOCATION	LEFLORE	SHARKEY	N86- 6397	N86- 491	AU86- 888	D87- 5870
EAST COAST						
WARSAW, VA	43	45	35	43	34	37
PLYMOUTH, NC	45	51	43	46	42	39
KINSTON, NC	42	47	40	43	41	37
FLORENCE, SC	44	45	39	42	37	35
MEAN	44	47	39	44	39	37
SOUTHEAST						
BLACKVILLE, SC	33	38	32	33	29	30
TIFTON, GA	35	37	33	34	28	28
FAIRHOPE, AL	28	36	32	33	29	22
TALLASSEE, AL	38	41	34	37	31	29
JAY, FL	33	35	33	36	30	24
BATON ROUGE, LA	25	20	.	28	.	24
MEAN	32	35	33	34	29	26
UPPER AND CENTRAL SOUTH						
ATHENS, GA	36	40	33	38	33	31
CALHOUN, GA	33	34	38	36	34	30
CLEMSON, SC	45	46	36	45	38	33
JACKSON, TN	46	47	41	45	39	38
BELLE MINA, AL	31	38	28	36	26	27
MEAN	38	41	35	40	34	32
DELTA						
PORTAGEVILLE, MO(A)	38	42	32	40	40	24
PORTAGEVILLE, MO(B)	37	45	33	36	30	25
KEISER, AR	48	47	41	49	38	39
JONESBORO, AR	50	48	37	51	44	38
PINE TREE, AR	34	35	29	36	28	30
STONEVILLE, MS(A)	37	41	35	42	31	31
STONEVILLE, MS(B)	39	43	35	41	28	30
ST. JOSEPH, LA	43	45	39	44	37	33
ROHWER, AR	29	36	30	35	27	24
MEAN	39	42	35	42	34	30
WEST						
STUTTGART, AR	39	46	34	39	36	30
BOSSIER CITY, LA	35	41	22	38	31	26
BIXBY, OK	38	39	37	36	39	35
BEAUMONT, TX	33	36	27	34	27	25
MEAN	36	41	30	37	33	29

TABLE 33 - (continued)

LOCATION	AU87- 727	D87- 4429	G86- 1195	N88- 192	S87- 1551	SC84- 931
EAST COAST						
WARSAW, VA	40	37	41	41	28	36
PLYMOUTH, NC	48	45	47	49	38	45
KINSTON, NC	46	39	42	43	35	41
FLORENCE, SC	42	34	38	46	33	39
MEAN	44	39	42	45	34	40
SOUTHEAST						
BLACKVILLE, SC	34	28	29	38	26	29
TIFTON, GA	30	31	31	29	30	30
FAIRHOPE, AL	32	25	31	34	24	29
TALLASSEE, AL	36	32	35	38	29	34
JAY, FL	32	28	32	38	33	31
BATON ROUGE, LA	27	.	.	.	.	26
MEAN	32	29	32	35	28	30
UPPER AND CENTRAL SOUTH						
ATHENS, GA	38	32	36	38	30	33
CALHOUN, GA	32	32	36	36	30	33
CLEMSON, SC	42	36	40	44	35	40
JACKSON, TN	48	37	41	48	36	41
BELLE MINA, AL	30	25	27	32	24	29
MEAN	38	32	36	40	31	35
DELTA						
PORTAGEVILLE, MO(A)	30	30	39	37	25	32
PORTAGEVILLE, MO(B)	30	32	34	40	26	29
KEISER, AR	44	40	42	46	36	41
JONESBORO, AR	44	38	43	49	37	40
PINE TREE, AR	35	30	33	40	27	30
STONEVILLE, MS(A)	34	29	33	37	23	31
STONEVILLE, MS(B)	35	30	29	42	27	30
ST. JOSEPH, LA	40	39	38	42	31	43
ROHWER, AR	30	26	22	34	20	26
MEAN	36	33	35	41	28	34
WEST						
STUTTGART, AR	37	29	36	35	19	29
BOSSIER CITY, LA	32	26	31	37	21	29
BIXBY, OK	41	34	33	35	31	34
BEAUMONT, TX	31	26	27	36	23	28
MEAN	35	29	32	36	24	30

TABLE 34 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP VI, 1991

LOCATION	LEFLORE	SHARKEY	N86- 397	N86- 491	AU86- 888	D87- 5870
EAST COAST						
WARSAW, VA	2.7	4.0	3.2	2.3	1.5	3.2
PLYMOUTH, NC	4.0	5.0	3.0	3.0	3.0	3.0
KINSTON, NC	2.0	3.0	1.0	2.0	3.0	2.0
FLORENCE, SC	2.0	2.7	2.0	2.0	1.3	2.0
SOUTHEAST						
TIFTON, GA	1.4	1.4	2.6	1.1	1.3	1.9
FAIRHOPE, AL	1.0	2.3	1.3	1.0	1.0	1.0
TALLASSEE, AL	1.2	2.0	1.0	1.2	1.0	1.0
JAY, FL	0.1	0.2	0.1	0.1	0.1	0.1
BATON ROUGE, LA	1.0	1.0	.	2.0	.	3.0
UPPER AND CENTRAL SOUTH						
ATHENS, GA	1.8	3.7	1.5	2.3	1.5	1.8
CALHOUN, GA	2.3	2.3	1.8	2.3	1.5	1.7
CLEMSON, SC	2.0	3.0	1.0	1.0	1.0	1.0
JACKSON, TN	3.0	3.0	2.0	4.0	2.0	3.0
BELLE MINA, AL	1.5	2.0	1.0	1.5	1.0	1.5
DELTA						
PORTAGEVILLE, MO(A)	1.5	4.0	2.0	2.0	2.0	1.5
PORTAGEVILLE, MO(B)	2.0	2.5	2.0	2.0	1.5	2.0
KEISER, AR	2.3	2.0	1.0	2.5	2.0	1.5
JONESBORO, AR	2.3	3.7	1.3	2.7	2.7	1.7
PINE TREE, AR	1.0	2.0	1.0	1.0	1.0	1.0
STONEVILLE, MS(A)	2.0	3.3	2.7	2.3	2.0	2.0
STONEVILLE, MS(B)	2.0	3.3	2.0	2.3	2.0	2.0
ST. JOSEPH, LA	3.0	3.9	3.0	2.5	2.4	2.4
ROHWER, AR	1.0	2.0	1.0	1.0	1.0	1.0
WEST						
STUTTGART, AR	2.3	3.7	1.3	2.3	1.7	1.7
BOSSIER CITY, LA	1.0	2.3	2.3	1.7	1.0	1.0
BIXBY, OK	1.0	3.0	3.0	2.0	1.0	2.0
BEAUMONT, TX	1.0	2.0	1.0	1.3	1.0	1.0

TABLE 34 - (continued)

LOCATION	AU87- 727	D87- 4429	G86- 1195	N88- 192	S87- 1551	SC84- 931
EAST COAST						
WARSAW, VA	1.8	2.8	2.2	2.3	1.5	1.7
PLYMOUTH, NC	4.0	4.0	3.0	3.0	2.0	3.0
KINSTON, NC	3.0	3.0	2.0	2.0	2.0	1.0
FLORENCE, SC	1.7	1.3	1.7	2.3	1.0	1.0
SOUTHEAST						
TIFTON, GA	1.9	1.1	1.4	1.6	1.2	1.3
FAIRHOPE, AL	1.0	1.0	1.0	1.0	1.0	1.0
TALLASSEE, AL	1.5	1.0	1.0	1.2	1.3	1.0
JAY, FL	0.2	0.1	0.1	0.1	0.1	0.1
BATON ROUGE, LA	2.0	.	.	.	.	1.0
UPPER AND CENTRAL SOUTH						
ATHENS, GA	1.8	1.7	1.5	1.7	1.5	1.5
CALHOUN, GA	1.3	1.8	1.3	1.8	1.2	1.5
CLEMSON, SC	2.0	1.0	1.0	1.3	1.0	1.0
JACKSON, TN	3.0	3.0	3.0	2.0	2.0	1.0
BELLE MINA, AL	1.0	1.2	1.0	1.0	1.0	1.0
DELTA						
PORTAGEVILLE, MO(A)	2.0	1.5	1.5	2.0	1.0	1.0
PORTAGEVILLE, MO(B)	2.0	1.5	1.5	2.0	1.0	1.0
KEISER, AR	2.0	2.0	1.7	1.0	1.3	1.0
JONESBORO, AR	2.3	2.7	2.3	2.0	1.3	1.0
PINE TREE, AR	1.0	1.3	1.0	1.3	1.0	1.0
STONEVILLE, MS(A)	2.0	2.3	2.0	3.0	2.0	2.0
STONEVILLE, MS(B)	2.0	2.0	2.0	3.0	2.0	2.0
ST. JOSEPH, LA	2.4	2.1	2.6	2.5	1.5	1.6
ROHWER, AR	1.0	1.0	1.0	1.0	1.0	1.0
WEST						
STUTTGART, AR	2.7	1.7	2.3	2.3	1.0	1.0
BOSSIER CITY, LA	1.0	1.0	1.0	1.7	1.0	1.0
BIXBY, OK	2.0	1.0	1.0	1.0	0.0	1.0
BEAUMONT, TX	1.3	1.0	1.0	2.0	1.0	1.0

TABLE 35 - SEED QUALITY SCORES FOR THE STRAINS IN UNIFORM GROUP VI, 1991

LOCATION	LEFLORE	SHARKEY	N86- 397	N86- 6491	AU86- 888	D87- 5870
EAST COAST						
WARSAW, VA	1.2	1.2	1.5	1.5	1.8	1.2
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
SOUTHEAST						
TIFTON, GA	1.8	2.6	1.6	1.6	1.6	1.8
TALLASSEE, AL	1.0	3.0	1.0	1.0	1.0	1.0
JAY, FL	4.0	3.0	3.0	3.0	4.0	2.0
QUINCY, FL	1.6	5.0	1.3	1.5	2.8	2.8
UPPER AND CENTRAL SOUTH						
ATHENS, GA	1.5	2.3	1.5	1.8	2.2	1.5
CALHOUN, GA	1.5	1.2	1.8	1.0	1.5	1.2
JACKSON, TN	1.7	1.9	2.0	1.6	1.6	2.0
DELTA						
PORTAGEVILLE, MO(A)	2.0	2.0	2.0	2.0	1.5	2.0
PORTAGEVILLE, MO(B)	1.5	2.0	1.5	1.5	1.0	1.0
KEISER, AR	2.0	1.5	2.0	2.0	2.0	2.0
JONESBORO, AR	3.0	2.7	2.0	3.3	2.0	2.0
PINE TREE, AR	2.3	2.3	2.0	2.3	2.0	2.0
STONEVILLE, MS(A)	2.0	3.0	2.3	2.0	2.3	2.0
STONEVILLE, MS(B)	2.0	2.0	2.0	2.0	2.0	2.0
ST. JOSEPH, LA	2.5	2.5	1.8	2.5	1.6	2.2
ROHWER, AR	2.0	2.3	2.0	1.3	3.0	2.7
WEST						
STUTTGART, AR	1.0	2.0	1.0	1.0	2.0	1.3
BEAUMONT, TX	1.5	2.3	1.5	1.3	1.2	1.2

TABLE 35 - (continued)

LOCATION	AU87- 727	D87- 4429	G86- 1195	N88- 192	S87- 1551	SC84- 931
EAST COAST						
WARSAW, VA	1.2	1.4	1.6	1.5	1.3	1.0
PLYMOUTH, NC	1.5	2.0	1.5	2.0	2.0	1.5
KINSTON, NC	2.0	1.5	1.5	2.0	2.0	1.5
SOUTHEAST						
TIFTON, GA	2.0	2.1	2.0	1.6	4.2	2.2
TALLASSEE, AL	1.0	1.0	1.0	1.0	1.0	1.0
JAY, FL	3.0	3.0	4.0	3.0	5.0	2.0
QUINCY, FL	3.2	4.3	1.6	1.8	4.0	2.0
UPPER AND CENTRAL SOUTH						
ATHENS, GA	1.5	1.5	1.5	1.5	1.7	1.5
CALHOUN, GA	1.3	1.3	1.5	1.3	1.7	1.0
JACKSON, TN	2.0	2.0	1.8	1.8	1.7	1.4
DELTA						
PORTAGEVILLE, MO(A)	2.0	2.0	2.0	2.0	2.0	2.0
PORTAGEVILLE, MO(B)	1.0	1.5	2.0	1.5	1.0	1.5
KEISER, AR	1.5	1.5	1.0	2.0	2.5	2.5
JONESBORO, AR	2.0	2.3	3.0	2.3	2.0	2.0
PINE TREE, AR	2.0	2.0	2.7	2.3	2.0	2.3
STONEVILLE, MS(A)	2.3	2.3	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	2.0	2.8	2.2	1.9	1.7
ROHWER, AR	2.0	2.3	2.0	2.3	2.3	2.0
WEST						
STUTTGART, AR	1.0	1.0	1.0	1.0	2.0	2.0
BEAUMONT, TX	2.0	2.3	1.2	1.5	2.2	1.2

PRELIMINARY GROUP VI

1991

Preliminary Group VI nurseries, which included Sharkey and Bedford, along with 34 experimental entries, were grown at 7 locations. The Parentage for each of the entries is reported in Table 36. A general summary of performance is given in Table 37. Data from individual locations are reported in Tables 38-42.

The mean seed yield for the seven locations range from 35.4 bushels per acre to 46 bushels per acre. Sharkey had a mean seed yield of 42.8 bushels per acre. There were no experimental lines having a mean seed yield significantly higher than that for Sharkey. There were four lines having a mean seed yield significantly lower than that for Sharkey. V89-2372 had an overall mean seed yield of 44.3 bushels per acre. The performance of this line is of particular importance because it is essentially Essex converted to a later maturity. Essex has a long history of good performance as a Group V variety and it is of a special interest to see that it also yields well when converted to the later maturity.

Twenty-seven of the experimental strains were rated resistant or heterogeneous for reaction to Race 3 in the greenhouse at Jackson, Tennessee. Eighteen of these lines were also resistant or heterogeneous for reaction to SCN Race 4. S88-1995 has the same broad range of resistance to SCN as does Hartwig.

