

U. S. REGIONAL SOYBEAN LABORATORY
URBANA, ILLINOIS

THE UNIFORM SOYBEAN TESTS
SOUTHERN STATES

1970

RSLM 247

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
CROPS RESEARCH DIVISION
COOPERATING WITH
STATE AGRICULTURAL EXPERIMENT STATIONS

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INTRODUCTION

The program of the U. S. Regional Soybean Laboratory has been directed toward the development of improved strains of soybeans and the obtaining of fundamental information necessary to the efficient breeding of strains to meet specific needs. In the Southern Region, fundamental studies and breeding programs are conducted at three locations, Stoneville, Mississippi; Raleigh, North Carolina; and Gainesville, Florida. After promising new strains are developed at these breeding centers, or by any other cooperating agency, they are advanced to the preliminary and uniform regional tests, conducted in cooperation with the Southeastern States. This testing program enables the breeder to evaluate new strains under a wide variety of conditions, and permits new strains to be put into production in a minimum amount of time.

Ten uniform test groups have been established to evaluate the better strains developed in the breeding programs. The groups 00 through IV are adapted in the northern part of the United States, and the groups IV-S through VIII are grown in the southern part. Within their area of adaptation, there is a maturity range of 12 to 18 days within each maturity class. The best standard varieties available of each maturity class are used as check varieties with which to compare new strains as to seed yield, chemical composition, maturity, height, lodging, seed quality, and reaction to diseases. For the groups grown in the southern area, the major check varieties are: Kent, Hill, Dare, Hood, Lee 68, Bragg, Hampton, and Hardee. At Stoneville, Miss., where all maturity classes will mature, the approximate maturity dates of these varieties, when planted during the first half of May, are: Kent, September 8; Hill, September 20; Dare, October 1; Hood, October 8; Lee, October 16; Bragg, October 22; Hampton, November 1; and Hardee, November 6.

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

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

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

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STRAIN IDENTIFICATION

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

Co - Coker's Pedigreed Seed Co., Hartsville, South Carolina
D - Delta Branch Exp. Sta. and U. S. Regional Soybean Laboratory
F - Florida Agr. Exp. Sta. and U. S. Regional Soybean Laboratory
Ga - Georgia Agricultural Experiment Station
L - Illinois Agr. Exp. Sta. and U. S. Regional Soybean Laboratory
La - Louisiana Agricultural Experiment Station
Md - Maryland Agr. Exp. Sta. and U. S. Regional Soybean Laboratory
N - North Carolina Agr. Exp. Sta. and U. S. Regional Soybean Laboratory
R - Arkansas Agricultural Experiment Station
S - Missouri Agr. Exp. Sta. and U. S. Regional Soybean Laboratory
UD - Delaware Agricultural Experiment Station
V - Virginia Agricultural Experiment Station

* * * * *

* This annual report of activity of the U. S. Regional Soybean *
* Laboratory, as well as that of the state stations with which *
* the Laboratory cooperates, is a progress report and as such *
* may contain statements which may or may not be verified by *
* subsequent experiments. The fact that any statement has been *
* made herein does not necessarily constitute publication. For *
* this reason, citation to particular statements in the report *
* should not be published unless permission has been granted *
* previously by the Laboratory or the State station concerned. *
* * * * *

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

Location	IV	V	VI	VII	VIII	Soil type	P ₂ O ₅	K ₂ O	pH	Fertilizer	Yield-adapted variety
East Coast											
Queenstown, Md.	1	1				Mattapex silt loam	M	H	6.0	0-160-160	35.7 - A
Linkwood, Md.	1*	1*				Sassafras sandy loam	H	H	6.2	0-45-90	45.2 - D
Poplar Hill, Md.	1	1				Downer sandy loam	VH	M	6.0	40-80-80	37.2 - D
Georgetown, Del.	1*	1*				Norfolk sandy loam	VH	H	6.1	0-45-90	40.4 - E
Warsaw, Va.	1*	1*	1			Sassafras sandy loam	M+	M+	6.3	15-90-90	28.6 - E
Petersburg, Va.	1	1*	1*			Marlboro f. sandy loam	H	M	6.1	0-0-0	36.1 - E
Holland, Va.	1	1	1			Dragston L.F.S.	VH	M+	5.2	0-0-0	54.7 - D
Plymouth, N.C.	1	1*	1*	1		Bladen f. sandy loam	H	M	5.4	0-40-80	50.1 - G
Rocky Mt., N.C.				1		Norfolk sandy loam	H	H	5.9	0-40-80	25.1 - I
Willard, N.C.			1	1*	1	Norfolk sandy loam				0-40-80	49.0 - G
Clayton, N.C.			1	1	1	Norfolk sandy loam	H	H	6.0	0-40-80	34.6 - I
Florence, S.C.			1	1	1	Dunbar f. sandy loam				0-0-0	38.2 - I
Hartsville, S.C.(A)			1	1	1	Norfolk sandy loam				18-54-108	33.5 - J
Hartsville, S.C.(B)			1	1	1	Norfolk sandy loam				18-54-108	40.0 - K
Southeast											
Blackville, S.C.(A)			1*	1	1	Dothan loamy sand	VH	M	6.0	0-30-60	19.1 - J
Blackville, S.C.(B)				1*	1*	Froemantville loamy sand	VH	M	6.0	36-108-108	24.6 - J
Tifton, Ga.	1	1	1	1	1	Norfolk loamy sand	H	M	6.2	18-45-68	50.9 - I
Live Oak, Fla.				1*	1*	Klej fine sand	H	M	6.4	0-50-100	36.3 - J
Gainesville, Fla.				1	1*	Arredonda fine sand	H	M	6.1	0-40-80	36.4 - K
Marianna, Fla.				1	1					0-70-70	26.7 - I
Quincy, Fla.			1	1	1*	Norfolk L.F.S.	H	L	5.2	0-70-70	33.1 - J
Jay, Fla.			1*	1*	1*	Tifton sandy loam				0-112-112	49.8 - I
Fairhope, Ala.			1	1	1	Marlboro F.S.L.	H	H	6.4	16-48-48	41.3 - I
Baton Rouge, La.			1	1	1*	Olivier silt loam	M	L	6.9	0-40-40	36.4 - I
Newton, Miss.			1	1		Prentiss silt loam				6-12-70	24.1 - I
Poplarville, Miss.				1	1						27.5 - I
Upper & Central South											
Orange, Va.	1	1				Davidson sandy loam	M	M	6.5	0-84-84	50.0 - A
Blairsville, Ga.	1	1				Hayesville clay	M	M	6.0	0-70-140	52.4 - A
Trenton, Ill.	1					Harrison silt loam	VH	H	6.2	0-0-0	50.5 - A
Eldorado, Ill.	1					Harco silt loam	H	H	6.4	11-32-11	54.1 - A
Carbondale, Ill.	1					Stoy silt loam				0-110-180	45.9 - A
Princeton, Ky.	1	1				Crider silt loam				0-0-0	46.7 - C
Martin, Tenn.	1	1				Grenada sandy loam	M	H	6.7	0-70-70	50.7 - D
Jackson, Tenn.			1			Memphis silt loam	H	H	6.7	0-40-40	57.7 - E
Belle Mina, Ala.			1	1		Humphrey sandy loam				0-40-40	46.1 - D
Clemson, S.C.				1	1	Cecil sandy clay loam	VH	H	6.0	0-70-70	23.1 - I