TABLE 36 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP VI, 1991

VARIETY OR STRAIN	PARENTAGE
1. SHARKEY	TRACY X CENTENNIAL
2. BEDFORD	FORREST(2) X (D68-18 X PI 88788)
3. AU88-166	HUTCHESON X N81-1121
4. AU88-690	D81-2228 X CO 82-645
5. AU88-856	D81-2228 X CO 82-645
6. AU88-1823	J80-293 X CO 82-645
7. AU88-3034	D82-3298 X LEFLORE
8. D87-4371	SHARKEY X LEFLORE
9. D88-4138	D82-2218 X LAMAR
10. D88-4380	D82-2218 X SHARKEY
11. D88-4438	D82-2218 X SHARKEY
12. D88-5960	D82-3298 X D82-5193
13. G87-1127	G80-1335 X D77-6056
14. G87-1340	G80-1335 X D77-6056
15. G87-1794	TWIGGS X CO 368
16. G87-2052	THOMAS X GORDON
17. G87-3619	CO 368 X GORDON
18. N89-280	YOUNG X NCR84-V233
19. N89-566	YOUNG X NCR84-V248
20. N89-977	N84-1299(2) X NCC143
21. RJ85-9116	J77-255 X BEDFORD
22. R89-131	(R80-437 X LEFLORE) X (JEFF X R80-64K)
23. R89-414	SOHOMA X BEDFORD
24. R89-1119	LEFLORE X (JEFF X R80-64K)
25. R89-2822	(TRACY-M X JEFF) X (NAROW X LEFLORE)
26. R89-292VS	R82-466S X LEFLORE
27. S88-1995	FORREST(3) X PI 437654
28. S88-2167	FORREST(3) X PI 437654
29. SC88-341	GORDON X LEFLORE
30. SC88-999	J80-293 X [GORDON X (FOSTER X D77-6056)]
31. SC88-1151	CO 368 X J80-293
32. SC88-1239	CO 368 X J80-293
33. SC88-1888	J80-293 X KIRBY
34. TSB87-176	BRAGG X COKER 156
35. TSB87-196	BRAGG X CO 156
36. V89-2372	ESSEX(6) X CO 4504

TABLE 37 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP VI, 1991

STRAIN	SEED YIELD	MAT. INDEX	HT.	----PERCENT----	SCN	SCN	SBL	
				OIL	PROTEIN	3	4	
SHARKEY	42.8	10/17	44	18.8	44.2	R	S	5
BEDFORD	41.2	9-	38	20.2+	40.8-	R	R	3
AU88-166	40.9	6-	30	21.3+	41.7-	S	S	3
AU88-690	35.4-	1-	37	19.2	41.5-	R	R	3
AU88-856	38.8	2-	38	20.4+	41.3-	R	S	3
AU88-1823	38.8	0	36	20.6+	41.5-	R	S	3
AU88-3034	36.1-	0	36	19.0	41.7-	R	H	4
D87-4371	43.9	2-	40	18.8	45.6+	R	S	4
D88-4138	41.1	3-	37	20.4+	41.1-	R	H	2
D88-4380	44.6	2-	36	20.0+	43.1-	R	R	3
D88-4438	42.2	3-	38	18.8	43.6	R	R	4
D88-5960	39.0	0	39	18.8	43.5	R	R	2
G87-1127	38.6	2-	36	20.0+	38.8-	R	R	3
G87-1340	40.6	2-	39	19.9+	42.1-	R	H	3
G87-1794	39.7	1-	39	20.7+	40.6-	R	S	4
G87-2052	39.4	1-	36	19.5+	41.3-	H	S	3
G87-3619	35.9-	2-	37	20.5+	40.2-	R	S	4
N89-280	45.6	5-	39	21.0+	42.3-	S	S	4
N89-566	46.0	5-	38	20.7+	42.6-	S	S	4
N89-977	36.7-	1-	48	21.3+	43.1-	S	S	4
RJ85-9116	44.9	3-	35	21.0+	39.8-	R	R	4
R89-131	45.6	3-	38	19.9+	42.7-	R	S	3
R89-414	43.8	0	35	19.6+	43.1-	H	H	3
R89-1119	39.7	4-	37	18.4-	43.9	R	R	3
R89-2822	38.0	4-	34	19.0	43.2-	H	S	3
R89-292VS	42.2	1+	42	18.7	42.7-	R	H	4
S88-1995	40.5	4-	33	20.1+	40.7-	R	R	5
S88-2167	40.2	6-	33	19.4+	41.8-	R	R	5
SC88-341	41.8	1-	37	18.5	41.6-	R	R	5
SC88-999	39.8	5-	38	18.9	44.5	R	R	2.5
SC88-1151	39.3	1-	36	20.1+	41.6-	R	S	3
SC88-1239	40.3	5-	37	19.4+	44.3	R	MR	3
SC88-1888	41.9	2-	37	19.9+	42.4-	R	MR	3
TSB87-176	37.6	0	39	19.9+	42.5-	S	S	4
TSB87-196	37.2	3-	37	20.4+	42.4-	S	S	3
V89-2372	44.3	1-	32	20.5+	42.7-	S	S	4
LSD (.05)	5.6			0.5	1.0			
C.V.	13%			2%	2%			

+ or - designations refer to differences from Sharkey

TABLE 38 - SEED YIELD, IN BUSHEL PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP VI, 1991

STRAIN	PLY-MOUTH, NC	ATHENS, GA	TALLAS-SEE, AL	JAY, FL	KEISER, AR	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)
SHARKEY	50.6	36.7	57.2	33.0	45.3	33.7	43.1
BEDFORD	42.8	38.9	38.0-	39.0	43.4	46.5+	40.1
AU88-166	50.8	42.8	40.2	48.0	48.8	34.2	21.2-
AU88-690	41.0-	35.0	36.9-	34.0	42.0	24.6-	34.2-
AU88-856	48.4	40.6	36.4-	40.0	44.6	23.5-	37.8-
AU88-1823	44.2	45.8+	39.6-	30.0	49.1	23.4-	39.7
AU88-3034	45.7	37.5	34.5-	26.0	44.1	28.7	36.3-
D87-4371	47.7	42.0	45.6	42.0	50.6	36.4	42.9
D88-4138	53.6	34.9	46.1	33.0	45.4	32.8	42.1
D88-4380	48.3	42.6	51.2	35.0	49.2	40.7+	44.9
D88-4438	43.3	41.1	45.8	35.0	46.7	42.2+	41.3
D88-5960	45.3	35.8	30.6-	31.0	47.2	40.3+	42.7
G87-1127	42.0-	39.8	48.1	30.0	41.6	30.6	38.4-
G87-1340	44.3	43.8	52.5	28.0	46.3	30.8	38.2-
G87-1794	50.3	40.6	42.4	33.0	42.2	30.0	39.5
G87-2052	44.6	40.1	50.2	31.0	45.6	27.7-	36.8-
G87-3619	39.6-	39.5	47.6	21.0	46.9	19.4-	37.2-
N89-280	45.8	47.1+	46.5	54.0	50.2	30.1	45.5
N89-566	47.8	39.0	50.0	37.0	53.0	46.9+	48.2+
N89-977	33.8-	42.9	34.5-	39.0	41.4	26.7-	38.4-
RJ85-9116	47.1	35.4	49.7	41.0	49.5	48.1+	43.2
R89-131	51.7	49.5+	58.5	35.0	47.7	30.6	46.3
R89-414	44.0	40.7	49.5	33.0	51.2	40.1+	48.1+
R89-1119	43.2	40.9	53.9	32.0	39.0	29.7	39.1
R89-2822	45.1	39.5	49.3	22.0	44.6	24.0-	41.5
R89-292VS	53.1	43.3	45.4	35.0	43.0	35.2	40.7
S88-1995	45.1	31.6	36.9-	35.0	49.9	41.8+	43.6
S88-2167	46.4	29.9	39.8	32.0	47.1	44.8+	41.5
SC88-341	44.8	47.3+	42.4	32.0	47.1	36.4	42.7
SC88-999	49.4	35.7	45.7	22.0	47.5	35.6	42.6
SC88-1151	40.1-	42.6	56.0	23.0	48.1	24.8-	40.3
SC88-1239	46.9	37.1	51.3	22.0	49.7	32.6	42.7
SC88-1888	45.7	43.2	49.3	21.0	50.9	39.0	44.3
TSB87-176	42.2-	35.4	40.3	37.0	46.2	22.3-	40.0
TSB87-196	44.0	30.2	44.7	33.0	45.4	24.4-	38.7-
V89-2372	48.3	45.2	52.1	30.0	49.6	37.7	47.0
LSD (.05)	7.9	8.7	17.6	.	7.1	5.5	4.3
C.V.	9%	11%	19%	.*	7.5%	8%	5%

TABLE 39 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1991

STRAIN	PLY-MOUTH, NC	TALLAS-SEE, AL	JAY, FL	KEISER, AR	STONE-VILLE, MS (A)
SHARKEY	17.4	20.1	19.7	17.0	20.0
BEDFORD	19.6	20.8	20.6	19.4	20.5
AU88-166	20.8	21.9	21.2	19.9	22.5
AU88-690	18.6	20.0	19.2	18.1	20.1
AU88-856	20.0	20.8	20.3	19.3	21.4
AU88-1823	20.1	21.2	20.7	19.6	21.5
AU88-3034	18.4	21.0	19.7	17.4	18.6
D87-4371	18.0	19.3	19.7	17.7	19.4
D88-4138	19.4	20.6	21.3	19.4	21.2
D88-4380	18.9	20.9	20.4	19.0	20.9
D88-4438	17.9	19.9	19.3	17.4	19.7
D88-5960	18.6	18.7	19.9	17.4	19.4
G87-1127	19.1	20.8	20.5	18.7	21.0
G87-1340	18.5	21.2	20.1	18.7	21.1
G87-1794	20.2	21.5	21.5	18.7	21.4
G87-2052	19.1	19.8	19.9	18.0	20.9
G87-3619	19.6	20.5	20.7	19.4	22.3
N89-280	20.1	21.4	21.2	20.1	22.1
N89-566	20.6	21.3	21.1	19.9	20.7
N89-977	19.9	22.6	21.5	19.9	22.7
RJ85-9116	20.4	21.5	21.8	19.6	21.6
R89-131	19.3	20.7	20.2	18.9	20.6
R89-414	19.2	20.3	19.5	18.2	20.7
R89-1119	17.7	19.2	18.6	17.1	19.4
R89-2822	18.2	20.0	19.4	18.0	19.4
R89-292VS	17.7	19.6	19.0	18.0	19.4
S88-1995	19.8	20.6	20.4	18.9	21.0
S88-2167	19.0	19.6	20.7	17.6	19.9
SC88-341	18.0	19.2	19.2	16.4	19.7
SC88-999	17.9	19.3	19.8	17.8	19.5
SC88-1151	19.8	21.0	20.4	18.9	20.6
SC88-1239	18.0	20.3	19.7	18.7	20.1
SC88-1888	19.4	20.8	20.6	17.9	20.8
TSB87-176	19.1	20.0	20.3	18.9	21.0
TSB87-196	19.6	20.9	21.1	19.5	21.0
V89-2372	20.2	20.9	19.8	19.9	21.9

TABLE 40 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1991

STRAIN	PLY-MOUTH, NC	TALLAS-SEE, AL	JAY, FL	KEISER, AR	STONE-VILLE, MS (B)
SHARKEY	45.8	43.0	44.2	44.8	43.3
BEDFORD	41.8	41.5	41.3	40.7	38.9
AU88-166	42.0	41.8	41.8	43.5	39.4
AU88-690	41.9	41.5	42.1	42.0	39.9
AU88-856	42.1	42.7	42.2	41.7	38.0
AU88-1823	41.6	42.0	41.5	42.9	39.5
AU88-3034	41.7	41.2	41.6	42.8	41.1
D87-4371	45.9	45.9	45.8	45.6	44.9
D88-4138	42.3	41.7	40.1	41.4	39.9
D88-4380	43.7	42.8	44.0	43.5	41.4
D88-4438	43.7	42.9	44.0	44.4	42.8
D88-5960	43.5	44.1	43.5	43.7	42.7
G87-1127	39.8	40.1	38.6	39.2	36.3
G87-1340	45.6	41.1	41.7	42.4	39.6
G87-1794	41.5	41.0	40.5	41.0	38.9
G87-2052	41.9	42.5	42.6	41.2	38.2
G87-3619	40.4	41.8	40.2	41.4	37.0
N89-280	43.0	43.6	42.1	42.3	40.4
N89-566	42.3	42.8	43.6	42.3	42.0
N89-977	43.7	43.2	44.3	43.0	41.2
RJ85-9116	40.6	40.8	40.2	39.7	37.9
R89-131	43.1	42.6	43.0	43.3	41.7
R89-414	43.1	44.0	45.3	42.9	40.2
R89-1119	44.6	44.1	44.7	44.1	42.0
R89-2822	44.2	43.5	42.5	43.8	42.2
R89-292VS	44.3	42.0	44.0	42.4	40.9
S88-1995	41.5	41.6	40.8	40.8	38.8
S88-2167	42.2	42.8	41.6	42.5	39.7
SC88-341	42.7	42.5	41.3	43.0	38.3
SC88-999	45.7	44.9	43.6	45.2	43.1
SC88-1151	42.3	41.7	40.9	43.2	39.8
SC88-1239	45.9	44.0	43.1	45.0	43.3
SC88-1888	43.4	42.5	41.8	44.3	40.0
TSB87-176	42.9	43.7	42.5	42.6	40.6
TSB87-196	43.5	43.6	40.8	43.1	40.8
V89-2372	43.1	43.6	43.6	43.0	40.0

TABLE 41 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1991

STRAIN	PLY-MOUTH, NC	ATHENS, GA	TALLAS-SEE, AL	JAY, FL	KEISER, AR	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)
SHARKEY	51.0	45.0	41.0	35.0	47.0	43.0	46.0
BEDFORD	51.0	40.0	36.0	26.0	44.0	33.0	33.0
AU88-166	40.0	30.0	27.0	28.0	37.0	26.0	24.0
AU88-690	46.0	36.0	36.0	31.0	43.0	31.0	36.0
AU88-856	49.0	36.0	35.0	31.0	44.0	36.0	35.0
AU88-1823	46.0	34.0	34.0	33.0	41.0	32.0	30.0
AU88-3034	43.0	36.0	35.0	26.0	42.0	35.0	36.0
D87-4371	50.0	38.0	41.0	31.0	43.0	39.0	39.0
D88-4138	44.0	36.0	37.0	30.0	42.0	37.0	35.0
D88-4380	41.0	36.0	34.0	30.0	42.0	33.0	33.0
D88-4438	46.0	39.0	34.0	35.0	41.0	36.0	35.0
D88-5960	47.0	37.0	34.0	33.0	46.0	41.0	38.0
G87-1127	43.0	36.0	33.0	28.0	43.0	36.0	35.0
G87-1340	48.0	36.0	38.0	37.0	43.0	37.0	32.0
G87-1794	44.0	36.0	38.0	32.0	48.0	35.0	37.0
G87-2052	46.0	37.0	39.0	27.0	39.0	33.0	33.0
G87-3619	44.0	37.0	37.0	29.0	39.0	39.0	34.0
N89-280	45.0	42.0	35.0	39.0	44.0	34.0	37.0
N89-566	49.0	36.0	39.0	31.0	41.0	33.0	35.0
N89-977	53.0	44.0	50.0	39.0	50.0	56.0	44.0
RJ85-9116	41.0	37.0	32.0	33.0	39.0	34.0	30.0
R89-131	44.0	36.0	36.0	34.0	44.0	36.0	35.0
R89-414	48.0	34.0	32.0	30.0	40.0	31.0	29.0
R89-1119	44.0	35.0	34.0	29.0	43.0	33.0	38.0
R89-2822	42.0	32.0	34.0	31.0	41.0	31.0	30.0
R89-292VS	46.0	43.0	40.0	36.0	49.0	43.0	38.0
S88-1995	42.0	34.0	32.0	28.0	36.0	33.0	29.0
S88-2167	43.0	34.0	31.0	26.0	37.0	31.0	31.0
SC88-341	46.0	37.0	35.0	28.0	40.0	34.0	36.0
SC88-999	48.0	36.0	35.0	35.0	41.0	37.0	33.0
SC88-1151	43.0	36.0	36.0	29.0	43.0	35.0	28.0
SC88-1239	45.0	36.0	39.0	33.0	40.0	34.0	33.0
SC88-1888	45.0	38.0	36.0	29.0	44.0	33.0	35.0
TSB87-176	48.0	39.0	37.0	35.0	41.0	38.0	34.0
TSB87-196	47.0	35.0	37.0	28.0	42.0	33.0	35.0
V89-2372	41.0	28.0	32.0	30.0	37.0	29.0	28.0

TABLE 42 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1991

STRAIN	PLY-MOUTH, NC	ATHENS, GA	TALLAS-SEE, AL	JAY, FL	KEISER, AR	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)
SHARKEY	1.5	2.8	2.0	3.0	2.0	2.0	2.0
BEDFORD	1.5	2.0	2.0	3.0	3.0	3.0	2.0
AU88-166	1.5	1.5	1.0	2.0	1.0	2.0	2.0
AU88-690	1.5	1.5	1.0	2.0	2.5	2.0	2.0
AU88-856	1.5	1.5	1.0	4.0	2.0	3.0	2.0
AU88-1823	1.5	1.5	1.0	4.0	1.0	2.0	2.0
AU88-3034	1.5	1.5	1.0	3.0	2.5	2.5	2.0
D87-4371	1.5	2.2	3.0	3.0	2.0	2.0	2.0
D88-4138	1.5	1.5	1.0	3.0	3.0	3.0	2.0
D88-4380	1.5	1.5	1.0	3.0	1.5	2.0	2.0
D88-4438	1.5	1.8	3.0	2.0	1.5	2.0	2.0
D88-5960	1.5	1.5	1.0	2.0	3.0	2.0	2.0
G87-1127	1.5	1.5	1.0	4.0	3.0	3.0	2.0
G87-1340	1.5	1.5	1.0	5.0	1.5	2.0	2.0
G87-1794	1.5	1.5	1.0	3.0	1.5	2.0	2.0
G87-2052	1.5	1.5	1.0	3.0	1.0	2.0	2.0
G87-3619	1.5	1.5	1.0	4.0	2.5	2.5	2.0
N89-280	1.5	1.5	1.0	2.0	2.0	2.0	2.0
N89-566	1.5	1.5	1.0	2.0	1.5	2.0	2.0
N89-977	1.5	2.0	1.0	4.0	2.0	2.5	2.0
RJ85-9116	2.0	1.5	1.0	5.0	2.0	2.0	2.0
R89-131	1.5	1.5	1.0	3.0	1.5	2.0	2.0
R89-414	1.5	1.5	1.0	3.0	2.0	2.0	2.0
R89-1119	1.5	1.5	1.0	3.0	3.0	2.0	2.0
R89-2822	1.5	1.5	1.0	3.0	2.0	2.0	2.0
R89-292VS	1.5	1.8	1.0	4.0	2.5	2.0	2.0
S88-1995	1.5	1.5	2.0	4.0	2.0	3.0	2.0
S88-2167	1.5	1.5	1.0	4.0	1.5	3.0	2.0
SC88-341	1.5	1.5	1.0	3.0	3.0	2.0	2.0
SC88-999	1.5	1.5	1.0	3.0	1.5	2.0	2.0
SC88-1151	1.5	1.5	1.0	4.0	1.5	2.0	2.0
SC88-1239	1.5	1.5	1.0	4.0	1.0	2.0	2.0
SC88-1888	1.5	1.5	1.0	4.0	2.0	2.0	2.0
TSB87-176	1.5	1.5	1.0	2.0	1.5	2.0	2.0
TSB87-196	1.5	1.5	1.0	3.0	1.5	2.0	2.0
V89-2372	1.5	1.5	1.0	5.0	1.5	2.0	2.0

UNIFORM GROUP VII
1991

VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1. STONEWALL	N73-693 X F76-8757	F6
2. HAGOOD	CENTENNIAL X YOUNG	F6
3. AU85-1814	D77-6103 X BRAXTON	F6
4. G84-3185	JOHNSTON X BRAXTON	F5
5. N86-452	N86-452 X N79-856	F5
6. SC84-583	D76-9665 X JOHNSTON	F5
7. D87-4389	SHARKEY X LEFLORE	F5
8. G85-373	GORDON X BRAXTON	F6
9. AU87-547	J80-293 X N81-1756	F6
10. G86-1267	D76-9665 X BRAXTON	F6
11. G86-1434	D79-6058 X TWIGGS	F6
12. N88-431	N84-1299 X N82-2037	F6

Background of lines used as parents:

N73-693 is a selection from D68-216 X Ransom which was grown in Uniform Group VI in 1977. D68-216 is a SCN race 3 resistant selection of the same parentage as Forrest.

F76-8757 is a SCN race 3 resistant line from Centennial X (Forrest X (Cobb X D68-216)).

D77-6103 is a selection from Centennial X J74-57.

N77-940 is a selection from N77-1540 X Centennial grown in Uniform VII in 1980.

N79-856 is a selection from Essex X N70-3037.

D77-9665 is a selection from Forrest X Centennial.

J80-293 is a selection from J74-39 X Centennial. J74-39 is of the same parentage as Bedford.

D79-6058 has same parentage as Sharkey.

N84-1299 RS4- cycle 1

N82-2037 is a selection from N73-1102 X 330-26-29-4 grown in Preliminary VII, 1984.

UNIFORM GROUP VII

1991

Uniform Group VII nurseries were planted at 23 locations. Results from 22 of these plantings are reported in Tables 43-49. Table 43 gives a general summary of performance including three year means for seed yield and oil and protein percentages along with reaction to pest and general agronomic characteristics. Data from individual locations are reported in Tables 44-49.

Stonewall had an overall mean seed yield of 46.1 bushels per acre. There were no experimental lines having a higher mean seed yield. G84-3185 which equaled Stonewall in seed yield is somewhat more resistant to *M. incognita* than Stonewall and also appeared more resistant to stem canker.

Ratings for reaction to the two root knot nematodes were made in the greenhouse at the University of Georgia and ratings for reaction to SCN races 3 and 4 (14) were made in the greenhouse at Jackson, Tennessee. G85-373 appeared resistant to both races of the root knot nematode and to SCN race 3. AU87-547 was rated moderately resistance to *M. incognita*, good resistance to *M. arenaria*, and resistant to SCN races 3 and 4. It's mean seed yield was 45.2 bushels per acre.

Stem canker ratings were made at Beaumont, Texas, based upon a naturally developing infection. Ratings were on the basis of a 0 to 9 scale. Hagood received a rating of 2. In a planting in Mississippi where a heavy level of stem canker developed on susceptible material, Hagood had a seed yield of 6 bushels per acre as compared with 40 bushels per acre with Stonewall. Hagood appeared to be very susceptible to stem canker development.

Ratings for soybean looper feeding were made in the large field cage at Stoneville where moths were released to lay eggs on the material. Entries receiving a rating of 5 would have over 80% defoliation.

TABLE 43 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP VII, 1991

	NO. OF LOCATIONS	STONE- WALL	HAGOOD	AU85- 1814	G84- 3185	N86- 452
Seed Yield - 1991						
East Coast	4	40.8	36.7	38.0	43.2	36.0
Southeast	9	45.9	46.0	43.3	47.2	46.9
Upper and Central South	3	43.0	40.4	41.3	46.1	43.4
Delta and West	7	50.6	43.6	46.7	46.6	45.4
1990-91						
East Coast		35.4	32.5	32.8	38.5	35.6
Southeast		39.7	39.8	38.7	41.4	41.1
Upper and Central South		48.0	44.3	43.6	48.2	48.3
Delta and West		50.1	45.6	46.7	48.2	47.0
1989-91						
East Coast		38.7	36.0	34.7	40.0	37.4
Southeast		37.8	39.4	38.9	40.9	40.2
Upper and Central South		48.7	45.8	43.6	45.9	48.4
Delta and West		47.7	43.4	43.6	47.1	44.9
Oil Content - 1991						
		21.0	20.1	19.8	21.0	19.9
	1990-91	20.9	20.1	20.0	21.1	20.1
	1989-91	20.7	19.9	19.8	20.9	19.8
Protein Content - 1991						
		41.1	42.5	42.3	39.6	41.7
	1990-91	41.6	42.6	42.3	39.7	41.9
	1989-91	41.3	42.4	42.3	39.6	41.8
Seed size		16.2	13.8	15.3	15.7	13.9
Maturity index		10-19	+2	+2	+0	-0
Height		35	39	40	36	33
Seed quality		1.6	1.6	1.7	1.7	1.7
M. incognita		5.0	2.8	1.9	2.5	4.7
M. arenaria		3.5	3.5	3.3	3.4	2.5
SCN race 3		R	R	R	S	S
SCN race 4		S	S	S	S	S
SBL Feeding		3	4	3	3	3
Flower color		W	W	S	P	W
Pubescence color		T	G	T	T	T
Pod wall color		T	T	T	T	T
Stem Canker		1.0	2.0	1.7	0	2.3

TABLE 43 - (continued)

	SC84- 583	D87- 4389	G85- 373	AU87- 547	G86- 1267	G86- 1434	N88- 431
Seed Yield - 1991							
East Coast	40.4	37.4	37.3	38.0	38.1	37.6	37.9
Southeast	48.2	45.6	45.4	46.8	46.6	45.2	44.3
Upper and Central South	43.5	41.2	42.7	44.9	43.8	43.8	41.0
Delta and West	43.1	47.9	47.1	47.5	43.9	47.8	46.2
1990-91							
East Coast	37.1	33.5	35.3				
Southeast	42.0	39.8	39.7				
Upper and Central South	45.0	45.6	48.7				
Delta and West	44.8	48.4	45.9				
1989-91							
East Coast	39.2						
Southeast	40.3						
Upper and Central South	45.5						
Delta and West	42.6						
Oil Content - 1991							
1990-91	20.8	19.8	20.6	21.0	20.8	19.8	21.1
1989-91	20.9	19.8	20.6				
1989-91	20.8						
Protein Content - 1991							
1990-91	39.1	42.5	40.2	41.6	39.3	41.3	43.5
1989-91	39.6	42.9	40.3				
1989-91	39.5						
Seed size	13.9	14.7	13.8	14.4	13.1	13.1	18.0
Maturity index	+2	-2	-2	-4	-1	-1	+2
Height	38	38	40	33	34	38	38
Seed quality	1.7	1.7	1.8	1.8	1.6	1.5	1.9
M. incognita	2.5	4.5	1.3	2.3	1.2	1.0	4.6
M. arenaria	3.5	3.2	2.0	2.2	2.0	2.8	4.5
SCN race 3	S	R	R	R	R	R	S
SCN race 4	S	S	S	R	S	S	S
SBL Feeding	4	3	2.5	3	4	5	5
Stem Canker	3.3	0	0	1.0	0	1.0	0.7
Flower color	P	P	W	W	P	W	P
Pubescence color	T	T	T	G	T	T	T
Pod wall color	T	T	T	T	T	T	Br

TABLE 44 - SEED YIELD, IN BUSHEL PER ACRE, FOR THE STRAINS IN UNIFORM GROUP VII, 1991

LOCATION	STONE- WALL	HAGOOD	AU85- 1814	G84- 3185	N86- 452	SC84- 583
EAST COAST						
KINSTON, NC	48.6	35.3	37.1	43.2	35.1	42.0
CLINTON, NC	46.4	42.0	47.7	53.8	40.8	44.5
FLORENCE, SC(A)	45.4	45.2	44.5	52.2	40.4	48.7
FLORENCE, SC(B)	22.9	24.3	22.7	23.5	27.6	26.5
MEAN	40.8	36.7	38.0	43.2	36.0	40.4
SOUTHEAST						
BLACKVILLE, SC(A)	30.2	26.6	27.8	33.2	30.2	26.8
BLACKVILLE, SC(B)	32.9	40.9	32.3	36.8	31.8	38.4
TALLASSEE, AL	46.4	52.0	50.1	41.9	45.5	52.6
TIFTON, GA	48.1	46.9	52.4	54.9	58.5	53.7
GAINESVILLE, FL*	20.3	20.5	19.3	28.5	20.7	29.7
QUINCY, FL	47.9	49.1	43.5	49.8	45.2	54.6
JAY, FL	46.0	49.0	31.0	51.0	51.0	50.0
FAIRHOPE, AL	58.3	56.7	57.2	62.1	60.0	60.6
BATON ROUGE, LA	57.1	46.4	52.2	47.7	52.6	48.7
MEAN	45.9	46.0	43.3	47.2	46.9	48.2
UPPER & CENTRAL SOUTH						
ATHENS, GA	27.5	32.8	34.0	35.8	36.0	31.7
CALHOUN, GA	51.3	46.0	45.0	49.8	42.7	51.5
CLEMSON, SC	50.2	42.3	45.0	52.6	51.5	47.3
MEAN	43.0	40.4	41.3	46.1	43.4	43.5
DELTA & WEST						
STONEVILLE, MS(A)	44.7	35.5	41.9	37.9	44.3	46.0
STONEVILLE, MS(B)	43.4	42.9	44.7	42.5	44.3	44.0
STUTTGART, AR	52.5	49.8	42.1	41.6	44.5	42.4
ROHWER, AR	49.5	47.9	50.6	54.0	51.1	43.1
ST. JOSEPH, LA	59.8	50.5	52.5	57.4	54.5	50.0
BOSSIER CITY, LA	61.0	49.9	55.2	47.0	43.2	49.9
BEAUMONT, TX	43.0	28.8	39.6	45.9	36.2	26.6
MEAN	50.6	43.6	46.7	46.6	45.4	43.1

*Not included in mean.

TABLE 44 - (continued)

LOCATION	D87- 4389	G85- 373	AU87- 547	G86- 1267	G86- 1434	N88- 431	L.S.D. (.05)	C.V. (%)
EAST COAST								
KINSTON, NC	44.1	44.4	39.8	40.2	47.3	37.9	7.5	10.8
CLINTON, NC	38.7	43.7	45.0	43.3	41.5	46.3	9.5	12.6
FLORENCE, SC(A)	44.5	41.3	47.7	46.2	41.2	49.0	.	9.2
FLORENCE, SC(B)	22.4	19.9	19.6	22.7	20.2	18.3	.	15.1
MEAN	37.4	37.3	38.0	38.1	37.6	37.9		
SOUTHEAST								
BLACKVILLE, SC(A)	27.9	24.3	26.9	28.0	27.7	25.9	.	14.7
BLACKVILLE, SC(B)	35.6	30.4	31.2	29.9	30.0	33.0	.	13.1
TALLASSEE, AL	46.7	61.0	50.3	56.8	57.7	48.0	8.3	9.6
TIFTON, GA	54.4	50.6	50.9	57.7	53.3	54.2	.	.
GAINESVILLE, FL*	16.9	26.1	19.8	30.8	18.9	14.4	9.8	27.0
QUINCY, FL	45.5	51.8	47.5	44.6	51.7	45.9	.	.
JAY, FL	37.0	36.0	50.0	35.0	33.0	46.0	1.7	2.1
FAIRHOPE, AL	61.6	57.9	63.3	66.8	58.0	51.8	5.0	4.9
BATON ROUGE, LA	55.9	51.4	54.6	54.1	50.1	49.4	5.3	6.1
MEAN	45.6	45.4	46.8	46.6	45.2	44.3		
UPPER & CENTRAL SOUTH								
ATHENS, GA	24.9	30.7	30.4	28.7	35.8	29.5	6.3	11.7
CALHOUN, GA	50.4	49.7	49.1	53.9	48.6	44.7	5.9	7.1
CLEMSON, SC	48.2	47.7	55.3	48.7	47.0	48.9	5.0	6.1
MEAN	41.2	42.7	44.9	43.8	43.8	41.0		
DELTA & WEST								
STONEVILLE, MS(A)	42.8	44.4	36.6	44.5	44.1	42.0	5.4	7.5
STONEVILLE, MS(B)	45.6	43.9	44.8	41.9	42.8	39.6	3.2	4.4
STUTTGART, AR	47.9	38.8	51.4	38.0	48.8	46.5	7.1	9.2
ROHWER, AR	53.0	47.3	57.9	44.3	47.4	51.0	7.7	9.2
ST. JOSEPH, LA	55.4	59.9	49.0	49.3	55.1	53.3	6.8	7.7
BOSSIER CITY, LA	52.7	51.8	56.0	47.8	51.8	53.1	16.6	19.0
BEAUMONT, TX	38.0	43.7	36.8	41.7	44.4	37.8	8.9	12.1
MEAN	47.9	47.1	47.5	43.9	47.8	46.2		

*Not included in mean.