Location	IV	V	VI	VII	VIII	Soil type	P ₂ O ₅	K ₂ O	pH	Ferti- lizer ^{1/}	Yield-adapted variety
Upper & central South (cont'd.)											
Experiment, Ga.	1	1	1	1	1	Cecil clay				0-60-100	42.5 - F
Delta											
Evansville, Ind.	1	1				Montgomery silty clay	M	H	6.2	80-80-80	38.6 - A
Portageville, Mo.(A)	1	1*	1*			Tiptonville silt loam	VH	H	5.9	0-50-50	39.6 - D
Portageville, Mo.(B)	1*	1	1			Sharkey clay	VH	VH	5.7	0-50-50	26.0 - G
Keiser, Ark.	1	1*	1*			Sharkey clay	H	H	6.0	0-0-0	39.8 - G
Marianna, Ark.	1	1	1			Calloway silt loam	M	M	6.0	0-0-45	38.3 - G
Stoneville, Miss.(A)	1	1	1*	1*		Bosket f. sandy loam	M	M	6.7	0-0-0	51.9 - D
Stoneville, Miss.(B)	1*	1*	1*	1*	1	Sharkey clay	M	H	6.4	0-0-0	41.6 - G
Rohwer, Ark.				1		Perry clay	M	H	6.6	0-0-0	23.6 - H
St. Joseph, La.	1	1	1	1	1	Commerce sandy loam	VH	M	6.0	0-25-25	35.0 - I
West											
Columbus, Kan.	1										
Mt. Vernon, Mo.	1	1				Huntington silt loam	M	VH	6.6	18-45-60	21.8 - A
Stuttgart, Ark.	1	1	1	1		Crowley silt loam	VL	L	6.2	0-0-0	28.1 - A
Curtis, La.	1	1	1	1	1	Yahola very f. sandy loam				0-60-30	32.7 - G
Bixby, Okla.	1	1	1			Lonoke sandy loam				0-0-0	45.4 - G
Bushland, Texas	1					Pullman silty clay				0-0-0	23.0 - D
Halfway, Texas	1	1	1			Pullman sandy clay	M	VH	8.2	0-0-0	15.2 - A
Lubbock, Texas	1*	1	1			Amarillo loam	L	VH	8.1	0-72-0	50.6 - C
Beaumont, Texas			1	1*	1*	Morrey silt loam	VL	M	6.7	18-72-72	43.1 - C
Crowley, La.			1	1	1	Crowley silt loam	L	M	5.8	0-60-30	29.7 - I
											46.9 - I

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

2/ Varieties: A = Kent; B = Custer; C = Hill; D = Dare; E = York; F = Davis; G = Lee 68; H = Semmes; I = Bragg; J = Hampton; K = Hardee.

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 36 to 40 inches. An attempt was made to follow the best cultural and management practices in conducting these strain comparisons.

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

Planting Rate: All strains were packeted for planting at the rate of 10 seeds per foot.

Yields are taken by harvesting a 16-foot length from the midsection 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: Percent oil and percent protein were determined from representative locations. Percentage composition of the seed is expressed on a moisture-free basis. All chemical analyses are made at Urbana, Illinois.

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

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

- 1 - almost all plants erect
- 2 - either all plants leaning slightly, or a few plants down
- 3 - either all plants leaning moderately, or 25 to 50% of the plants down
- 4 - either all plants leaning considerably, or 50 to 80% of 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, Kent; Group V, Hill; Group VI, Hood; Group VII, Bragg; and Group VIII, Hampton 266A.

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

(1) very good; (2) good; (3) fair; (4) poor; and (5) very poor

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

Disease ratings are given on a scale of 1 to 5 as follows:

A. Foliar:

- | | |
|---|---|
| 1 - immune to highly resistant | 4 - lesions numerous and necrosis surround lesion |
| 2 - lesions small and few in number | 5 - leaves covered with lesions and much necrosis |
| 3 - lesions moderate in number and size | |

B. Root and Stem:

- | | |
|------------------------------|-------------------------------|
| 1 - no plants killed | 4 - 9 to 19% of plants killed |
| 2 - 1 to 3% of plants killed | 5 - over 20% of plants killed |
| 3 - 4 to 8% of plants killed | |

In addition to percentage of plants killed, apparent plant vigor is considered in giving ratings for phytophthora rot.

C. Root knot ratings are based upon degree of galling development on roots.

D. Purple stain ratings are given to seed samples on a scale of 1 to 5 as follows:

- | | |
|-----------------------------|------------------------------|
| 1 - no purple staining | 4 - 9 to 19% purple staining |
| 2 - 1 to 3% purple staining | 5 - over 20% purple staining |
| 3 - 4 to 8% purple staining | |

E. In some cases actual percentages are reported for purple stain development or seed coat mottling.

Statistical analyses: Yield data are analyzed by analysis of variance. Differences necessary to indicate difference between strains (odds 19:1) are reported for each location and each area. Yield data from tests with extremely low yields or an extremely high co-efficient of variability are not included in calculating averages.

UNIFORM GROUP IV-S

1970

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Kent	Lincoln x Ogden	F ₇
2. Delmar	C799 x FC33243	F ₆
3. Custer	Scott type with resistance to C.N. and P.R.	
4. D65-2262	D54-2437 x PI 261,467	F ₅
5. D66-4505	D53-354(2) x D54-2437	F ₇
6. D66-5566	Subline of DA60-13-1 (D49-2491(4) x Hawkeye)	F ₈
7. D67-2896	Hill(2) x PI 171,450	F ₅
8. D67-3118	Hill(2) x PI 171,450	F ₅
9. D67-3143	Hill(2) x PI 171,450	F ₅
10. D67-3269	Hill(2) x PI 171,450	F ₅
11. D67-3297	Hill(2) x PI 171,450	F ₅
12. S63-5328S	Lee x Scott	F ₆

Background of strains used as parents:

C799 is a selection from C143 x Lincoln. C143 is a selection from PI 70218.

FC33243 is a type which has proved to be highly resistant to root knot nematodes in Delaware.

D54-2437 is a selection from N48-1394 x L6-5679 which has a high field type resistance to phytophthora rot. N48-1394 has the same parentage as Hood. L6-5679 is a selection from Lincoln x Richland. D54-2437 was tested in Uniform Group IV, 1957-1961.

PI 261,467 and PI 171,450 are late-flowering strains of Group III maturity. They are considered "summer types" at the 34° latitude level in Japan.

D53-354 was tested in Uniform Group IV for the years 1956-1958. It is a selection from D49-2525 x L6-5679. D49-2525 is a sister strain of Lee. D53-354 has excellent seed quality.

Twenty-eight IV-S nurseries were planted. Results from 27 of these nurseries are summarized in Tables 1 through 7. Table 1 gives a general summary of agronomic qualities, oil and protein content of the seed, and field reaction to disease development. Two and three-year data are also reported for seed yield, oil and protein percentages.

Differences among strains for seed yield were significant at the 5% level of confidence at 20 locations. A combined analysis of variance for seed yield for locations within a production region showed difference among strains to be significant at the 5% level of confidence in the East Coast and Upper and Central South.

Three-year mean seed yields for Delmar and Custer are below that for Kent in each production region. Delmar is superior to Kent in seed holding and in resistance to root knot nematodes. Custer is resistant to phytophthora rot and cyst nematodes. As in previous years, seed of Custer appeared low in protein content.

D65-2262 was the first determinate growth type strain to be included in Group IV-S. D65-2262 is 6 days later than Kent but is superior in seed quality, seed holding, and disease resistance. Seed yield has been above Kent in the Delta and West.

D65-4505 has been grown 3 years. Seed yields average slightly higher than Kent in the East Coast and Delta and equal in the West. Maturity is similar to that of Kent, but D65-4505 is superior in seed quality, seed holding. In addition it is resistant to bacterial pustule and phytophthora rot. D66-5566 has a 2-year average 0.6 bushel below Kent in the East but is superior in the other regions. It is also superior in seed holding and seed quality.

Six strains were grown for the first time. Five of these were selected from Hill(2) x PI 171,450 to give early determinate types with late flowering in order to give greater plant height. All have superior seed quality and seed holding to Kent. As an example of the delay in flowering, D67-3143 averages 1 day later in maturity than Kent, but averaged 10 days later in flowering as an average of Halfway and Stoneville. All are taller than D66-5566. S63-5328S averaged 5 days later than Kent. Seed yield was superior in the Delta.

Table 1. - General summary of performance for the strains in Uniform Group IV-S, 1970

	Kent	Delmar	Custer	D65-2262	D66-4505	D66-5566
Seed Yield - 1970						
East Coast	35.3	31.9-	33.0	32.0	34.7	35.8
Upper & Central South	47.1	42.5-	44.4	42.7-	45.7	48.7
Delta	30.9	31.6	31.0	32.6	32.2	32.8
West	37.0	37.8	34.0	44.6+	38.9	38.4
- 1969-70						
East Coast	37.5	35.2	35.4	34.6	37.7	36.9
Upper & Central South	47.5	44.4	44.4	44.5	46.1	50.1
Delta	32.7	31.7	31.4	35.4	34.3	35.7
West	36.8	36.0	34.4	39.7	36.4	37.9
- 1968-70						
East Coast	38.7	36.7	36.3	36.1	39.2	
Upper & Central South	46.5	42.8	42.6	43.1	44.4	
Delta	31.2	30.5	30.3	34.5	34.7	
West	38.4	37.3	36.0	39.8	38.1	
Oil Content - 1970						
	22.4	23.5+	23.4+	20.8-	21.9-	22.0
- 1969-70	22.4	23.3	23.2	21.0	22.0	22.2
- 1968-70	22.3	23.1	22.9	20.8	22.0	
Protein Content - 1970						
	40.7	39.7-	37.5-	40.6	40.1	41.5
- 1969-70	40.8	39.9	37.6	40.6	40.4	41.4
- 1968-70	40.5	39.4	37.2	40.1	39.7	
Seed size	16.8	15.9	14.6-	14.0-	13.1-	15.3-
Maturity index	9-26	+2	+1	+6	0	+1
Seed quality	3.1	2.8	3.1	1.8	2.2	2.3
Height	35	38	39	31	34	24
Shattering	4.0	2.0	3.0	1.3	1.3	1.0
Bacterial pustule	3.0	4.0	1.0	1.0	1.0	1.0
Phytophthora rot	2.0	2.0	1.0	1.0	1.0	1.0
Seed coat mottling (%) ¹	6	1	7	11	2	20
Flower color	P	W	P	W	P	P
Pubescence color	T	G	G	G	G	T
Pod wall color	B	B	B	T	T	T
Growth type	I	I	I	D	I	D

¹Halfway, Texas.

Table 1. - (continued)

	D67-2896	D67-3118	D67-3143	D67-3269	D67-3297	S63-5328S
Seed Yield - 1970						
East Coast	34.4	30.0-	36.7	32.4	36.4	36.7
Upper & Central South	45.0	42.5-	44.9	44.2	47.3	47.4
Delta	35.3	31.7	30.6	31.7	34.2	33.0
West	40.1	37.4	35.8	40.1	41.9	37.3
- 1969-70						
East Coast						
Upper & Central South						
Delta						
West						
- 1968-70						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1970	20.5-	19.5-	21.6-	20.9-	21.1-	22.6
- 1969-70						
- 1968-70						
Protein Content - 1970	39.3-	41.0	39.8	41.2	39.6-	38.7-
- 1969-70						
- 1968-70						
Seed size	11.7-	11.3-	14.7-	13.8-	13.3-	14.9-
Maturity index	+6	+3	+1	+6	+4	+5
Seed quality	2.1	2.0	2.1	2.0	2.0	2.6
Height	34	33	33	32	31	39
Shattering	1.0	1.0	1.3	1.0	1.0	2.7
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	1.0	1.0	1.0	1.0	1.0	1.0
Seed coat mottling (%) ¹	28	26	21	16	29	0
Flower color	P	P	W	W	W	P
Pubescence color	T	T	T	T	T	G
Pod wall color	T	T	T	T	T	B
Growth type	D	D	D	D	D	I

Table 2. - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1970

Location	Kent	Delmar	Custer	D65- 2262	D66- 4505	D66- 5566	D67- 2896
<u>East Coast</u>							
Queenstown, Md.(A)	35.7	26.8	33.8	28.6	34.2	31.5	27.6
Queenstown, Md.(B)	23.8	22.7	13.2-	24.3	19.5	19.5	27.2
Linkwood, Md.	47.4	45.7	45.2	40.9	45.4	46.0	43.4
Poplar Hill, Md.(A)	31.8	26.1	27.8	27.1	27.9	27.5	33.4
Poplar Hill, Md.(B)	31.9	26.8	33.8	29.9	33.9	36.2	27.5
Georgetown, Del.	35.5	41.5	35.8	33.0	39.4	48.1+	43.4+
Warsaw, Va.	28.3	22.7-	26.9	25.3-	29.5	30.9	25.5-
Plymouth, N.C.	48.1	43.1	47.2	46.9	48.3	46.3	47.4
Tifton, Ga.*	24.5	34.9+	25.3	34.4+	24.3	17.0	34.1+
Mean	35.3	31.9-	33.0	32.0	34.7	35.8	34.4
<u>Upper and Central South</u>							
Orange, Va.	30.0	31.9	28.8	35.4	38.7	37.9	34.6
Blairsville, Ga.	52.4	37.6-	49.8	43.8	46.8	44.8	43.9
Trenton, Ill.	50.5	41.7-	45.8-	46.1-	43.2-	45.1-	44.2-
Eldorado, Ill.	54.1	49.5-	51.1	50.2-	51.2	55.1	52.2
Carbondale, Ill.	45.9	40.4-	43.6	42.2	41.0-	45.0	44.3
Princeton, Ky.	53.4	45.7-	46.8-	42.1-	54.2	47.7-	43.1-
Mean	47.7	41.1-	44.3-	43.3-	45.8	45.9	43.7-
<u>Delta</u>							
Evansville, Ind.	38.6	36.0	40.2	38.4	38.4	37.6	39.8
Portageville, Mo.(A)	22.1	37.7+	33.8+	23.0	28.0	16.4	27.3
Portageville, Mo.(B)	5.4	5.6	3.7-	12.1+	7.0+	5.6	12.7+
Martin, Tenn.	45.8	39.0	41.4	39.1	41.5	47.0	40.1
Keiser, Ark.	24.4	26.2	28.6	33.9+	31.6+	43.6+	39.1+
Marianna, Ark.	39.2	40.4	28.8	36.5	36.9	37.2	41.7
Stoneville, Miss.	40.9	36.4-	40.2	45.3+	41.8	42.2	46.1+
Mean	30.9	31.6	31.0	32.6	32.2	32.8	35.3
<u>West</u>							
Columbus, Kan.	21.8	24.1	21.8	32.8+	28.3+	36.6+	33.5+
Mt. Vernon, Mo.	28.1	27.6	25.9	34.9+	28.8	28.4	32.4+
Bixby, Okla.*	4.8	7.5	6.4	15.0	8.8	3.8	14.6
Halfway, Texas	61.9	59.9	53.7	70.3	59.3	53.4	53.2
Lubbock, Texas	36.0	39.5	34.5	40.6	39.1	35.1	41.2+
Mean	37.0	37.8	34.0	44.6	38.9	38.4	40.1