TABLE 45 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP VII, 1991

LOCATION	STONE- WALL	HAGOOD	AU85- 1814	G84- 3185	N86- 452	SC84- 583
OIL PERCENTAGE						
KINSTON, NC	20.6	19.6	19.0	20.6	18.5	20.2
CLINTON, NC	19.1	19.4	19.2	20.0	19.1	20.0
FLORENCE, SC(A)	21.1	20.8	19.9	21.0	19.9	21.6
TALLASSEE, AL	21.1	21.1	20.1	21.1	19.8	20.9
ATHENS, GA	21.6	20.8	20.2	20.7	20.1	20.7
CLEMSON, SC	20.7	19.4	19.2	20.7	19.5	21.1
JAY, FL	21.8	20.1	19.9	21.3	20.0	20.9
QUINCY, FL	22.5	21.8	21.4	22.4	21.3	22.5
STONEVILLE, MS(B)	22.2	20.8	20.1	22.2	20.4	21.5
STUTTGART, AR	19.5	18.9	20.2	21.5	20.1	20.0
ROHWER, AR	21.7	19.0	20.4	21.5	20.9	20.7
ST. JOSEPH, LA	20.6	20.1	19.4	20.3	19.2	20.7
BEAUMONT, TX	20.4	19.3	19.0	20.0	19.5	19.4
MEAN	21.0	20.1	19.8	21.0	19.9	20.8
PROTEIN PERCENTAGE						
KINSTON, NC	42.5	43.5	44.1	40.1	44.3	40.1
CLINTON, NC	42.0	42.6	42.3	39.1	42.5	40.3
FLORENCE, SC(A)	42.0	42.1	43.1	40.6	42.3	38.3
TALLASSEE, AL	42.1	42.3	44.0	41.4	43.0	40.5
ATHENS, GA	40.0	40.0	39.9	38.7	39.7	36.7
CLEMSON, SC	40.6	43.0	41.9	38.9	42.2	38.1
JAY, FL	42.7	43.9	43.6	41.1	42.5	40.6
QUINCY, FL	41.8	42.7	42.9	40.7	42.1	40.3
STONEVILLE, MS(B)	39.4	41.7	41.6	37.8	41.6	38.0
STUTTGART, AR	43.0	44.7	40.2	38.0	40.6	39.2
ROHWER, AR	37.9	42.6	40.9	37.7	38.4	37.3
ST. JOSEPH, LA	38.8	39.7	42.1	38.6	39.8	37.6
BEAUMONT, TX	41.7	44.2	43.6	42.3	43.5	41.6
MEAN	41.1	42.5	42.3	39.6	41.7	39.1
GRAMS PER 100 SEED						
KINSTON, NC	18.6	17.2	16.4	17.3	18.1	17.1
FLORENCE, SC(A)	12.9	13.0	13.3	12.4	13.2	14.4
TALLASSEE, AL	12.7	12.8	14.9	11.8	12.7	13.6
ATHENS, GA	14.9	16.0	14.0	13.0	14.3	14.0
CLEMSON, SC	16.2	14.9	14.0	13.4	15.3	13.5
JAY, FL	18.0	19.0	18.0	16.0	15.0	18.0
STONEVILLE, MS(B)	14.2	14.2	14.1	13.2	14.6	13.9
STUTTGART, AR	13.6	14.7	14.7	14.8	13.7	14.1
MEAN	15.1	15.2	14.9	14.0	14.6	14.8

TABLE 45 - (continued)

LOCATION	D87- 4389	G85- 373	AU87- 547	G86- 1267	G86- 1434	N88- 431
OIL PERCENTAGE						
KINSTON, NC	18.8	19.1	20.0	20.0	19.2	19.9
CLINTON, NC	19.1	19.3	19.8	20.8	19.4	20.6
FLORENCE, SC(A)	20.8	20.3	21.0	21.0	20.2	21.4
TALLASSEE, AL	20.0	21.0	21.0	20.8	20.1	20.9
ATHENS, GA	19.7	20.9	21.5	20.7	20.1	21.6
CLEMSON, SC	19.8	19.8	21.2	20.5	19.7	21.4
JAY, FL	20.3	20.5	20.7	20.7	19.4	20.5
QUINCY, FL	20.9	21.9	22.8	22.2	21.1	21.6
STONEVILLE, MS(B)	20.4	21.7	21.8	21.6	19.9	21.3
STUTTGART, AR	19.0	21.4	20.5	20.7	19.2	20.1
ROHWER, AR	20.9	21.7	21.9	20.6	19.7	22.2
ST. JOSEPH, LA	19.1	19.9	21.3	20.5	19.5	20.9
BEAUMONT, TX	18.6	20.2	19.1	19.8	20.0	21.4
MEAN	19.8	20.6	21.0	20.8	19.8	21.1
PROTEIN PERCENTAGE						
KINSTON, NC	43.5	41.5	42.2	40.0	42.3	45.0
CLINTON, NC	42.8	41.5	42.5	40.2	41.1	44.0
FLORENCE, SC(A)	40.8	42.0	41.8	40.4	41.2	43.6
TALLASSEE, AL	44.0	41.1	43.0	40.7	42.2	45.0
ATHENS, GA	41.4	38.4	39.7	38.3	39.5	41.8
CLEMSON, SC	42.3	39.6	41.2	39.0	41.4	42.4
JAY, FL	43.3	40.8	43.7	40.3	42.1	45.5
QUINCY, FL	44.7	41.1	41.4	40.1	42.0	44.7
STONEVILLE, MS(B)	40.9	39.0	40.0	37.0	41.0	42.5
STUTTGART, AR	44.3	38.6	42.9	37.3	41.8	44.0
ROHWER, AR	39.2	36.1	38.3	36.4	40.1	39.8
ST. JOSEPH, LA	41.2	40.1	39.7	39.5	39.5	43.0
BEAUMONT, TX	44.7	42.2	44.6	41.8	42.8	44.4
MEAN	42.5	40.2	41.6	39.3	41.3	43.5
GRAMS PER 100 SEED						
KINSTON, N	14.9	15.4	16.6	17.0	15.7	16.0
FLORENCE, SC(A)	12.0	14.6	12.7	12.2	12.7	13.2
TALLASSEE, AL	11.4	12.1	12.1	14.3	10.7	12.5
ATHENS, GA	13.8	12.7	14.0	14.8	13.1	14.4
CLEMSON, SC	12.9	13.6	13.7	13.9	13.3	15.7
JAY, FL	16.0	15.0	16.0	16.0	16.0	17.0
STONEVILLE, MS(B)	14.9	14.1	12.2	14.3	12.9	14.3
STUTTGART, AR	13.1	12.6	15.1	15.0	11.2	14.4
MEAN	13.6	13.8	14.1	14.7	13.2	14.7

TABLE 46 - RELATIVE MATURITY DATA, DAYS EARLIER (-) OR LATER (+) THAN STONEWALL,
FOR THE STRAINS IN UNIFORM GROUP VII, 1991

LOCATION	STONE- WALL	HAGOOD	AU85 1814	G84- 3185	N86- 452	SC84- 583
EAST COAST						
KINSTON, NC	10/30	+4	+0	-6	+0	+0
CLINTON, NC	10/29	+0	+0	+0	+0	+0
FLORENCE, SC(A)	10/19	+3	+2	+0	-1	+3
FLORENCE, SC(B)	10/22	+3	+2	-2	-1	+3
MEAN	10/25	+3	+1	-2	+0	+2
SOUTHEAST						
BLACKVILLE, SC(A)	10/17	+1	+2	+0	-2	+2
TALLASSEE, AL	10/11	+5	+5	+4	+1	+5
TIFTON, GA	10/05	+6	+5	+3	+1	+3
GAINESVILLE, FL*	10/17	+3	+2	+3	+0	+3
JAY, FL	10/25	-2	+0	-4	-1	-1
FAIRHOPE, AL	10/21	+4	+5	+4	+0	+0
MEAN	10/16	+3	+3	+1	+0	+2
UPPER AND CENTRAL SOUTH						
ATHENS, GA	10/14	+4	+2	-1	+1	+6
CALHOUN, GA	10/20	-1	+2	-3	-3	+1
CLEMSON, SC	10/19	+2	+2	+1	+0	+2
MEAN	10/18	+1	+2	-1	-1	+3
DELTA AND WEST						
STONEVILLE, MS(A)	10/19	+1	+1	+2	+1	+2
STONEVILLE, MS(B)	10/23	+1	+2	+1	+1	+1
STUTTIGART, AR	10/12	+2	+1	+0	+1	+1
ROHWER, AR	10/14	+2	+2	+2	+1	+1
ST. JOSEPH, LA	10/14	+2	+3	+2	+1	+2
BEAUMONT, TX	10/14	+0	+2	+1	-2	-2
MEAN	10/16	+1	+2	+1	+1	+1

*Not included in mean.

TABLE 46 - (continued)

LOCATION	D87- 4389	G85- 373	AU87- 547	G86- 1267	G86- 1434	N88- 431
EAST COAST						
KINSTON, NC	-6	+0	-6	+0	-6	+0
CLINTON, NC	-3	-5	-5	-2	-3	+0
FLORENCE, SC(A)	-3	-3	-4	-3	-1	+3
FLORENCE, SC(B)	-4	-7	-6	-5	+0	+2
MEAN	-4	-4	-5	-2	-2	+1
SOUTHEAST						
BLACKVILLE, SC(A)	-2	-2	-4	-2	-1	+1
TALLASSEE, AL	-1	+1	-1	+3	+0	+5
TIFTON, GA	+0	+1	-4	+0	+2	+4
GAINESVILLE, FL*	+1	+1	-3	+0	+0	+2
JAY, FL	-8	-2	-7	-4	-5	+0
FAIRHOPE, AL	-6	-4	-6	+0	-4	+4
MEAN	-4	-1	-5	-1	-2	+3
UPPER AND CENTRAL SOUTH						
ATHENS, GA	-2	-3	+2	-2	+1	+3
CALHOUN, GA	-4	-3	-9	-2	-8	-1
CLEMSON, SC	-1	-2	-2	-1	-2	+2
MEAN	-3	-3	-3	-2	-3	+1
DELTA AND WEST						
STONEVILLE, MS(A)	+0	-1	-2	+0	-1	+2
STONEVILLE, MS(B)	+0	-7	-7	+0	+1	+3
STUTTART, AR	+0	-2	-3	-1	+0	+1
ROHWER, AR	+1	+1	+0	+1	+1	+3
ST. JOSEPH, LA	+0	-1	-1	+2	+1	+2
BEAUMONT, TX	+1	-1	-1	-2	+1	+1
MEAN	+0	-2	-2	+0	+1	+2

*Not included in mean.

TABLE 47 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP VII, 1991

LOCATION	STONEWALL	HAGOOD	AU85- 1814	G84- 3185	N86- 452	SC84- 583
EAST COAST						
KINSTON, NC	40	48	48	46	41	48
CLINTON, NC	32	38	44	38	34	34
FLORENCE, SC(A)	40	48	47	43	38	45
FLORENCE, SC(B)	32	36	39	33	33	34
MEAN	36	43	45	40	37	40
SOUTHEAST						
BLACKVILLE, SC(A)	32	36	36	33	33	35
BLACKVILLE, SC(B)	33	37	37	33	29	37
TALLASSEE, AL	38	42	40	37	32	39
TIFTON, GA	30	37	38	30	33	33
GAINESVILLE, FL*	19	19	23	22	17	20
JAY, FL	33	33	34	30	28	35
FAIRHOPE, AL	30	35	33	31	25	32
BATON ROUGE, LA	30	30	36	33	26	31
MEAN	32	36	36	32	29	35
UPPER AND CENTRAL SOUTH						
ATHENS, GA	36	39	39	40	33	38
CALHOUN, GA	34	38	39	36	37	37
CLEMSON, SC	43	46	44	43	40	43
MEAN	38	41	41	40	37	39
DELTA AND WEST						
STONEVILLE, MS(A)	39	46	42	42	36	39
STONEVILLE, MS(B)	41	46	47	38	37	43
STUTTGART, AR	39	46	43	39	36	40
ROHWER, AR	33	35	34	36	32	33
ST. JOSEPH, LA	40	45	44	40	39	44
BOSSIER CITY, LA	35	38	40	35	31	39
BEAUMONT, TX	27	30	32	29	28	31
MEAN	36	41	40	37	34	38

*Not included in mean.

TABLE 47 - (continued)

LOCATION	D87 - 4389	G85 - 373	AU87 - 547	G86 - 1267	G86 - 1434	N88 - 431
EAST COAST						
KINSTON, NC	42	48	42	42	48	48
CLINTON, NC	36	42	32	42	40	50
FLORENCE, SC(A)	43	47	36	42	42	45
FLORENCE, SC(B)	37	37	25	31	37	35
MEAN	40	44	34	39	42	45
SOUTHEAST						
BLACKVILLE, SC(A)	33	36	32	31	34	33
BLACKVILLE, SC(B)	35	35	30	33	34	37
TALLASSEE, AL	38	41	34	36	39	38
TIFTON, GA	38	37	34	34	34	33
GAINESVILLE, FL*	19	21	15	17	15	18
JAY, FL	34	35	26	29	28	34
FAIRHOPE, AL	32	32	26	30	33	29
BATON ROUGE, LA	33	33	27	29	34	29
MEAN	35	36	30	32	34	33
UPPER AND CENTRAL SOUTH						
ATHENS, GA	36	42	33	39	41	38
CALHOUN, GA	40	39	36	34	38	35
CLEMSON, SC	44	49	40	40	47	44
MEAN	40	43	36	38	42	39
DELTA AND WEST						
STONEVILLE, MS(A)	39	41	35	35	41	41
STONEVILLE, MS(B)	41	44	34	36	41	42
STUTTGART, AR	41	42	34	35	39	42
ROHWER, AR	37	34	31	32	32	37
ST. JOSEPH, LA	45	45	38	38	42	40
BOSSIER CITY, LA	34	41	34	33	36	37
BEAUMONT, TX	33	31	26	23	29	30
MEAN	39	40	33	33	37	38

*Not included in mean.

TABLE 48 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP VII, 1991

LOCATION	STONE- WALL	HAGOOD	AU85- 1814	G84- 3185	N86- 452	SC84- 583
EAST COAST						
KINSTON, NC	3.0	3.0	3.0	3.0	3.0	3.0
CLINTON, NC	5.0	5.0	5.0	4.0	5.0	5.0
FLORENCE, SC(A)	2.0	2.3	2.0	2.3	3.0	2.0
SOUTHEAST						
TALLASSEE, AL	1.2	2.2	1.7	1.8	1.0	2.0
TIFTON, GA	1.6	2.5	2.3	1.5	1.2	1.5
GAINESVILLE, FL	1.0	1.3	1.3	1.3	1.0	1.0
JAY, FL	1.0	2.0	1.0	2.0	1.0	1.0
FAIRHOPE, AL	1.0	1.7	1.0	1.0	1.0	1.0
BATON ROUGE, LA	2.0	3.0	4.0	4.0	3.0	3.0
UPPER AND CENTRAL SOUTH						
ATHENS, GA	2.2	1.5	2.0	2.3	2.2	2.0
CALHOUN, GA	1.7	2.3	1.8	2.5	2.5	1.5
CLEMSON, SC	1.0	1.3	1.0	2.3	1.0	1.0
DELTA AND WEST						
STONEVILLE, MS(A)	2.0	2.0	2.3	2.3	3.0	2.0
STONEVILLE, MS(B)	2.3	3.0	2.7	3.0	3.7	2.7
STUTTGART, AR	2.7	3.7	3.0	3.7	2.0	2.7
ROHWER, AR	1.0	1.0	1.3	1.7	1.0	1.0
ST. JOSEPH, LA	1.8	2.8	2.3	2.8	2.4	2.7
BOSSIER CITY, LA	1.3	2.0	1.7	3.0	1.7	1.3
BEAUMONT, TX	1.0	1.0	1.0	1.0	1.0	1.0

TABLE 48 - (continued)

LOCATION	D87- 4389	G85- 373	AU87- 547	G86- 1267	G86- 1434	N88- 431
EAST COAST						
KINSTON, NC	2.0	3.0	3.0	3.0	3.0	3.0
CLINTON, NC	5.0	5.0	3.0	5.0	5.0	5.0
FLORENCE, SC(A)	2.0	2.0	1.3	2.0	2.0	2.0
SOUTHEAST						
TALLASSEE, AL	1.0	1.5	1.0	1.3	1.7	1.8
TIFTON, GA	1.4	2.2	1.3	1.6	1.3	1.6
GAINESVILLE, FL	1.0	1.3	1.0	1.0	1.0	1.0
JAY, FL	1.0	2.0	1.0	1.0	1.0	1.0
FAIRHOPE, AL	1.0	1.0	1.0	1.0	1.0	1.0
BATON ROUGE, LA	3.0	3.0	1.0	2.0	4.0	2.0
UPPER AND CENTRAL SOUTH						
ATHENS, GA	1.5	1.8	1.5	1.7	2.2	1.8
CALHOUN, GA	1.8	2.2	1.7	1.8	1.5	1.8
CLEMSON, SC	1.0	1.7	1.0	1.0	2.0	1.3
DELTA AND WEST						
STONEVILLE, MS(A)	2.0	2.3	2.0	2.0	2.0	2.7
STONEVILLE, MS(B)	2.7	3.0	2.0	2.3	2.7	2.7
STUTTGART, AR	2.7	3.3	1.7	3.0	3.0	2.7
ROHWER, AR	1.0	1.0	1.0	1.0	1.0	1.0
ST. JOSEPH, LA	1.7	2.2	1.8	2.6	2.0	2.2
BOSSIER CITY, LA	1.0	2.0	1.0	1.3	1.0	1.7
BEAUMONT, TX	1.0	1.3	1.0	1.0	1.0	1.0

TABLE 49 - SEED QUALITY SCORES FOR THE STRAINS IN UNIFORM GROUP VII, 1991

LOCATION	STONE- WALL	HAGOOD	AU85- 1814	G84- 3185	N86- 452	SC84- 583
EAST COAST						
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
SOUTHEAST						
TALLASSEE, AL	1.0	1.0	1.0	1.0	1.0	1.0
TIFTON, GA	1.6	1.3	1.7	1.5	1.5	1.5
JAY, FL	2.0	3.0	3.0	3.0	2.0	3.0
QUINCY, FL	2.0	1.3	1.8	1.8	2.0	1.0
UPPER AND CENTRAL SOUTH						
ATHENS, GA	1.5	1.5	1.5	1.5	1.5	1.5
CALHOUN, GA	1.3	1.5	1.5	1.0	1.5	1.3
DELTA AND WEST						
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
STUTTGART, AR	1.3	1.7	1.0	1.7	1.0	1.0
ROHWER, AR	2.0	1.3	1.3	2.0	2.0	1.7
ST. JOSEPH, LA	2.0	1.8	2.2	1.8	2.2	2.1
BOSSIER CITY, LA	1.7	2.0	2.3	2.0	2.0	2.3
BEAUMONT, TX	1.2	1.0	1.2	1.2	1.2	1.5

TABLE 49 - (continued)

LOCATION	D87- 4389	G85- 373	AU87- 547	G86- 1267	G86- 1434	N88- 431
EAST COAST						
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
SOUTHEAST						
TALLASSEE, AL	1.0	1.0	1.0	1.0	1.0	1.0
TIFTON, GA	1.6	1.4	1.5	1.5	1.4	1.5
JAY, FL	3.0	4.0	3.0	3.0	2.0	4.0
QUINCY, FL	2.0	2.0	1.8	1.0	1.3	2.0
UPPER AND CENTRAL SOUTH						
ATHENS, GA	1.8	1.5	1.5	1.5	1.5	2.0
CALHOUN, GA	1.5	1.2	1.5	1.3	1.2	1.7
DELTA AND WEST						
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
STUTTGART, AR	1.0	1.0	1.7	1.0	1.0	1.7
ROHWER, AR	2.0	2.0	2.0	1.0	1.0	1.7
ST. JOSEPH, LA	2.1	2.0	2.0	1.9	2.2	2.0
BOSSIER CITY, LA	2.0	2.0	2.3	2.0	2.0	2.3
BEAUMONT, TX	1.2	1.2	1.0	1.3	1.0	1.3

PRELIMINARY GROUP VII

1991

Preliminary Group VII nurseries, which included Stonewall and Sharkey along with 34 experimental entries, were grown at 9 locations. The parentage of each of the entries is reported in Table 50. A general summary of performance is reported in Table 51. Data from individual locations are reported in Tables 52-56.

Stonewall had an overall mean seed yield of 44.3 bushels per acre. There were no lines having a significantly higher mean seed yield. There were 16 lines having a significantly lower mean seed yield. Only two lines ranked slightly above Stonewall in seed yield. V88-970 had a mean seed yield of 40.9 bushels per acre. This line is basically Essex converted to later maturity to determine whether the productivity of Essex would be maintained in a later maturing environment.

In the planting at Jackson, Tennessee to evaluate for reaction to soybean cyst nematode 21 of the experimental entries were rated resistant to SCN race 3 and 9 of these were also rated resistant to SCN race 4 (14). Soybean looper ratings were made in the field cage at Stoneville where a high population of moths were released for egg laying. All of the entries rated resistant yielded significantly less than Stonewall. Ratings for reaction to stem canker were made in the field at Beaumont, Texas, where ratings were made on a 0 to 9 basis.

There were no North Carolina entries in the 1991 plantings. Seed sent by United Parcel Services was lost in route.

TABLE 50 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP VII, 1991

VARIETY OR STRAIN	PARENTAGE
1. STONEWALL	N73-693 X F76-8757
2. SHARKEY	TRACY X LEFLORE
3. AU88-1040	F82-1739 X THOMAS
4. AU88-1580	LEFLORE X G80-1011
5. AU88-2173	BRIM X R82-368
6. AU88-2202	BRIM X R82-368
7. AU88-2242	BRIM X R82-368
8. AU88-2304	BRIM X R82-368
9. D87-4389	SHARKEY X LEFLORE
10. D88-5732	D82-3298 X D82-5173
11. D88-5914	D82-3298 X D82-5173
12. D88-5926	D82-3298 X D82-5173
13. D88-5991	D82-3298 X D82-5173
14. D88-6167	D82-3298 X D82-5173
15. D89-9807	D82-2753 X LAMAR
16. G87-1594	TWIGGS X CO 368
17. G87-1968	THOMAS X GORDON
18. G87-2134	THOMAS X GORDON
19. G87-3228	CO 368 X GORDON
20. G87-3686	CO 368 X GORDON
21. G87-5387	N80-5023 X D81-8875
22. G87-5770	N80-5023 X D81-8875
23. R89-18S	GORDON X R82-368
24. R88-45VS	GORDON X R82-368
25. SC88-416	YOUNG X J80-293
26. SC88-558	YOUNG X J80-293
27. SC88-1139	CO 368 X J80-293
28. SC88-1195	CO 368 X J80-293
29. SC88-1352	CO 368 X J80-293
30. SC88-1568	CO 368 X D77-6056
31. SC88-2872	CO 368 X LEFLORE
32. TSB86-3449	BRAGG X TERRA-VIG 708
33. TSB86-3469	COKER 156 X TRACY
34. TSB86-3454	BRAGG X TERRA-VIG 708
35. TSB87-481	CO 156 X TRACY
36. V88-970	ESSEX(6) X CO 4504

TABLE 51 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP VII, 1991

STRAIN	SEED YIELD	MAT. INDEX	HT.	----PERCENT----	SCN	SCN	SBL	
				OIL	PROTEIN	3	4	
STONEWALL	44.3	10/18	36	20.7	41.7	R	S	4
SHARKEY	39.4	1-	41	19.1-	44.5+	R	S	4
AU88-1040	39.0-	3-	33	20.2	40.0-	R	S	3
AU88-1580	41.3	0	35	20.3	40.0-	R	R	4
AU88-2173	41.4	3+	33	21.3	42.2	S	S	3
AU88-2202	40.3	3+	32	21.8+	41.6	S	S	3
AU88-2242	42.6	1+	32	21.4	42.2	S	S	4
AU88-2304	42.3	2+	35	20.8	41.8	S	S	4
D87-4389	44.4	0	38	20.0	42.8	R	S	4
D88-5732	34.3-	1+	38	18.4-	44.3+	R	R	2
D88-5914	35.5-	2-	35	19.6-	42.0	S	S	1
D88-5926	34.1-	0	40	19.2-	43.4+	R	R	1
D88-5991	35.8-	2+	31	18.9-	44.5+	R	R	1
D88-6167	37.6-	1-	35	19.2-	42.6	R	R	1
D89-9807	38.9-	3-	38	19.3-	42.3	R	R	3
G87-1594	38.7-	1+	33	20.0	41.2	R	S	5
G87-1968	42.7	1-	33	20.5	40.5-	R	S	4
G87-2134	37.8-	2-	33	20.6	41.4	R	S	3
G87-3228	36.3-	1+	30	20.0	41.6	R	S	4
G87-3686	40.4	2+	34	21.6+	40.0-	R	S	3
G87-5387	34.5-	3+	36	19.3-	41.7	R	S	2
G87-5770	33.8-	2+	36	19.0-	43.0+	R	S	2
R89-18S	45.4	2+	41	21.0	41.2	S	S	4
R88-45VS	41.0	2+	37	20.9	40.7	S	S	4
SC88-416	41.0	2+	38	20.3	42.2	S	S	3
SC88-558	42.3	5-	36	20.3	42.8	R	R	3
SC88-1139	42.3	0	36	21.2	39.9-	R	S	4
SC88-1195	39.3-	1-	38	20.9	40.3-	R	S	4
SC88-1352	40.9	1-	38	21.0	42.1	R	H	4
SC88-1568	42.4	1-	33	21.8+	39.4-	R	R	4
SC88-2872	44.3	1-	34	20.5	40.8	R	S	4
TSB86-3449	36.0-	6+	38	20.9	39.4-	S	S	4
TSB86-3469	37.5-	6+	40	20.8	40.1-	S	S	4
TSB86-3454	35.7-	6+	38	20.9	39.5-	S	S	4
TSB87-481	35.6-	0	35	20.8	41.1	S	S	4
V88-970	40.9	0	32	20.2	42.4	S	S	4
LSD (.05)	5.0			0.8	1.2			
C.V.	14%			3%	2%			

TABLE 52 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP VII, 1991

STRAIN	CLINTON, NC	BLACK- VILLE, SC	ATHENS, GA	TALLAS- SEE, AL	JAY, FL	ROHWER, AR	STONE- VILLE, MS (A)	STONE- VILLE, MS(B)	BEAU- MONT, TX
STONEWALL	47.0	29.6	40.0	54.2	55.0	48.9	41.6	44.0	38.4
SHARKEY	50.2	25.6	37.4	43.4	33.0	43.1	40.0	40.7	41.0
AU88-1040	52.5	24.6	41.2	52.0	39.0	43.7	25.6-	33.2-	39.0
AU88-1580	45.8	32.9	50.6+	54.6	31.0	45.2	35.9	33.6-	42.0
AU88-2173	52.3	26.1	46.5	42.2	40.0	51.1	31.3-	44.6	38.8
AU88-2202	48.2	29.9	45.4	47.6	46.0	30.4-	32.8	43.1	39.7
AU88-2242	56.6	30.4	45.2	52.6	43.0	37.7	36.7	45.5	35.5
AU88-2304	45.1	28.6	46.0	49.2	48.0	42.4	40.4	40.2	40.8
D87-4389	46.0	23.0	42.0	60.6	43.0	56.9	44.8	41.5	41.5
D88-5732	40.1	23.2	40.8	23.4-	26.0	44.6	35.8	38.6-	36.4
D88-5914	36.4	28.4	41.2	29.5-	28.0	38.2	43.3	37.9-	37.0
D88-5926	39.5	26.8	32.2	40.8	28.0	36.9	34.3	37.1-	30.9-
D88-5991	42.4	29.4	41.8	43.5	28.0	33.0-	39.5	35.0-	29.9-
D88-6167	42.7	25.6	40.2	46.7	28.0	43.7	39.7	36.8-	34.6
D89-9807	45.7	26.5	44.7	44.7	35.0	43.7	32.7	40.1	36.7
G87-1594	47.9	23.2	40.7	61.5	34.0	38.6	29.9-	37.7-	34.7
G87-1968	48.6	36.6	46.3	57.9	31.0	42.3	43.0	40.7	37.8
G87-2134	37.0	27.4	38.1	56.2	32.0	32.1-	38.2	36.4-	42.4
G87-3228	49.2	33.5	42.9	44.6	25.0	43.1	26.9-	31.8-	29.3-
G87-3686	45.5	26.2	43.5	60.8	37.0	40.9	38.7	37.1-	34.3
G87-5387	43.3	24.8	33.5	42.3	31.0	28.3-	36.9	36.6-	33.9
G87-5770	34.2-	19.2	34.8	34.8-	29.0	38.9	38.2	39.2	35.6
R89-18S	63.5+	27.2	45.6	54.7	45.0	49.0	38.5	44.1	41.1
R88-45VS	53.5	31.0	40.1	52.9	48.0	44.6	27.1-	33.3-	38.3
SC88-416	50.0	31.2	34.6	48.0	45.0	49.6	29.8-	41.7	39.1
SC88-558	43.8	30.1	52.5+	48.2	46.0	41.0	42.8	42.1	34.1
SC88-1139	51.4	32.7	44.1	64.3	30.0	55.0	27.4-	35.6-	40.2
SC88-1195	42.3	30.9	45.8	53.5	26.0	45.8	32.7	41.7	35.2
SC88-1352	53.4	26.9	46.9	54.3	26.0	52.4	31.6-	35.8-	40.5
SC88-1568	51.5	32.4	40.3	53.3	33.0	51.4	36.1	42.8	40.7
SC88-2872	61.8+	28.1	41.2	62.8	33.0	48.5	39.7	42.3	41.6
TSB86-344	45.7	34.0	41.8	40.2	27.0	36.6	30.6-	36.7-	31.4-
TSB86-346	42.8	33.0	39.7	46.7	34.0	47.8	28.2-	34.8-	30.7-
TSB86-345	45.2	31.9	35.6	42.3	25.0	44.9	26.1-	35.1-	35.4
TSB87-481	37.6	23.1	37.7	41.8	36.0	36.1	33.9	38.0-	35.9
V88-970	49.1	31.7	50.9+	42.9	33.0	46.6	39.5	44.1	30.4-
LSD (.05)	12.1	N.S.	8.3	14.2	.	14.7	9.6	4.8	7.0
C.V.	13%	19%	10%	14%	.%	17%	13%	6%	9%

TABLE 53 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1991

STRAIN	CLINTON, NC	JAY, FL	STONE- VILLE, MS (B)	TALLAS- SEE, AL	BEAU- MONT, TX
STONEWALL	20.3	21.2	21.9	20.3	19.6
SHARKEY	18.6	19.2	20.9	19.9	17.0
AU88-1040	19.4	19.8	21.1	20.5	20.4
AU88-1580	19.7	20.2	21.2	20.4	20.0
AU88-2173	20.9	21.2	21.4	21.7	21.2
AU88-2202	20.8	22.2	22.0	22.3	21.7
AU88-2242	20.4	21.3	21.9	21.5	21.7
AU88-2304	20.5	21.1	21.3	20.8	20.5
D87-4389	21.6	20.3	21.0	19.2	18.1
D88-5732	18.5	19.1	19.0	18.9	16.6
D88-5914	18.7	19.4	21.0	20.1	19.0
D88-5926	19.5	18.7	20.9	18.2	18.6
D88-5991	17.7	18.2	20.0	19.3	19.5
D88-6167	18.8	19.4	20.7	19.1	18.2
D89-9807	18.2	19.9	20.9	20.0	17.4
G87-1594	19.7	20.2	20.6	19.7	19.9
G87-1968	19.8	20.0	22.3	20.5	20.0
G87-2134	19.1	21.3	21.6	20.7	20.2
G87-3228	19.5	20.1	21.1	20.4	18.7
G87-3686	19.9	21.9	22.7	21.6	21.7
G87-5387	18.9	18.7	20.6	19.8	18.5
G87-5770	18.4	18.9	19.7	19.4	18.7
R89-18S	19.9	21.0	21.9	21.9	20.1
R88-45VS	20.5	20.9	21.9	20.9	20.4
SC88-416	19.6	20.7	21.1	20.7	19.6
SC88-558	19.8	20.6	21.7	21.5	18.1
SC88-1139	20.6	21.3	21.6	22.1	20.2
SC88-1195	20.7	21.0	21.5	21.6	19.7
SC88-1352	21.3	20.0	21.2	21.5	20.8
SC88-1568	21.1	22.0	22.5	21.8	21.6
SC88-2872	19.7	20.4	20.9	21.1	20.6
TSB86-3449	20.2	22.0	21.1	21.7	19.4
TSB86-3469	19.9	21.6	20.9	21.0	20.7
TSB86-3454	20.7	22.0	21.4	20.9	19.6
TSB87-481	19.7	20.7	21.2	20.9	21.3
V88-970	20.4	19.4	21.5	19.9	19.9