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

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

*Not included in mean

Table 2. - (continued)

Location	D67- 3118	D67- 3143	D67- 3269	D67- 3297	S63- 5328S	L.S.D. (.05)	C.V.
<u>East Coast</u>							
Queenstown, Md.(A)	31.2	30.3	29.2	38.1	37.2	N.S.	18%
Queenstown, Md.(B)	23.7	29.4	23.3	27.8	21.6	6.2	16%
Linkwood, Md.	39.8	44.1	42.6	46.0	47.5	N.S.	6%
Poplar Hill, Md.(A)	23.5	26.2	29.1	27.5	31.5	9.1	19%
Poplar Hill, Md.(B)	27.6	40.1+	32.2	32.7	39.9	8.1	15%
Georgetown, Del.	25.4-	41.7	31.9	42.9	39.9	7.9	12%
Warsaw, Va.	22.3-	28.0	22.6-	24.5-	26.9	2.7	6%
Plymouth, N.C.	46.3	48.3	48.5	51.6	48.8	N.S.	8%
Tifton, Ga.*	31.2	28.4	36.2+	30.4	35.9+	9.1	18%
Mean	30.0-	36.7	32.4	36.4	36.7	3.4	
<u>Upper and Central South</u>							
Orange, Va.	28.7	34.6	34.5	41.5	36.4	N.S.	17%
Blairsville, Ga.	45.3	48.8	45.9	47.0	44.0	9.8	12%
Trenton, Ill.	40.9-	48.4	42.3-	46.8	45.1	4.2	6%
Eldorado, Ill.	49.1-	51.9	49.0-	52.5	57.4	3.9	4%
Carbondale, Ill.	36.2-	41.5-	44.9	42.1	45.5	4.0	6%
Princeton, Ky.	48.5-	47.1-	44.7-	50.5	48.9-	4.2	5%
Mean	41.4-	45.4	43.6-	46.7	46.2	3.3	
<u>Delta</u>							
Evansville, Ind.	38.2	40.8	36.4	42.0	43.0	N.S.	7%
Portageville, Mo.(A)	21.7	16.5	24.2	24.4	29.0	8.7	20%
Portageville, Mo.(B)	9.9+	8.8+	9.7+	8.8+	5.2	1.6	19%
Martin, Tenn.	38.8	39.9	39.4	45.7	44.7	N.S.	11%
Keiser, Ark.	31.2+	30.9+	34.1+	38.5+	28.6	6.1	11%
Marianna, Ark.	38.2	37.7	34.8	34.3	34.7	N.S.	11%
Stoneville, Miss.	44.2	39.5	43.2	46.0+	46.0+	3.4	6%
Mean	31.7	30.6	31.7	34.2	33.0	N.S.	
<u>West</u>							
Columbus, Kan.	31.3+	27.2+	31.3+	32.0+	26.0	3.8	8%
Mt. Vernon, Mo.	28.0	27.9	28.2	32.1+	27.3	3.0	7%
Bixby, Okla.*	15.0	6.5	11.6	13.5	8.1	5.0	31%
Halfway, Texas	52.8	50.9-	58.7	63.0	59.0	9.8	10%
Lubbock, Texas	37.4	37.4	42.2+	43.1+	37.0	5.2	8%
Mean	37.4	35.8	40.1	41.9	37.3	N.S.	

Table 3. - Chemical composition and seed size for the strains in Uniform Group IV-S, 1970

Location	Kent	Delmar	Custer	D65-2262	D66-4505	D66-5566	D67-2896
<u>Oil Percentage</u>							
Linkwood, Md.	23.5	23.5	23.6	20.9	22.8	22.1	21.9
Warsaw, Va.	21.2	21.4	22.8	21.1	21.4	21.1	19.7
Blairsville, Ga.	22.4	23.6	23.1	20.3	21.1	22.9	20.1
Carbondale, Ill.	22.2	23.5	23.1	20.5	22.0	21.8	21.3
Evansville, Ind.	22.7	22.7	23.0	19.6	21.1	21.5	19.6
Portageville, Mo.(A)	21.6	24.7	23.8	20.9	22.3	21.6	20.0
Stoneville, Miss.(B)	24.5	26.0	25.8	22.8	23.8	24.2	21.8
Halfway, Texas	20.9	22.9	21.9	20.1	20.6	20.9	19.6
Mean	22.4	23.5+	23.4+	20.8-	21.9-	22.0	20.5-
<u>Protein Percentage</u>							
Linkwood, Md.	40.8	40.0	37.0	40.7	40.0	41.5	38.3
Warsaw, Va.	40.9	42.1	38.1	40.0	40.1	42.1	41.2
Blairsville, Ga.	41.8	40.2	38.3	40.7	41.8	42.1	38.7
Carbondale, Ill.	40.3	40.6	38.4	40.4	38.6	40.5	37.6
Evansville, Ind.	41.2	40.5	37.7	41.3	40.7	42.4	39.7
Portageville, Mo.(A)	43.5	40.5	37.7	42.0	40.5	42.5	41.2
Stoneville, Miss.(B)	36.3	34.6	34.2	39.1	37.0	39.3	38.5
Halfway, Texas	40.6	39.4	38.7	40.4	42.3	41.5	39.0
Mean	40.7	39.7-	37.5-	40.6	40.1	41.5	39.3-
<u>Grams per 100 Seeds</u>							
Linkwood, Md.	18.3	17.2	17.3	15.6	15.5	16.5	14.2
Warsaw, Va.	12.2	11.6	11.9	12.1	10.2	11.5	9.7
Blairsville, Ga.	21.0	15.0	16.0	14.0	15.0	16.0	10.0
Carbondale, Ill.	18.5	19.5	16.5	16.5	13.6	18.6	14.1
Evansville, Ind.	16.1	16.7	13.4	14.0	12.3	13.3	11.4
Portageville, Mo.(A)	13.0	13.0	12.0	11.0	10.0	12.0	9.0
Stoneville, Miss.(B)	13.4	13.7	12.5	13.4	11.4	15.3	12.4
Halfway, Texas	22.0	20.3	17.0	15.7	16.7	19.0	12.7
Mean	16.8	15.9	14.6-	14.0-	13.1-	15.3-	11.7-

Table 3. - (continued)