TABLE 54 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1991

STRAIN	CLINTON, NC	JAY, FL	STONE- VILLE, MS (B)	TALLAS- SEE, AL	BEAU- MONT, TX
STONEWALL	42.1	42.1	39.9	41.5	43.0
SHARKEY	43.7	45.1	43.5	43.9	46.2
AU88-1040	40.7	41.7	37.3	40.5	40.0
AU88-1580	40.8	39.3	39.0	40.0	41.1
AU88-2173	41.6	43.3	41.4	42.4	42.5
AU88-2202	42.0	42.2	41.0	40.9	41.7
AU88-2242	42.4	42.7	41.2	42.7	41.9
AU88-2304	42.0	42.6	40.5	42.1	41.8
D87-4389	40.8	43.5	41.0	43.4	45.4
D88-5732	44.0	44.3	43.9	42.6	46.5
D88-5914	42.4	42.8	39.6	41.9	43.2
D88-5926	42.6	44.4	40.6	45.8	43.5
D88-5991	45.5	46.9	42.3	42.9	44.7
D88-6167	42.8	44.0	40.6	41.0	44.8
D89-9807	42.3	41.3	39.5	43.5	44.9
G87-1594	41.5	40.0	40.4	42.1	42.1
G87-1968	41.2	40.3	36.7	41.7	42.4
G87-2134	42.3	41.0	38.6	42.1	43.0
G87-3228	40.7	41.2	39.4	42.4	44.5
G87-3686	41.4	40.0	37.4	40.7	40.7
G87-5387	41.2	42.5	40.0	40.3	44.5
G87-5770	42.6	43.1	41.2	42.9	45.0
R89-18S	41.6	41.6	39.2	41.1	42.3
R88-45VS	40.2	41.4	38.6	41.0	42.2
SC88-416	41.5	42.0	41.2	42.2	44.0
SC88-558	42.8	42.6	40.6	42.2	45.8
SC88-1139	39.5	38.6	40.0	39.3	42.2
SC88-1195	40.3	39.6	39.5	40.2	42.1
SC88-1352	41.2	43.0	41.2	42.4	42.8
SC88-1568	39.1	38.7	37.5	40.7	40.8
SC88-2872	39.8	41.1	40.6	40.6	42.1
TSB86-3449	39.6	37.6	38.6	38.3	42.7
TSB86-3469	40.3	39.7	39.6	39.4	41.6
TSB86-3454	39.8	37.6	38.0	40.0	42.1
TSB87-481	41.5	40.9	40.0	41.2	41.9
V88-970	42.4	41.9	41.0	43.5	43.3

TABLE 55 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1991

STRAIN	CLINTON, NC	BLACK- VILLE, SC	ATHENS, GA	TALLAS- SEE, AL	JAY, FL	ROHWER, AR	STONE- VILLE, MS (A)	STONE- VILLE, MS (B)	BEAU- MONT, TX
STONEWALL	36.0	38.0	38.0	41.0	34.0	30.0	41.0	39.0	29.0
SHARKEY	48.0	36.0	43.0	39.0	36.0	40.0	43.0	45.0	35.0
AU88-1040	30.0	36.0	38.0	36.0	31.0	27.0	36.0	39.0	24.0
AU88-1580	34.0	34.0	38.0	38.0	33.0	27.0	38.0	42.0	27.0
AU88-2173	32.0	32.0	36.0	32.0	26.0	33.0	38.0	42.0	24.0
AU88-2202	30.0	32.0	37.0	31.0	31.0	25.0	39.0	40.0	23.0
AU88-2242	34.0	32.0	36.0	34.0	29.0	27.0	34.0	41.0	24.0
AU88-2304	34.0	34.0	38.0	36.0	32.0	32.0	43.0	40.0	30.0
D87-4389	36.0	38.0	38.0	38.0	37.0	41.0	44.0	44.0	28.0
D88-5732	48.0	36.0	42.0	37.0	32.0	32.0	41.0	43.0	30.0
D88-5914	36.0	38.0	39.0	34.0	31.0	31.0	40.0	42.0	27.0
D88-5926	42.0	42.0	46.0	40.0	36.0	32.0	43.0	47.0	33.0
D88-5991	34.0	32.0	36.0	35.0	25.0	25.0	37.0	35.0	24.0
D88-6167	28.0	38.0	40.0	38.0	31.0	31.0	40.0	41.0	25.0
D89-9807	30.0	40.0	43.0	41.0	36.0	32.0	42.0	46.0	36.0
G87-1594	38.0	34.0	36.0	36.0	28.0	27.0	36.0	37.0	27.0
G87-1968	34.0	36.0	37.0	36.0	26.0	26.0	38.0	36.0	24.0
G87-2134	30.0	36.0	36.0	36.0	35.0	24.0	35.0	42.0	23.0
G87-3228	28.0	28.0	30.0	31.0	26.0	22.0	41.0	39.0	22.0
G87-3686	34.0	32.0	40.0	32.0	30.0	30.0	41.0	40.0	24.0
G87-5387	36.0	37.0	40.0	37.0	37.0	28.0	42.0	41.0	28.0
G87-5770	34.0	36.0	36.0	38.0	33.0	32.0	42.0	42.0	28.0
R89-18S	46.0	40.0	41.0	39.0	35.0	40.0	44.0	46.0	34.0
R88-45VS	36.0	39.0	40.0	36.0	36.0	34.0	40.0	43.0	32.0
SC88-416	38.0	38.0	39.0	41.0	37.0	32.0	44.0	44.0	29.0
SC88-558	38.0	38.0	38.0	38.0	36.0	27.0	39.0	41.0	27.0
SC88-1139	38.0	39.0	38.0	38.0	34.0	31.0	41.0	39.0	28.0
SC88-1195	46.0	40.0	42.0	39.0	31.0	29.0	41.0	41.0	29.0
SC88-1352	38.0	38.0	44.0	37.0	35.0	34.0	44.0	45.0	31.0
SC88-1568	34.0	35.0	35.0	35.0	27.0	32.0	38.0	36.0	27.0
SC88-2872	38.0	36.0	38.0	35.0	32.0	29.0	39.0	36.0	26.0
TSB86-344	40.0	40.0	38.0	43.0	34.0	35.0	43.0	43.0	30.0
TSB86-346	42.0	41.0	45.0	41.0	37.0	36.0	46.0	46.0	28.0
TSB86-345	42.0	40.0	45.0	39.0	27.0	34.0	41.0	43.0	29.0
TSB87-481	36.0	26.0	40.0	37.0	29.0	32.0	42.0	42.0	28.0
V88-970	38.0	31.0	34.0	30.0	29.0	31.0	36.0	38.0	23.0

TABLE 56 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1991

STRAIN	CLINTON, NC	ATHENS, GA	TALLAS- SEE, AL	JAY, FL	ROHWER, AR	STONE- VILLE, MS (A)	STONE- VILLE, MS (B)	BEAU- MONT, TX
STONEWALL	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.0
SHARKEY	1.5	1.5	2.0	0.3	3.0	2.5	2.0	2.3
AU88-1040	1.5	1.5	1.0	0.4	2.0	2.0	2.0	1.0
AU88-1580	1.5	1.5	1.0	0.3	1.5	2.0	2.0	1.0
AU88-2173	1.5	1.5	1.0	0.3	1.0	2.0	2.0	1.0
AU88-2202	1.5	1.5	1.0	0.2	1.5	2.0	2.0	1.0
AU88-2242	1.5	1.5	1.0	0.4	2.0	2.0	2.0	1.0
AU88-2304	1.5	1.5	1.0	0.2	2.0	2.0	2.0	1.0
D87-4389	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.3
D88-5732	1.5	1.5	2.0	0.3	2.0	2.0	2.0	1.0
D88-5914	1.5	1.5	1.0	0.4	3.0	2.0	2.0	1.0
D88-5926	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.0
D88-5991	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.8
D88-6167	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.0
D89-9807	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.0
G87-1594	1.5	1.5	1.0	0.4	2.0	2.0	2.0	1.0
G87-1968	1.5	1.5	1.0	0.2	1.0	2.0	2.0	1.3
G87-2134	1.5	1.5	1.0	0.4	2.0	2.0	2.0	1.0
G87-3228	1.5	1.5	1.0	0.4	1.0	2.0	2.0	1.0
G87-3686	1.5	1.5	1.0	0.4	1.5	2.0	2.0	1.0
G87-5387	1.5	1.5	1.0	0.4	1.5	2.0	2.0	1.3
G87-5770	1.5	1.5	1.0	0.4	1.5	2.0	2.0	1.3
R89-18S	1.5	1.5	1.0	0.2	2.0	2.0	2.0	1.3
R88-45VS	1.5	1.5	1.0	0.3	1.5	2.0	2.0	1.0
SC88-416	1.5	1.5	1.0	0.3	1.5	2.0	2.0	1.0
SC88-558	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.3
SC88-1139	1.5	1.5	1.0	0.4	2.0	2.0	2.0	1.0
SC88-1195	1.5	1.5	1.0	0.4	2.0	2.0	2.0	1.3
SC88-1352	1.5	1.5	1.0	0.4	2.0	2.0	2.0	1.0
SC88-1568	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.3
SC88-2872	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.0
TSB86-344	1.5	1.5	1.0	0.2	1.5	2.0	2.0	1.3
TSB86-346	1.5	1.5	1.0	0.3	2.0	2.0	2.0	1.0
TSB86-345	1.5	1.5	1.0	0.2	2.0	2.0	2.0	1.0
TSB87-481	1.5	1.5	1.0	0.3	1.0	2.0	2.0	1.0
V88-970	1.5	1.5	2.0	0.4	1.5	2.0	2.0	1.0

UNIFORM GROUP VIII
1991

VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1. KIRBY	CENTENNIAL X [FORREST X (COBB X D68-216)	F6
2. PERRIN	COKER 488 X BRAXTON	F5
3. COOK	BRAXTON X YOUNG	F6
4. F86-1456	KIRBY(2) X TRACY-M	F5
5. G84-234	KIRBY X WRIGHT	F6
6. SC84-679	D76-9665 X JOHNSTON	F5
7. AU86-2126	BRAXTON X JOHNSTON	F6
8. SC85-123	CENTENNIAL X YOUNG	F6
9. F88-8692	KIRBY X F84-1569	F6
10. F88-9160	F77-2000 X BRAXTON	F6
11. SC87-2220	BRAXTON X (GORDON X JOHNSTON)	F5
12. SC88-2660	KIRBY X (GORDON X D77-6056)	F5

Background of lines used as parents:

D68-216 is a selection from Dyer X Bragg
D76-9665 is a selection From Forrest X Centennial.
F84-1569
F77-2000 same parentage as Kirby.
D77-6056 is a selection from Centennial X J74-47.
J74-47 is a SCN race 4 resistant line with same
parentage as Bedford.

UNIFORM GROUP VIII

1991

Uniform Group VIII nurseries were grown at 16 locations. Results of 15 of these plantings are summarized in Table 57, which also reports three year means for seed yield and percent protein and oil along with information on pest reaction and general agronomic qualities. Data from individual locations are reported in Tables 58-63.

The recently released Cook cultivar had a mean seed yield of 46.2 bushels per acre, which was 10 bushels per acre above the mean seed yield for Kirby. Cook averaged three days earlier in maturity than did Kirby. Perrin, which averaged 1.5 days later in maturity than Kirby had a significantly higher mean seed yield. The strain SC84-679 had a mean seed yield of 44 bushels per acre which was significantly higher than that for Perrin. This strain is being increased for release. F88-1456 equalled Perrin in seed yield has good resistance to both root knot nematodes and also is resistant to SCN race 3 and to stem canker. G84-234 also has excellent resistance to both root knot nematodes and is resistant to SCN race 3.

The entries were evaluated for reaction to the two root knot nematodes in the greenhouse at the University of Georgia. It is of particular interest that 11 of the 12 entries had good resistance to *M. incognita* and seven had moderate to good resistance to *M. arenaria*. All entries were evaluated for reaction to SCN races 3 and 4 in the greenhouse at Jackson, Tennessee. One line SC86-2660 had good resistance to both races of root knot nematode and also resistance to both races of soybean cyst nematode. Ratings for stem canker were made in the field at Beaumont, Texas, on the basis of a rating of 0-9.

TABLE 57 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP VIII, 1991

	NO. OF LOCATIONS	KIRBY	PERRIN	COOK	F86- 1456	G84- 234
Seed Yield - 1991	14	29.2	33.1	24.3	36.6	31.1
1990-91		29.2		30.5	33.3	32.6
1989-91		30.2		34.9	34.0	33.5
Oil Content - 1991		19.8	19.6	19.9	20.0	19.5
1990-91		20.0		20.1	20.1	19.8
1989-91		19.7		20.1	20.1	19.7
Protein Content - 1991		41.6	42.2	42.5	42.1	42.4
1990-91		41.8		42.3	42.2	42.2
1989-91		42.0		42.0	42.0	42.0
Seed size		13.0	17.4	15.5	13.6	15.2
Maturity index		10-24	+1	-3	-3	-3
Height		35	38	35	37	34
Seed quality		1.7	1.7	1.8	1.7	1.8
M. incognita		1.1	1.5	1.5	1.5	1.0
M. arenaria		2.5	2.5	4.0	2.2	1.2
SCN race 3		R	S	S	R	R
SCN race 4		S	S	S	S	S
Stem Canker		2.0	0	0.3	0	1.0
SBL Feeding		4	4	2	4	4
Flower color		P	P	P	P	P
Pubescence color		T	T	T	T	T
Pod wall color		T	T	T	T	T

TABLE 57 - (continued)

	SC84- 679	AU86- 2126	SC85- 123	F88- 8692	F88- 9160	SC87- 2220	SC88- 2660
Seed Yield - 1991	30.7	30.0	34.0	34.0	30.0	33.5	31.5
1990-91	32.4	31.8	32.8				
1989-91	34.9						
Oil Content - 1991	20.8	21.4	19.7	20.1	20.0	18.8	20.4
1990-91	20.8	21.3	19.6				
1989-91	20.8						
Protein Content - 1991	40.2	41.3	43.5	42.4	41.5	42.5	41.0
1990-91	40.6	41.4	43.6				
1989-91	40.4						
Seed size	14.4	14.3	14.1	16.6	15.0	14.0	13.9
Maturity index	0	-3	-1	+3	+4	-2	-4
Height	34	30	39	32	40	37	34
Seed quality	1.8	1.7	1.6	1.8	1.8	1.7	1.8
M. incognita	1.4	2.2	3.0	1.5	1.0	1.8	1.0
M. arenaria	4.2	2.5	3.0	3.0	1.8	3.8	2.5
SCN race 3	R	R	S	R	R	R	R
SCN race 4	S	S	S	S	S	S	R
Stem Canker	2.0	1.3	0.7	0.3	0	0.7	2.0
SBL Feeding	4	3	4	5	4	4	4
Flower color	P	W	W	P	P	P	W
Pubescence color	T	T	G	T	G	G	T
Pod wall color	T	T	T	T	T	T	T

TABLE 58 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN UNIFORM GROUP VIII, 1991

LOCATION	KIRBY	PERRIN	COOK	F86- 1456	G84- 234	SC84- 679
CLINTON, NC	47.6	48.8	54.0	49.2	52.6	57.3
FLORENCE, SC(A)	44.5	46.6	51.2	45.3	43.9	50.6
FLORENCE, SC(B)	22.9	23.5	28.7	21.3	27.6	26.2
BLACKVILLE, SC(A)	26.6	32.2	31.4	28.0	27.1	29.6
BLACKVILLE, SC(B)	23.7	28.8	37.2	27.3	25.8	32.9
ATHENS, GA	33.9	33.8	37.6	35.3	35.0	33.6
TALLASSEE, AL	55.1	54.8	59.5	57.4	54.7	59.0
TIFTON, GA	37.3	48.6	60.0	54.2	45.4	45.4
GAINESVILLE, FL*	19.7	31.5	34.4	18.5	18.2	15.8
QUINCY, FL	42.9	38.8	45.0	50.7	47.1	51.6
JAY, FL	24.0	26.0	44.0	39.0	31.0	53.0
FAIRHOPE, AL	52.9	50.5	62.6	52.2	54.3	60.7
BATON ROUGE, LA	57.0	61.7	60.9	51.1	55.0	62.2
STONEVILLE, MS(A)	13.6	38.8	40.1	23.5	20.5	25.3
STONEVILLE, MS(B)	37.8	44.0	49.0	37.3	37.1	43.5
BEAUMONT, TX	24.3	31.9	32.4	30.3	36.3	28.8
MEAN	29.2	33.1	24.3	36.6	31.1	30.7

*Not included in mean.