Location						L.S.D.
	D67-3118	D67-3143	D67-3269	D67-3297	S63-5328S	(.05)
<u>Oil Percentage</u>						
Linkwood, Md.	20.1	21.6	22.3	21.6	22.3	
Warsaw, Va.	18.1	21.1	19.7	18.7	21.6	
Blairsville, Ga.	19.1	22.1	20.7	21.8	22.6	
Carbondale, Ill.	20.0	21.0	20.5	21.5	22.9	
Evansville, Ind.	19.2	21.3	19.7	20.4	22.2	
Portageville, Mo.(A)	19.7	21.0	20.7	21.0	23.7	
Stoneville, Miss.(B)	21.2	24.2	22.8	23.8	23.9	
Halfway, Texas	18.3	20.7	20.4	19.9	21.4	
Mean	19.5-	21.6-	20.9-	21.1-	22.6	0.5
<u>Protein Percentage</u>						
Linkwood, Md.	40.3	39.8	39.7	40.0	38.8	
Warsaw, Va.	43.4	40.6	43.1	43.1	40.0	
Blairsville, Ga.	40.5	40.0	40.3	38.6	37.3	
Carbondale, Ill.	40.0	40.2	42.4	39.7	38.7	
Evansville, Ind.	41.5	40.3	42.5	39.7	39.4	
Portageville, Mo.(A)	42.1	41.2	41.1	41.1	39.0	
Stoneville, Miss.(B)	38.9	35.6	39.4	35.1	36.0	
Halfway, Texas	41.1	40.7	41.1	39.5	40.3	
Mean	41.0	39.8	41.2	39.6-	38.7-	1.0
<u>Grams per 100 Seeds</u>						
Linkwood, Md.	13.8	17.1	16.0	16.2	16.1	
Warsaw, Va.	9.1	11.8	11.3	9.9	12.4	
Blairsville, Ga.	11.0	15.0	13.0	13.0	16.0	
Carbondale, Ill.	13.4	17.7	16.6	16.1	17.4	
Evansville, Ind.	10.2	13.6	13.6	13.0	14.0	
Portageville, Mo.(A)	9.0	12.0	11.0	10.0	13.0	
Stoneville, Miss.(B)	11.0	13.1	13.2	13.2	12.4	
Halfway, Texas	13.0	17.0	16.0	15.0	17.7	
Mean	11.3-	14.7-	13.8-	13.3-	14.9-	1.1

Table 4. - Relative maturity data, days earlier (-) or later (+) than Kent, for the strains in Unifrom Group IV-S, 1970

Location	Date planted	Kent matured	Delmar	Custer	D65-2262	D66-4505	D66-5566
<u>East Coast</u>							
Queenstown, Md.(A)	6-1	9-24	+2	-1	+7	-2	-1
Queenstown, Md.(B)	6-24	11-4	+2	+2	+6	+4	+2
Linkwood, Md.	5-28	9-24	+3	+3	+7	-4	-4
Poplar Hill, Md.(A)	6-17	10-8	+3	+3	+5	+3	+4
Poplar Hill, Md.(B)	7-8	10-23	+2	+1	+5	+4	+3
Georgetown, Del.	6-4	9-28	+8	+9	+11	+8	+9
Warsaw, Va.	5-19	9-18	+3	+2	+9	-1	-2
Plymouth, N.C.	5-7	9-15	+3	+3	+10	+10	+5
Tifton, Ga.	5-5	9-1	+6	-4	+8	+2	+1
Mean		9-21	+4	+2	+8	+3	+2
<u>Upper and Central South</u>							
Blairsville, Ga.	5-25	10-3	-3	+2	0	0	-2
Trenton, Ill.	5-24	9-30	+1	+1	+12	-4	+1
Eldorado, Ill.	5-21	9-26	+4	+1	+10	-2	+2
Carbondale, Ill.	5-27	9-30	-1	-4	+8	-8	+1
Princeton, Ky.	5-19	9-24	+1	-1	+7	0	-1
Mean		9-29	0	0	+7	-3	0
<u>Delta</u>							
Evansville, Ind.		10-7	+4	0	+9	-2	-2
Portageville, Mo.(A)	5-13	9-18	+8	0	+10	0	-1
Portageville, Mo.(B)	5-15	9-20	+1	-3	+6	-3	0
Martin, Tenn.	5-29	10-12	+2	-2	-3	+4	-2
Marianna, Ark.	5-19	9-18	+3	0	+4	+2	+5
Stoneville, Miss.	5-11	9-13	+3	+2	+9	0	+5
Mean		9-25	+4	0	+6	0	+1
<u>West</u>							
Columbus, Kan.	5-27	10-7	0	+1	-2	-1	-5
Lubbock, Texas	5-22	10-4	-2	-3	+3	-3	+3
Mean		10-6	-1	-1	0	-2	-1

Table 4. - (continued)

Location	D67- 2896	D67- 3118	D67- 3143	D67- 3269	D67- 3297	S63- 5328S
<u>East Coast</u>						
Queenstown, Md.(A)	+7	+4	-1	+7	+6	+4
Queenstown, Md.(B)	+4	+5	+6	+7	+6	+3
Linkwood, Md.	+14	.0	-1	+11	+1	+12
Poplar Hill, Md.(A)	+6	+7	+6	+6	+6	+4
Poplar Hill, Md.(B)	+5	+2	+2	+2	+3	+5
Georgetown, Del.	+12	+6	+8	+11	+8	+11
Warsaw, Va.	+8	+4	-2	+7	+5	+5
Plymouth, N.C.	+7	+5	+5	+7	+5	+10
Tifton, Ga.	+9	+1	-10	+7	+7	0
Mean	+8	+4	+1	+7	+5	+6
<u>Upper and Central South</u>						
Blairsville, Ga.	+5	+2	-1	+2	+2	+5
Trenton, Ill.	+9	+4	+3	+8	+5	+4
Eldorado, Ill.	+9	+4	+3	+10	+5	+9
Carbondale, Ill.	+6	-1	-3	+7	+1	0
Princeton, Ky.	+7	+2	0	+6	+3	+6
Mean	+7	+2	0	+7	+3	+5
<u>Delta</u>						
Evansville, Ind.	+8	+3	+3	+7	+4	+5
Portageville, Mo.(A)	+6	+5	+8	+7	+4	+10
Portageville, Mo.(B)	+3	-1	-3	+5	+5	+3
Martin, Tenn.	-1	-3	-2	-4	-4	+3
Marianna, Ark.	+3	-2	-1	+3	0	+7
Stoneville, Miss.	+8	+1	-5	+7	+5	+4
Mean	+5	+1	0	+4	+2	+5
<u>West</u>						
Columbus, Kan.	-3	-3	-3	+3	-1	+1
Lubbock, Texas	+5	+1	-1	+2	+5	-2
Mean	-1	-1	-2	+3	+2	0

Table 5. - Plant height for the strains in Uniform Group IV-S, 1970

Location	Kent	Delmar	Custer	D65-2262	D66-4505	D66-5566
<u>East Coast</u>						
Queenstown, Md.(A)	37	38	42	35	34	27
Queenstown, Md.(B)	32	34	32	29	29	28
Linkwood, Md.	39	45	47	37	41	24
Poplar Hill, Md.(A)	32	34	35	33	30	30
Poplar Hill, Md.(B)	33	35	31	29	28	29
Georgetown, Del.	41	40	49	40	42	35
Warsaw, Va.	40	41	46	34	40	25
Plymouth, N.C.	40	46	47	36	42	27
Tifton, Ga.	18	24	25	14	18	8
Mean	35	37	39	32	34	26
<u>Upper and Central South</u>						
Orange, Va.	49	49	52	39	48	32
Blairsville, Ga.	33	34	40	34	33	28
Trenton, Ill.	42	47	50	38	37	24
Eldorado, Ill.	45	49	48	34	44	28
Carbondale, Ill.	28	36	38	32	27	25
Princeton, Ky.	41	44	49	31	41	23
Mean	40	43	46	35	38	27
<u>Delta</u>						
Evansville, Ind.	43	46	46	36	43	32
Portageville, Mo.(A)	25	36	37	20	24	11
Portageville, Mo.(B)	17	19	17	20	17	9
Martin, Tenn.	34	31	40	30	32	25
Keiser, Ark.	34	37	39	28	33	22
Marianna, Ark.	40	41	38	28	36	22
Stoneville, Miss.	38	43	41	30	36	21
Mean	33	36	37	27	32	20
<u>West</u>						
Columbus, Kan.	34	29	23	28	25	16
Mt. Vernon, Mo.	32	38	46	32	32	30
Halfway, Texas	29	30	31	28	29	16
Lubbock, Texas	34	37	37	29	34	15
Mean	32	34	34	29	30	19

Table 5. - (continued)

Location	D67-2896	D67-3118	D67-3143	D67-3269	D67-3297	S63-5328S
<u>East Coast</u>						
Queenstown, Md.(A)	42	41	41	39	35	42
Queenstown, Md.(B)	35	35	36	37	37	34
Linkwood, Md.	39	38	39	33	34	44
Poplar Hill, Md.(A)	41	36	38	37	38	34
Poplar Hill, Md.(B)	34	32	35	34	35	36
Georgetown, Del.	43	40	44	41	37	50
Warsaw, Va.	38	35	35	33	33	46
Plymouth, N.C.	39	38	39	36	37	47
Tifton, Ga.	18	18	16	19	15	26
Mean	37	35	36	35	33	40
<u>Upper and Central South</u>						
Orange, Va.	44	44	44	41	40	50
Blairsville, Ga.	35	38	37	33	33	37
Trenton, Ill.	39	40	40	39	34	47
Eldorado, Ill.	36	36	36	32	35	50
Carbondale, Ill.	35	33	34	33	33	36
Princeton, Ky.	34	33	36	34	31	45
Mean	37	37	38	35	34	44
<u>Delta</u>						
Evansville, Ind.	43	41	41	38	37	47
Portageville, Mo.(A)	20	17	18	16	18	27
Portageville, Mo.(B)	22	18	18	19	15	18
Martin, Tenn.	29	27	26	33	26	39
Keiser, Ark.	29	32	33	31	30	33
Marianna, Ark.	31	31	30	30	30	38
Stoneville, Miss.	35	35	33	32	30	41
Mean	30	29	28	28	28	35
<u>West</u>						
Columbus, Kan.	32	30	23	29	24	26
Mt. Vernon, Mo.	41	36	41	39	35	47
Halfway, Texas	27	29	27	28	27	31
Lubbock, Texas	26	31	22	21	17	36
Mean	32	32	28	29	26	35

Table 6. - Lodging scores for the strains in Uniform Group IV-S, 1970

Location	Kent	Delmar	Custer	D65-2262	D66-4505	D66-5566
<u>East Coast</u>						
Queenstown, Md.(A)	1.0	1.0	1.5	1.7	1.0	1.2
Queenstown, Md.(B)	1.5	1.5	2.5	3.0	2.0	1.5
Linkwood, Md.	1.2	1.0	1.5	1.7	1.0	1.0
Poplar Hill, Md.(A)	1.0	1.0	1.0	3.0	1.0	1.7
Poplar Hill, Md.(B)	1.0	1.0	2.0	2.5	1.5	1.5
Georgetown, Del.	1.5	1.8	2.8	4.5	1.7	3.7
Warsaw, Va.	1.4	1.4	2.4	3.4	1.1	1.0
Plymouth, N.C.	2.7	2.3	3.0	3.7	3.0	2.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Upper and Central South</u>						
Orange, Va.	1.5	1.5	3.0	4.3	1.2	1.7
Blairsville, Ga.	2.2	2.0	2.3	3.2	1.5	2.0
Trenton, Ill.	1.7	1.6	1.8	2.5	1.3	1.5
Eldorado, Ill.	1.9	2.2	3.7	4.3	1.6	3.0
Carbondale, Ill.	1.0	1.0	2.0	3.0	1.0	2.0
Princeton, Ky.	1.0	1.0	2.3	2.7	1.0	1.0
<u>Delta</u>						
Evansville, Ind.	1.5	1.5	1.8	2.7	1.7	2.0
Portageville, Mo.(A)	1.5	2.7	3.7	3.3	1.8	1.0
Portageville, Mo.(B)	1.0	1.2	1.2	1.7	1.2	1.0
Martin, Tenn.	3.0	2.0	3.0	4.0	1.0	3.0
Keiser, Ark.	1.0	1.0	1.3	1.7	1.0	1.0
Marianna, Ark.	3.3	2.3	2.7	2.7	2.3	1.0
Stoneville, Miss.	2.3	2.3	3.0	3.0	2.0	2.0
<u>West</u>						
Columbus, Kan.	1.4	1.2	1.3	1.6	1.1	1.1
Mt. Vernon, Mo.	1.0	1.6	2.2	3.8	1.0	2.3
Halfway, Texas	1.0	1.0	1.0	1.0	1.0	1.0
Lubbock, Texas	1.5	1.0	1.5	2.0	1.0	1.0

Table 6. - (continued)

Location	D67-2896	D67-3118	D67-3143	D67-3269	D67-3297	S63-5328S
<u>East Coast</u>						
Queenstown, Md.(A)	1.7	1.8	1.5	2.2	1.3	1.2
Queenstown, Md.(B)	2.5	2.5	2.5	3.0	2.5	1.5
Linkwood, Md.	1.5	1.5	1.5	1.7	1.3	1.5
Poplar Hill, Md.(A)	2.0	1.7	1.7	2.3	2.7	1.0
Poplar Hill, Md.(B)	1.0	2.0	2.5	2.0	2.5	2.0
Georgetown, Del.	4.2	4.2	4.0	4.5	3.5	2.3
Warsaw, Va.	1.7	1.8	2.2	2.5	1.9	2.1
Plymouth, N.C.	3.0	3.0	3.0	3.0	2.0	3.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Upper and Central South</u>						
Orange, Va.	3.7	3.2	3.3	4.2	3.2	1.5
Blairsville, Ga.	2.8	3.0	2.7	3.5	2.3	1.7
Trenton, Ill.	2.6	2.3	2.2	2.9	2.0	1.4
Eldorado, Ill.	4.3	4.6	4.2	4.8	4.1	2.6
Carbondale, Ill.	2.0	3.0	2.0	2.0	2.0	2.0
Princeton, Ky.	1.7	1.3	2.0	1.3	1.3	1.7
<u>Delta</u>						
Evansville, Ind.	3.0	2.3	2.2	3.0	2.0	1.8
Portageville, Mo.(A)	1.7	1.8	1.3	1.7	1.5	2.2
Portageville, Mo.(B)	1.5	1.2	1.2	1.3	1.3	1.2
Martin, Tenn.	1.0	3.0	3.0	3.0	2.0	2.0
Keiser, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, Ark.	3.0	2.7	3.3	3.3	2.0	2.7
Stoneville, Miss.	3.0	2.0	3.0	3.0	2.3	3.0
<u>West</u>						
Columbus, Kan.	1.2	1.2	1.3	1.2	1.1	1.3
Mt. Vernon, Mo.	3.4	3.4	3.8	3.4	2.9	2.5
Halfway, Texas	1.0	1.0	1.0	1.3	1.0	1.0
Lubbock, Texas	1.5	1.0	1.0	1.0	1.0	1.0