TABLE 58 - (continued)

LOCATION	AU86- 2126	SC85- 123	F88- 8692	F88- 9160	SC87- 2220	SC88- 2660	L.S.D. (.05)	C.V. (%)
CLINTON, NC	51.8	48.4	49.0	57.7	52.7	48.7	8.4	9.7
FLORENCE, SC(A)	48.3	51.0	46.7	44.9	43.3	45.8	.	8.0
FLORENCE, SC(B)	26.5	26.2	25.9	26.8	22.9	23.8	.	14.9
BLACKVILLE, SC(A)	33.0	36.4	26.1	25.8	30.3	29.0	5.7	11.4
BLACKVILLE, SC(B)	33.1	33.6	23.2	25.2	32.3	27.0	7.8	15.9
ATHENS, GA	33.6	32.5	27.7	31.1	30.3	33.9	5.3	9.4
TALLASSEE, AL	56.8	49.6	52.9	56.0	55.4	55.4	9.9	10.6
TIFTON, GA	51.3	46.5	41.3	42.2	43.6	44.1	.	.
GAINESVILLE, FL*	21.0	13.7	29.2	19.5	20.1	17.6	7.9	22.0
QUINCY, FL	47.7	45.8	42.5	57.7	50.6	40.0	.	.
JAY, FL	45.0	26.0	50.0	47.0	29.0	27.0	2.9	3.6
FAIRHOPE, AL	60.5	51.8	53.8	54.8	48.9	54.8	6.6	7.1
BATON ROUGE, LA	52.0	58.3	56.3	56.3	54.0	50.2	6.9	6.9
STONEVILLE, MS(A)	18.1	20.9	25.0	5.9	22.7	26.8	4.9	12.3
STONEVILLE, MS(B)	37.4	36.3	37.1	30.2	39.7	40.1	3.9	5.9
BEAUMONT, TX	32.0	33.9	29.1	33.5	26.9	24.8	8.2	11.1
MEAN	30.0	34.0	34.0	30.0	33.5	31.5		

*Not included in mean.

TABLE 59 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP VIII, 1991

LOCATION	KIRBY	PERRIN	COOK	F86- 1456	G84- 234	SC84- 679
OIL PERCENTAGE						
CLINTON, NC	19.9	18.5	19.3	19.6	19.2	19.7
FLORENCE, SC(A)	20.3	20.1	20.7	20.7	19.1	21.1
ATHENS, GA	18.3	19.0	20.4	19.3	19.0	20.6
TALLASSEE, AL	20.0	19.5	20.1	20.0	19.6	20.6
JAY, FL	19.1	19.4	19.5	20.4	18.9	20.9
QUINCY, FL	21.5	21.6	20.9	21.6	21.3	22.5
STONEVILLE, MS(B)	20.3	19.8	20.5	20.5	20.3	21.1
BEAUMONT, TX	18.6	18.7	17.5	17.7	18.8	19.8
MEAN	19.8	19.6	19.9	20.0	19.5	20.8
PROTEIN PERCENTAGE						
CLINTON, NC	40.7	43.0	42.9	41.8	42.9	40.0
FLORENCE, SC(A)	41.5	41.7	42.3	41.6	43.6	39.8
ATHENS, GA	40.5	40.1	40.3	41.0	41.5	38.5
TALLASSEE, AL	41.8	43.0	42.5	42.3	42.4	40.4
JAY, FL	43.4	42.3	42.5	42.4	44.0	40.8
QUINCY, FL	41.2	42.5	42.8	41.3	42.1	40.5
STONEVILLE, MS(B)	40.2	40.9	41.5	41.3	40.3	39.4
BEAUMONT, TX	43.7	43.7	45.4	45.4	42.7	42.3
MEAN	41.6	42.2	42.5	42.1	42.4	40.2
GRAMS PER 100 SEED						
CLINTON, NC	15.8	15.1	14.8	14.2	14.9	14.1
ATHENS, GA	12.5	12.7	9.1	13.6	13.2	15.3
TALLASSEE, FL	11.0	11.8	8.1	14.2	10.5	13.2
JAY, FL	14.0	14.0	12.0	16.0	14.0	17.0
STONEVILLE, MS(B)	10.9	12.3	9.7	14.8	12.1	14.5
MEAN	12.8	13.2	10.7	14.6	12.9	14.8

TABLE 59 - (continued)

LOCATION	AU86- 2126	SC85- 123	F88- 8692	F88- 9160	SC87- 2220	SC88- 2660
OIL PERCENTAGE						
CLINTON, NC	20.7	19.2	19.5	19.7	17.9	19.4
FLORENCE, SC(A)	22.3	20.1	19.7	19.9	19.5	20.6
ATHENS, GA	19.0	19.2	19.1	18.6	18.9	20.4
TALLASSEE, AL	21.6	19.9	20.1	20.2	17.8	21.1
JAY, FL	22.2	19.5	20.4	20.5	18.5	20.3
QUINCY, FL	23.2	21.2	22.4	21.4	20.4	21.7
STONEVILLE, MS(B)	21.7	19.5	19.8	20.5	19.5	21.4
BEAUMONT, TX	20.2	18.9	19.5	19.5	17.6	18.2
MEAN	21.4	19.7	20.1	20.0	18.8	20.4
PROTEIN PERCENTAGE						
CLINTON, NC	41.4	43.5	41.3	42.0	42.9	41.3
FLORENCE, SC(A)	40.1	42.8	42.9	41.7	41.6	41.4
ATHENS, GA	42.4	42.8	41.2	40.2	41.0	38.5
TALLASSEE, AL	41.6	43.7	42.7	42.2	43.8	41.0
JAY, FL	40.2	44.3	42.3	42.0	42.7	41.2
QUINCY, FL	40.5	43.6	41.7	41.1	42.9	42.0
STONEVILLE, MS(B)	40.0	43.2	42.7	40.6	41.3	38.9
BEAUMONT, TX	44.0	44.2	44.4	42.1	44.0	43.4
MEAN	41.3	43.5	42.4	41.5	42.5	41.0
GRAMS PER 100 SEED						
CLINTON, NC	12.7	12.4	12.9	13.5	12.9	14.3
ATHENS, GA	12.9	13.9	13.2	13.0	12.9	12.4
TALLASSEE, FL	12.1	12.6	12.6	12.7	12.1	11.7
JAY, FL	13.0	15.0	16.0	15.0	14.0	14.0
STONEVILLE, MS(B)	12.5	12.9	13.3	13.6	13.6	11.9
MEAN	12.6	13.4	13.6	13.6	13.1	12.9

TABLE 60 - RELATIVE MATURITY, DAYS EARLIER, (-) OR LATER (+) THAN KIRBY, FOR THE STRAINS IN UNIFORM GROUP VIII, 1991.

LOCATION	KIRBY	PERRIN	COOK	F86- 1456	G84- 234	SC84- 679
CLINTON, NC	10/31	+0	-2	-2	-2	+0
FLORENCE, SC(A)	10/22	+2	-2	-3	-2	+2
FLORENCE, SC(B)	10/28	+0	-9	-4	-7	-5
ATHENS, GA	10/25	-2	-8	-5	-7	-7
TALLASSEE, AL	10/20	+1	-6	-6	-7	-2
TIFTON, GA	10/11	+0	+0	-2	+0	+1
GAINESVILLE, FL*	10/23	+0	-4	-4	-6	-3
JAY, FL	10/30	+5	+1	-2	+1	+5
FAIRHOPE, AL	10/22	+3	-2	-1	-2	+4
STONEVILLE, MS(A)	10/16	+7	+2	+0	+2	+2
STONEVILLE, MS(B)	11/01	+1	-4	-10	-11	-1
BEAUMONT, TX	10/17	-1	-4	-2	-3	-3
MEAN	10/24	-2	+4	-3	-1	-2

*Not included in mean.

TABLE 60 - (continued)

LOCATION	AU86- 2126	SC85- 123	F88- 8692	F88- 9160	SC87- 2220	SC88- 2660
CLINTON, NC	-5	+0	+0	+0	-5	-1
FLORENCE, SC(A)	-1	+2	+6	+10	-1	-3
FLORENCE, SC(B)	-7	-4	+2	+6	-7	-11
ATHENS, GA	-7	-5	+4	+5	-7	-12
TALLASSEE, AL	-5	-5	+7	+9	+5	+6
TIFTON, GA	+0	+1	+5	+6	+0	-5
GAINESVILLE, FL*	-1	-5	+6	+6	-6	-6
JAY, FL	-2	+4	-2	+2	-2	+0
FAIRHOPE, AL	-2	-1	+8	+11	-2	-2
STONEVILLE, MS(A)	-2	+0	+6	+0	+2	-3
STONEVILLE, MS(B)	-9	-9	+1	+2	-3	-11
BEAUMONT, TX	-3	-4	+1	+3	-5	-5
MEAN	-3	-3	-2	-2	-3	-3

*Not included in mean.

TABLE 61 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP VIII, 1991

LOCATION	KIRBY	PERRIN	COOK	F86- 1456	G84- 234	SC84- 679
FLORENCE, SC(A)	43	47	46	46	42	44
FLORENCE, SC(B)	38	43	39	41	40	35
BLACKVILLE, SC(A)	34	35	36	37	36	37
BLACKVILLE, SC(B)	34	37	33	34	33	32
ATHENS, GA	36	37	34	36	31	34
TALLASSEE, AL	42	45	40	43	37	42
TIFTON, GA	36	38	34	38	34	36
GAINESVILLE, FL*	25	26	23	25	23	21
JAY, FL	32	36	34	37	33	37
FAIRHOPE, AL	36	39	38	38	34	35
BATON ROUGE, LA	4	7	7	8	4	3
STONEVILLE, MS(A)	43	45	42	46	43	42
STONEVILLE, MS(B)	45	46	41	46	43	39
BEAUMONT, TX	32	33	29	33	31	28
MEAN	35	36	36	36	37	36

*Not included in mean.

TABLE 61 - (continued)

LOCATION	AU86- 2126	SC85- 123	F88- 8692	F88- 9160	SC87- 2220	SC88- 2660
FLORENCE, SC(A)	38	49	38	49	49	44
FLORENCE, SC(B)	34	43	36	42	36	37
BLACKVILLE, SC(A)	31	39	35	43	37	31
BLACKVILLE, SC(B)	28	37	33	41	35	33
ATHENS, GA	28	38	32	40	37	37
TALLASSEE, AL	36	46	35	49	45	39
TIFTON, GA	33	39	32	41	38	34
GAINESVILLE, FL*	17	23	23	27	25	19
JAY, FL	32	36	36	34	37	37
FAIRHOPE, AL	32	40	31	41	37	29
BATON ROUGE, LA	5	9	4	9	9	5
STONEVILLE, MS(A)	32	49	37	49	43	41
STONEVILLE, MS(B)	35	44	37	46	43	41
BEAUMONT, TX	24	34	31	36	29	29
MEAN	36	33	34	32	29	39

*Not included in mean.

TABLE 62 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP VIII, 1991

LOCATION	KIRBY	PERRIN	COOK	F86- 1456	G84- 234	SC84- 679
CLINTON, NC	4.0	5.0	4.0	4.0	4.0	5.0
FLORENCE, SC(A)	2.0	2.3	2.0	2.3	2.7	2.0
ATHENS, GA	2.0	1.7	2.0	2.0	2.2	2.3
TALLASSEE, AL	1.0	1.3	1.0	1.8	1.0	1.5
TIFTON, GA	1.3	1.9	2.0	1.6	1.4	1.7
GAINESVILLE, FL	1.3	1.6	1.8	1.5	1.5	1.0
JAY, FL	1.0	1.0	1.0	1.0	1.0	1.0
FAIRHOPE, AL	1.0	1.0	1.0	1.3	1.0	1.0
BATON ROUGE, LA	0.3	0.3	0.3	0.3	0.3	0.3
STONEVILLE, MS(A)	2.3	2.7	2.7	2.7	2.3	3.0
STONEVILLE, MS(B)	2.7	3.0	2.7	2.7	2.7	2.7
BEAUMONT, TX	1.0	1.0	1.0	1.0	1.3	1.0

TABLE 62 - (continued)

LOCATION	AU86- 2126	SC85- 123	F88- 8692	F88- 9160	SC87- 2220	SC88- 2660
CLINTON, NC	5.0	5.0	.	.	5.0	4.0
FLORENCE, SC(A)	4.0	2.7	1.7	3.0	2.3	2.0
ATHENS, GA	2.2	2.3	1.8	2.0	2.2	2.0
TALLASSEE, AL	4.0	1.7	1.0	1.5	1.0	1.2
TIFTON, GA	3.2	1.9	1.5	1.6	2.0	1.5
GAINESVILLE, FL	1.0	1.0	1.0	2.0	1.0	1.0
JAY, FL	1.0	1.0	1.0	1.0	1.0	1.0
FAIRHOPE, AL	1.0	1.7	1.0	1.3	1.0	1.0
BATON ROUGE, LA	0.3	0.3	0.3	0.3	0.3	0.3
STONEVILLE, MS(A)	3.7	3.3	3.7	2.3	3.0	2.0
STONEVILLE, MS(B)	3.0	3.0	2.7	3.0	3.0	2.7
BEAUMONT, TX	1.0	1.0	1.0	1.0	1.3	1.0

TABLE 63 - SEED QUALITY SCORES FOR THE STRAINS IN UNIFORM GROUP VIII, 1991

LOCATION	KIRBY	PERRIN	COOK	F86- 1456	G84- 234	SC84- 679
CLINTON, NC	1.5	1.5	1.5	1.5	1.5	1.5
ATHENS, GA	1.5	1.5	1.5	1.5	1.5	1.7
TALLASSEE, AL	1.0	1.0	1.0	1.0	1.0	1.0
TIFTON, GA	1.4	1.7	1.5	1.5	1.5	1.6
JAY, FL	4.0	4.0	4.0	3.0	4.0	3.0
QUINCY, FL	1.0	1.0	1.3	1.5	1.6	1.8
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
BEAUMONT, TX	1.2	1.0	1.0	1.0	1.0	1.5

TABLE 63 - (continued)

LOCATION	AU86- 2126	SC85- 123	F88- 8692	F88- 9160	SC87- 2220	SC88- 2660
CLINTON, NC	1.5	1.5	1.5	1.5	1.5	1.5
ATHENS, GA	1.5	1.5	2.0	1.5	1.5	1.5
TALLASSEE, AL	1.0	1.0	1.0	1.0	1.0	1.0
TIFTON, GA	1.5	1.4	1.7	1.7	1.4	1.4
JAY, FL	3.0	3.0	3.0	4.0	4.0	4.0
QUINCY, FL	1.8	1.0	1.3	1.0	1.0	1.8
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
BEAUMONT, TX	1.0	1.0	1.3	1.2	1.0	1.3

PRELIMINARY GROUP VIII

1991

Preliminary Group VIII nurseries, which included Kirby and Hagood, along with 34 experimental entries, were grown at 6 locations. The parentage for each of the entries is reported in Table 64. A general summary of performance is given in Table 65. Data from individual locations are reported in Tables 66-70.

The mean seed yield for the several locations range from 26.6 bushels per acre to 36.2 bushels per acre. Kirby had a mean seed yield of 29.1 bushel per acre. Only one line had a significantly higher mean seed yield.

Nearly all of the entries were resistant to SCN race 3, ten of them were also either resistant or heterogenous for reaction to SCN race 4.

Ratings for soybean looper feeding were made in the field cage at Stoneville where a high population of moths were released for egg laying. Ratings for stem canker (SC) were made in the field at Beaumont, Texas. The entries in Preliminary Group VIII were rated at a later date than were entries in the other maturity groups, giving the disease more time to develop on susceptible strains. Strains receiving a rating of zero in the first rating, remained zero in the second rating. However, ratings for the more susceptible lines showed an increase. Hagood which appeared very susceptible in a Mississippi planting had a rating change from a 2.5 to 3.5. Five strains received ratings of zero.