Table 7. - Seed quality scores for the strains in Uniform Group IV-S, 1970

Location	Kent	Delmar	Custer	D65-2262	D66-4505	D66-5566
<u>East Coast</u>						
Queenstown, Md.(A)	3.0	3.0	3.0	2.0	2.0	3.0
Queenstown, Md.(B)	3.0	2.3	4.0	1.0	2.3	1.7
Linkwood, Md.	3.0	3.0	3.0	2.0	2.0	2.0
Poplar Hill, Md.(A)	2.0	2.3	3.0	1.3	1.3	1.8
Poplar Hill, Md.(B)	1.3	1.7	1.3	1.7	1.3	1.0
Georgetown, Del.	2.3	2.2	2.3	1.2	1.5	1.9
Warsaw, Va.	2.3	2.2	2.3	1.2	1.5	1.9
Plymouth, N.C.	3.0	2.5	2.5	2.0	2.0	2.0
Tifton, Ga.	4.0	3.5	4.0	2.0	3.5	4.0
<u>Upper and Central South</u>						
Orange, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Blairsville, Ga.	3.2	2.7	3.2	2.2	2.5	2.7
Trenton, Ill.	2.8	2.6	2.8	2.0	2.1	2.1
Eldorado, Ill.	2.8	2.4	3.1	1.8	1.7	1.5
Carbondale, Ill.	5.0	3.0	4.0	1.0	1.0	2.0
Princeton, Ky.	2.7	2.0	3.0	1.7	1.3	1.0
<u>Delta</u>						
Evansville, Ind.	4.0	3.0	4.0	2.0	3.0	3.0
Portageville, Mo.(A)	3.0	3.5	2.0	2.0	1.8	1.7
Portageville, Mo.(B)	5.0	5.0	4.0	3.3	5.0	4.0
Keiser, Ark.	4.7	4.2	4.5	2.5	3.3	2.5
Marianna, Ark.	4.2	4.0	5.0	2.5	3.8	3.3
Stoneville, Miss.	3.0	3.0	3.0	2.0	2.0	2.0
<u>West</u>						
Columbus, Kan.	2.3	2.0	2.0	1.4	2.1	2.0
Mt. Vernon, Mo.	4.0	2.5	4.5	1.7	2.5	3.5
Lubbock, Texas	3.0	3.0	2.0	2.0	2.0	2.0

Table 7. - (continued)

Location	D67-2896	D67-3118	D67-3143	D67-3269	D67-3297	S63-5328S
<u>East Coast</u>						
Queenstown, Md.(A)	3.0	3.0	3.0	3.0	3.0	3.0
Queenstown, Md.(B)	1.0	1.7	2.0	2.3	1.7	2.3
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Poplar Hill, Md.(A)	1.2	1.0	1.7	1.7	1.3	1.8
Poplar Hill, Md.(B)	1.0	1.0	1.3	1.0	1.0	1.0
Georgetown, Del.	1.5	1.5	1.4	1.5	1.6	1.7
Warsaw, Va.	1.5	1.5	1.4	1.5	1.6	1.7
Plymouth, N.C.	2.0	1.5	2.0	1.5	1.5	2.0
Tifton, Ga.	3.0	2.0	3.5	3.5	2.0	3.0
<u>Upper and Central South</u>						
Orange, Va.	1.0	1.0	1.0	1.0	3.0	1.0
Blairsville, Ga.	2.7	2.5	2.7	2.2	2.5	3.0
Trenton, Ill.	1.9	1.8	1.9	1.7	2.0	2.1
Eldorado, Ill.	1.8	1.6	1.7	1.6	1.7	2.1
Carbondale, Ill.	2.0	1.0	1.0	1.0	1.0	3.0
Princeton, Ky.	1.3	1.0	1.0	1.0	1.0	2.0
<u>Delta</u>						
Evansville, Ind.	2.5	3.0	2.0	2.0	2.0	3.0
Portageville, Mo.(A)	2.2	1.8	1.3	1.7	1.5	4.0
Portageville, Mo.(B)	5.0	5.0	4.8	3.7	4.0	5.0
Keiser, Ark.	2.8	2.0	3.0	2.5	2.8	3.8
Marianna, Ark.	2.7	2.7	3.2	3.2	3.2	3.8
Stoneville, Miss.	2.0	2.0	2.0	2.0	2.0	2.3
<u>West</u>						
Columbus, Kan.	1.9	1.4	1.8	1.5	1.4	1.9
Mt. Vernon, Mo.	1.8	1.8	2.1	1.8	2.1	3.5
Lubbock, Texas	2.0	2.0	1.0	1.0	2.0	2.0

PRELIMINARY GROUP IV-S

1970

Six Preliminary Group IV-S nurseries, including 34 experimental strains along with Kent and Custer, were grown. The parentage of these strains is reported in Table 8. Performance data are summarized in Tables 9 through 14.

Differences among strains for seed yield were significant at all locations. Portageville data were not included in the combined analysis of variance for seed yield, because of the high co-efficient of variation. The location x strain interaction was high and differences among strains were not significant at the 5% level of confidence. Twenty-one strains ranked above Kent in seed yield.

Strains differed in seed quality, seed holding, and reaction to bacterial pustule and phytophthora rot. L66L-310, the highest yielding strain, showed little advantage over Kent for seed quality but was superior in seed holding. Md66-1058, another of the better yielding strains, was weak in seed quality but held its seed well. D67-2908 is the earliest maturing of the determinate types. Although it matures earlier than Kent, it flowers 14 days later than Kent at Stoneville.

Table 8. - Parentage of the strains in Preliminary Group IV-S, 1970

Variety or strain	Parentage	Generation composited
1. Kent		
2. Custer		
3. D67-2908	Hill(2) x PI 171,450	F ₅
4. D67-2984	Hill(2) x PI 171,450	F ₅
5. D67-3003	Hill(2) x PI 171,450	F ₅
6. D67-3032	Hill(2) x PI 171,450	F ₅
7. D67-3208	Hill(2) x PI 171,450	F ₅
8. D67-3337	Hill(2) x PI 171,450	F ₅
9. D67-3344	Hill(2) x PI 171,450	F ₅
10. D68-3150	Hill x Sioux (D62-6289)	F ₈
11. D68-3172	D62-6289 x D62-6225	F ₅
12. D68-3176	D62-6289 x D62-6225	F ₅
13. D68-3205	D62-6289 x D62-6225	F ₅
14. D68-3217	D62-6289 x D62-6225	F ₅
15. D68-3271	Hill x Sioux (D62-6225)	F ₈
16. D68-3275	Hill x Sioux (D62-6252)	F ₈
17. D68-3347	D62-6202 x D62-6252	F ₅
18. D68-4449	DA60-13(2) x PI 171,450	F ₅
19. D68-4466	DA60-13(2) x PI 171,450	F ₅
20. L66L-310	Clark 63 x L57-9819	F ₆
21. L66L-333	Clark 63 x L57-9819	F ₆
22. Md62-2138-2	Sel. from intermated homozygous lines	
23. Md62-2939	Sel. from intermated homozygous lines	
24. Md62-3505	Sel. from intermated homozygous lines	
25. Md65-3806	Sel. from intermated higher protein lines	
26. Md66-1026	First cycle sel. from intermated population grown in bulk	
27. Md66-1049	First cycle sel. from intermated population grown in bulk	
28. Md66-1058	First cycle sel. from intermated population grown in bulk	
29. Md66-1155	First cycle sel. from intermated population grown in bulk	
30. Md66-1207	Second cycle sel. intermated population grown in bulk	
31. Md66-1219	Second cycle sel. intermated population grown in bulk	
32. Md66-1311	Second cycle sel. intermated population grown in bulk	
33. Md66-1312	Second cycle sel. intermated population grown in bulk	
34. S65-5696	Scott(4) x FC33243	F ₅
35. S66-251	Scott type, resistant to mildew, P.R. and R.K.	F ₅
36. S66-395	Scott(3) x FC33243	F ₅

Table 9. - General summary of performance for the strains grown in Preliminary Group IV-S, 1970