TABLE 64 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP VIII, 1991

VARIETY OR STRAIN	PARENTAGE
1. KIRBY	CENTENNIAL X [FORREST X (COBB X D68-218)]
2. HAGOOD	CENTENNIAL X YOUNG
3. AU88-1637	LEFLORE X G80-1011
4. AU88-395	F82-1739 X D82-3298
5. AU88-2012	J80-293 X CO 82-645
6. AU88-2076	J80-293 X CO 82-645
7. AU88-2099	J80-293 X CO 82-645
8. F87-1928	F77-1790 X F80-4690
9. F88-6111	BEDFORD X F88-6291
10. F88-8626	F83-1969 X F79-6429
11. F88-8662	F83-1969 X F79-6439
12. F88-8714	KIRBY X F84-1569
13. F88-8719	KIRBY X F84-1569
14. F88-8731	KIRBY X F84-1569
15. F88-8957	KIRBY(2) X TRACY-M
16. F88-9155	F77-2000 X BRAXTON
17. F88-9401	D81-9788 X F81-5923
18. F88-9458	D81-9788 X F81-5923
19. F88-9528	D81-9788 X F81-5923
20. F89-3846	F83-1960 X BR 6
21. G87-3143	CO 368 X GORDON
22. G87-3533	CO 368 X GORDON
23. G87-3539	CO 368 X GORDON
24. G87-4158	CO 368 X THOMAS
25. G87-4379	CO 368 X THOMAS
26. SC88-491	YOUNG X J80-293
27. SC88-1039	CO 368 X J80-293
28. SC88-1082	CO 368 X J80-293
29. SC88-1177	CO 368 X J80-293
30. SC88-1206	CO 368 X J80-293
31. SC88-1523	CO 368 X D77-6056
32. SC88-1552	CO 368 X D77-6056
33. SC88-2537	KIRBY X (N79-491 X FORREST)
34. SC88-2645	CO 368 X LEFLORE
35. SC88-2848	CO 368 X LEFLORE
36. SC88-2909	CO 368 X LEFLORE

TABLE 65 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP VIII, 1991

STRAIN	SEED YIELD	MAT. INDEX	HT.	----PERCENT----		SCN 3	SCN 4	SC	SBL
				OIL	PROTEIN				
KIRBY	29.1	10/26	32	20.4	42.4	R	S	2.5	4
HAGOOD	36.3+	3-	34	20.3	44.2+	R	S	3.5	4
AU88-1637	31.7	5-	33	20.7	40.9-	R	R	3.0	3
AU88-395	32.1	5-	32	20.4	40.4-	R	R	3.0	2
AU88-2012	28.3	4-	32	20.5	43.6+	R	H	1.0	3
AU88-2076	29.5	2-	30	20.6	41.6	R	S	3.5	3
AU88-2099	29.5	6-	30	19.5-	42.4	R	S	4.5	3
F87-1928	30.5	4+	34	19.0-	41.8	R	S	2.0	4
F88-6111	35.3	4-	35	20.5	41.2-	R	H	6.0	4
F88-8626	36.2+	1+	34	20.7	42.6	R	H	3.0	4
F88-8662	32.4	4+	38	20.6	41.9	S	S	1.5	4
F88-8714	31.9	5+	38	19.8	42.9	R	S	1.0	5
F88-8719	29.0	6+	38	20.5	41.1-	R	S	0.0	4
F88-8731	31.7	5+	37	19.4-	42.9	R	S	0.0	4
F88-8957	31.3	2-	34	19.7	43.3	R	S	0.0	3
F88-9155	30.3	2+	37	19.6	43.4	R	S	3.0	3
F88-9401	28.3	0	38	18.9-	43.2	R	S	3.0	3
F88-9458	27.4	1-	37	18.4-	42.2	R	S	5.0	4
F88-9528	26.6	0	37	19.7	41.5	R	S	3.5	4
F89-3846	29.2	3+	36	20.7	42.0	R	S	3.5	4
G87-3143	30.9	3-	34	19.9	41.9	R	S	2.5	4
G87-3533	34.6	4-	32	22.0+	38.7-	R	S	2.5	3
G87-3539	29.7	2-	33	21.3+	40.8-	R	S	1.5	4
G87-4158	31.3	2-	31	20.6	41.0-	R	S	0.0	4
G87-4379	31.1	4-	31	20.7	41.8	R	S	0.0	3
SC88-491	31.5	4-	36	19.3-	44.2+	R	S	2.0	4
SC88-1039	33.2	4-	36	20.3	43.0	R	MR	2.5	3
SC88-1082	33.5	4-	34	21.2+	41.0-	R	MR	1.0	4
SC88-1177	31.6	6-	32	20.2	44.0+	R	MR	3.5	3
SC88-1206	32.2	6-	32	21.0	41.1-	R	MR	2.0	4
SC88-1523	32.4	3-	32	19.5-	41.2-	R	S	4.5	4
SC88-1552	34.9	7-	30	21.8+	41.3-	R	S	4.0	4
SC88-2537	34.7	4-	32	20.7	41.7	R	S	3.0	4
SC88-2645	33.4	6-	31	21.1	40.3-	R	S	1.0	5
SC88-2848	29.5	4-	34	20.8	39.1-	R	S	2.5	5
SC88-2909	34.7	4-	32	20.2	42.9	R	MR	2.0	4
LSD (.05)	6.2			0.8	1.1				
C.V.	15%			3%	2%				

TABLE 66 - SEED YIELD, IN BUSHEL PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1991

STRAIN	BLACK- VILLE, SC	GAINES- VILLE, FL	QUINCY, FL	JAY, FL	BEAU- MONT, TX	STONE- VILLE, MS (B)
KIRBY	33.0	12.0	40.3	26.0	30.0	33.1
HAGOOD	37.0	16.6	40.2	45.0	31.2	47.5+
AU88-1637	39.1	10.8	41.9	29.0	32.2	37.2+
AU88-395	32.0	23.7	40.9	34.0	28.3	34.0
AU88-2012	33.6	13.6	37.5	23.0	28.0	34.1
AU88-2076	32.0	8.4	43.8	34.0	27.8	31.1
AU88-2099	31.4	20.6	30.7	28.0	29.8	36.3
F87-1928	31.7	19.9	41.2	32.0	29.6	28.8-
F88-6111	37.0	22.0	39.4	51.0	20.3-	41.8+
F88-8626	27.8	24.7	43.2	52.0	32.0	37.6+
F88-8662	36.3	23.3	36.3	29.0	32.5	36.8
F88-8714	24.0	28.0	41.6	25.0	35.7	37.1+
F88-8719	33.4	16.5	33.5	29.0	35.3	26.1-
F88-8731	28.2	25.0	45.3	34.0	26.8	30.9
F88-8957	32.0	16.7	37.1	25.0	40.3+	37.0+
F88-9155	28.5	13.1	38.1	43.0	28.8	30.3
F88-9401	32.2	19.1	34.2	23.0	31.4	29.6
F88-9458	31.0	17.4	32.7	31.0	20.5-	31.7
F88-9528	26.2	15.2	31.0	30.0	27.2	29.9
F89-3846	26.4	19.8	37.2	33.0	25.1	33.6
G87-3143	33.0	19.1	40.4	29.0	32.2	31.8
G87-3533	31.4	21.0	45.1	36.0	36.6	37.2+
G87-3539	26.7	12.7	41.1	27.0	34.3	36.5
G87-4158	38.3	14.5	36.7	35.0	32.6	31.0
G87-4379	37.1	12.1	30.8	32.0	39.1+	35.2
SC88-491	29.8	23.7	37.2	27.0	35.1	35.9
SC88-1039	40.3	20.3	39.5	26.0	35.8	37.2+
SC88-1082	32.0	24.5	39.9	28.0	38.5+	38.0+
SC88-1177	30.3	15.5	41.6	30.0	35.8	36.5
SC88-1206	31.8	19.6	37.1	27.0	42.1+	35.4
SC88-1523	35.0	17.1	44.8	32.0	25.9	39.4+
SC88-1552	36.6	17.2	51.4	29.0	33.9	41.2+
SC88-2537	40.9	17.5	41.7	27.0	38.4+	42.5+
SC88-2645	30.4	17.0	44.3	29.0	43.1+	36.7
SC88-2848	30.2	14.8	43.0	27.0	30.5	31.5
SC88-2909	40.0	28.1	42.5	23.0	38.0+	36.6
LSD (.05)	N.S.	N.S.	.	.	7.7	3.8
C.V.	18%	29%	.%	.%	12%	5%

TABLE 67 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1991

STRAIN	JAY, FL	STONE- VILLE, MS (B)	QUINCY FL	BEAUMONT, TX
KIRBY	20.1	20.9	21.6	19.6
HAGOOD	20.4	20.1	21.4	19.0
AU88-1637	20.0	21.5	21.8	20.2
AU88-395	19.7	21.6	22.0	19.4
AU88-2012	19.7	21.4	22.2	19.7
AU88-2076	20.3	21.5	22.3	19.2
AU88-2099	18.9	21.4	21.6	17.9
F87-1928	18.5	18.7	20.6	18.0
F88-6111	20.1	21.7	22.1	19.4
F88-8626	20.3	21.1	21.8	20.1
F88-8662	20.5	19.8	21.8	19.6
F88-8714	18.9	19.5	21.6	18.9
F88-8719	19.9	20.1	21.7	19.9
F88-8731	18.5	19.7	20.6	19.2
F88-8957	19.4	21.1	20.9	18.9
F88-9155	19.6	18.9	20.9	18.3
F88-9401	18.7	21.0	20.9	17.0
F88-9458	18.2	19.3	19.9	17.2
F88-9528	19.7	20.5	20.9	18.6
F89-3846	21.2	22.3	22.1	18.9
G87-3143	20.0	21.5	21.3	18.4
G87-3533	21.7	23.8	23.8	20.5
G87-3539	20.5	22.1	22.6	20.7
G87-4158	21.4	21.7	22.1	18.3
G87-4379	20.6	21.6	21.4	20.2
SC88-491	18.7	20.1	21.1	18.1
SC88-1039	20.5	22.1	22.0	18.3
SC88-1082	21.2	20.7	22.2	20.3
SC88-1177	19.6	21.3	21.6	19.3
SC88-1206	19.5	22.7	22.4	21.1
SC88-1523	19.9	20.7	20.2	18.4
SC88-1552	22.0	22.8	23.1	20.4
SC88-2537	20.5	22.0	22.0	19.7
SC88-2645	19.7	21.9	23.1	20.6
SC88-2848	20.6	21.4	22.5	19.4
SC88-2909	19.4	20.9	21.8	19.5

TABLE 68 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1991

STRAIN	JAY, FL	STONE VILLE, MS (B)	QUINCY, FL	BEAUMONT, TX
KIRBY	42.2	39.5	41.6	43.3
HAGOOD	43.2	43.2	43.7	45.8
AU88-1637	40.9	38.4	40.7	41.1
AU88-395	39.8	37.4	39.5	41.8
AU88-2012	42.8	41.0	42.8	45.1
AU88-2076	41.5	38.6	40.2	43.2
AU88-2099	42.0	39.8	41.5	43.8
F87-1928	40.8	41.3	41.3	43.3
F88-6111	41.2	37.0	39.8	42.6
F88-8626	42.2	40.0	42.3	43.3
F88-8662	40.9	41.9	41.8	43.1
F88-8714	42.0	41.2	41.6	45.0
F88-8719	40.7	41.2	40.5	42.2
F88-8731	42.6	42.0	42.3	43.8
F88-8957	43.0	41.0	42.0	45.0
F88-9155	42.7	42.0	42.8	44.7
F88-9401	42.5	38.6	41.8	45.2
F88-9458	41.1	41.0	42.0	43.6
F88-9528	39.3	39.8	41.3	43.8
F89-3846	40.2	37.8	41.7	44.0
G87-3143	40.0	39.2	41.6	44.2
G87-3533	38.5	35.4	36.7	41.0
G87-3539	39.9	38.8	40.3	42.3
G87-4158	40.0	39.1	40.0	43.1
G87-4379	40.6	39.3	41.8	43.0
SC88-491	44.5	41.9	42.6	45.6
SC88-1039	42.3	40.1	40.8	45.8
SC88-1082	39.7	40.6	40.0	43.2
SC88-1177	43.6	41.8	42.7	45.6
SC88-1206	40.0	38.5	40.7	42.7
SC88-1523	40.0	40.2	40.8	42.9
SC88-1552	41.1	38.5	39.5	43.2
SC88-2537	41.0	39.0	40.2	44.0
SC88-2645	40.8	38.0	39.0	41.2
SC88-2848	38.8	36.0	37.8	40.6
SC88-2909	43.2	40.6	40.9	44.7

TABLE 69 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1991

STRAIN	BLACK-VILLE, SC	GAINES-VILLE, FL	JAY, FL	BEAU-MONT, TX	STONE-VILLE, MS (B)
KIRBY	37.0	16.0	36.0	29.0	43.0
HAGOOD	40.0	18.0	35.0	32.0	46.0
AU88-1637	38.0	15.0	33.0	33.0	45.0
AU88-395	38.0	22.0	32.0	26.0	41.0
AU88-2012	40.0	16.0	32.0	28.0	42.0
AU88-2076	34.0	16.0	35.0	28.0	39.0
AU88-2099	31.0	16.0	33.0	32.0	38.0
F87-1928	38.0	25.0	32.0	31.0	42.0
F88-6111	38.0	26.0	34.0	34.0	43.0
F88-8626	40.0	21.0	32.0	35.0	42.0
F88-8662	44.0	29.0	38.0	40.0	41.0
F88-8714	38.0	28.0	36.0	41.0	46.0
F88-8719	42.0	23.0	42.0	40.0	44.0
F88-8731	40.0	29.0	37.0	31.0	48.0
F88-8957	35.0	22.0	34.0	35.0	45.0
F88-9155	42.0	23.0	36.0	38.0	48.0
F88-9401	41.0	31.0	34.0	38.0	47.0
F88-9458	40.0	29.0	38.0	37.0	42.0
F88-9528	40.0	26.0	39.0	36.0	45.0
F89-3846	39.0	23.0	37.0	34.0	47.0
G87-3143	40.0	22.0	30.0	33.0	44.0
G87-3533	36.0	21.0	31.0	30.0	43.0
G87-3539	38.0	19.0	32.0	30.0	45.0
G87-4158	38.0	18.0	31.0	29.0	39.0
G87-4379	34.0	16.0	33.0	32.0	42.0
SC88-491	34.0	25.0	37.0	36.0	48.0
SC88-1039	42.0	22.0	37.0	35.0	46.0
SC88-1082	39.0	22.0	36.0	32.0	42.0
SC88-1177	34.0	21.0	31.0	33.0	42.0
SC88-1206	36.0	16.0	33.0	33.0	42.0
SC88-1523	39.0	18.0	30.0	31.0	43.0
SC88-1552	37.0	14.0	29.0	29.0	40.0
SC88-2537	40.0	17.0	30.0	30.0	43.0
SC88-2645	39.0	16.0	32.0	30.0	40.0
SC88-2848	41.0	17.0	37.0	33.0	44.0
SC88-2909	35.0	20.0	31.0	27.0	45.0

TABLE 70 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1991

STRAIN	JAY, FL	BEAU- MONT, TX	STONE- VILLE, MS (B)
KIRBY	1.0	0.3	0.2
HAGOOD	1.0	0.4	0.2
AU88-1637	1.3	0.3	0.2
AU88-395	1.3	0.3	0.2
AU88-2012	1.0	0.3	0.2
AU88-2076	1.0	0.2	0.2
AU88-2099	1.3	0.3	0.2
F87-1928	1.5	0.3	0.2
F88-6111	1.3	0.2	0.2
F88-8626	1.0	0.2	0.2
F88-8662	1.3	0.2	0.2
F88-8714	1.5	0.3	0.2
F88-8719	1.3	0.3	0.2
F88-8731	1.3	0.3	0.2
F88-8957	1.0	0.4	0.2
F88-9155	1.0	0.2	0.2
F88-9401	1.3	0.4	0.2
F88-9458	1.5	0.3	0.2
F88-9528	1.0	0.2	0.2
F89-3846	1.0	0.3	0.2
G87-3143	1.0	0.3	0.2
G87-3533	1.3	0.4	0.2
G87-3539	1.0	0.4	0.2
G87-4158	1.0	0.2	0.2
G87-4379	1.0	0.3	0.2
SC88-491	1.3	0.3	0.2
SC88-1039	1.0	0.3	0.2
SC88-1082	1.0	0.2	0.2
SC88-1177	1.0	0.4	0.2
SC88-1206	1.0	0.3	0.2
SC88-1523	1.3	0.3	0.2
SC88-1552	1.3	0.3	0.2
SC88-2537	1.3	0.4	0.2
SC88-2645	1.0	0.3	0.2
SC88-2848	1.0	0.2	0.2
SC88-2909	1.3	0.5	0.2