Strain	Seed yield	Maturity index	Ht.	Percent		Seed quality	Seed holding	B.P.	P.R.	% moldy seed ^{1/}
				Oil	Protein					
Kent	33.9	9-22	34	23.1	39.5	3.1	4.0	3.0	2.5	18
Custer	32.5	+3	40	24.0	36.4	3.1	4.2	1.0	1.0	23
D67-2908	35.7	-3	24	21.4-	38.1	2.0	1.3	1.0	1.0	4
D67-2984	35.0	-1	30	21.4-	40.5	2.0	2.0	1.0	1.0	11
D67-3003	35.8	+4	29	21.4-	39.5	1.7	1.8	1.0	1.0	3
D67-3032	34.2	+1	28	22.5	40.8	2.1	1.4	1.0	1.0	8
D67-3208	33.5	+6	29	20.6-	39.3	1.8	1.3	1.0	1.0	2
D67-3337	36.2	+9	36	21.8	38.7	2.1	1.7	1.0	1.0	6
D67-3344	34.1	+6	36	20.9-	39.9	2.3	1.7	1.0	1.0	13
D68-3150	35.0	+6	25	18.8-	43.0	1.9	1.3	1.0	1.0	3
D68-3172	34.1	+3	32	21.9	38.3	2.0	1.3	1.0	1.0	17
D68-3176	30.4	+4	33	19.1-	40.9	2.4	1.6	1.0	1.0	19
D68-3205	31.6	+7	32	18.0-	45.2+	2.4	1.7	1.0	1.0	7
D68-3217	32.9	+8	32	17.6-	44.6+	2.3	1.3	1.0	1.0	6
D68-3271	31.8	+2	27	18.8-	43.9+	2.3	1.0	1.0	1.0	9
D68-3275	28.7	-3	32	19.1-	40.9	2.5	2.8	1.0	1.5	15
D68-3347	30.3	+3	34	18.8-	41.5	2.3	1.7	1.0	1.0	6
D68-4449	34.7	+3	25	22.0	41.1	2.1	2.7	1.0	1.0	10
D68-4466	37.1	+6	31	20.9-	42.6	2.1	1.6	1.0	1.0	10
L66L-310	39.3	0	41	21.5	41.2	2.8	1.6	1.0	1.0	24
L66L-333	33.8	-4	36	23.0	38.9	2.4	5.0	1.0	1.5	6
Md62-2138-2	32.5	0	34	23.1	41.0	3.0	2.5	3.5	2.0	20
Md62-2939	35.1	+3	36	24.4	40.4	2.5	4.0	3.0	2.0	7
Md62-3505	37.3	+5	36	24.8+	39.4	2.5	3.2	3.0	1.5	4
Md65-3806	31.5	-4	40	22.5	39.9	2.5	3.5	3.0	2.0	15
Md66-1026	33.5	0	39	21.4-	41.8	2.2	2.1	2.5	2.0	11
Md66-1049	34.7	+1	38	23.4	39.8	3.0	1.7	2.5	1.5	10
Md66-1058	38.2	0	33	23.6	39.6	2.6	1.3	2.0	1.5	24
Md66-1155	36.5	+2	36	23.2	39.0	2.8	4.0	3.0	2.0	12
Md66-1207	33.9	+3	39	21.9	40.9	2.9	3.5	3.0	2.7	24
Md66-1219	34.6	+3	40	22.1	41.1	2.7	3.7	3.0	2.5	35
Md66-1311	35.7	+6	41	23.7	40.1	2.5	1.2	3.0	1.5	9
Md66-1312	34.0	+8	44	22.5	39.1	2.5	1.5	3.0	2.0	11
S65-5696	30.4	+3	35	22.8	37.9	2.9	4.5	1.0	2.0	18
S66-251	35.1	+9	39	22.2	39.7	2.9	3.4	1.0	1.5	8
S66-395	36.0	+8	39	23.4	36.6	2.8	3.8	1.0	1.5	7
L.S.D. (.05)	N.S.			1.7	3.8					
L.S.D. (.01)	N.S.			2.2	5.0					

^{1/} Georgetown, Delaware

Table 10. - Seed yield, in bushels per acre, for the strains in Preliminary Group IV-S, 1970

Strain	George- town, Del.	Link- wood, Md.	Warsaw, Va.	Portage- ville,* Mo.	Stone- ville, Miss.(B)	Lubbock, Texas
Kent	38.0	45.1	25.8	11.4	29.9	30.8
Custer	33.8	42.8	24.4	23.2+	36.2	25.4
D57-2908	43.9+	41.5	29.3	11.2	31.3	32.2
D67-2984	33.0	42.7	26.4	15.5	38.5	34.4
D67-3003	39.9	40.0	23.8	15.2	38.5	36.9
D67-3032	40.8	37.5-	27.1	14.0	29.9	35.5
D67-3208	35.0	40.8	21.6	15.9	23.4	41.9+
D67-3337	28.5-	45.3	22.3	15.6	40.1+	38.8+
D67-3344	34.2	39.4-	20.2	14.6	34.5	42.3+
D68-3150	36.2	37.2-	24.7	10.4	41.2	35.8
D68-3172	36.7	39.4-	22.4	22.3+	34.2	38.0
D68-3176	30.5-	37.3-	20.0	10.7	29.9	34.1
D68-3205	31.3-	37.3-	19.5	17.9	36.0	33.9
D68-3217	31.7-	37.5-	21.0	16.4	38.7	35.6
D68-3271	30.8-	38.1-	21.3	16.3	36.8	32.2
D68-3275	31.3-	38.8-	21.6	10.8	25.6	26.4
D68-3347	30.3-	41.1	17.3-	11.0	31.3	31.5
D68-4449	34.6	39.8	26.9	12.7	36.8	35.5
D68-4466	37.1	47.3	24.3	8.0	38.1	38.8+
L66L-310	39.4	43.5	29.1	8.9	48.5+	36.1
L66L-333	47.8+	46.5	30.4	15.9	21.8	23.0-
Md62-2138-2	26.6-	41.4	27.7	17.8	30.1	36.8
Md62-2939	35.0	41.9	26.7	13.5	35.6	36.5
Md62-3505	38.2	47.8	21.9	12.3	40.5	38.3
Md65-3806	39.1	42.4	24.7	18.0	24.9	26.2
Md66-1026	44.6+	38.9	21.3	10.8	23.0	39.7+
Md66-1049	43.1	43.9	22.4	8.8	24.7	39.2+
Md66-1058	40.8	50.0	28.6	15.1	34.1	37.6
Md66-1155	40.0	46.3	30.1	12.3	35.4	30.9
Md66-1207	31.7-	47.9	24.8	10.9	29.8	35.5
Md66-1219	30.3-	45.6	30.7	15.5	35.9	30.7
Md66-1311	37.6	45.8	23.4	12.1	35.6	36.3
Md66-1312	33.4	43.8	20.6	16.4	34.4	37.7
S65-5696	34.3	44.5	24.9	15.2	26.8	21.6-
S66-251	36.6	40.5	23.5	9.3	40.0	35.6
S66-395	39.9	44.8	23.1	9.0	32.3	40.1
L.S.D. (.05)	5.6	5.4	7.1	7.3	11.6	7.6
C.V.	9%	6%	14%	26%	17%	11%

*Not included in mean

Table 11. - Oil percentages for the strains in Preliminary Group IV-S, 1970

Strain	Linkwood, Md.	Warsaw, Va.	Stoneville, Miss.(B)
Kent	23.3	21.8	24.2
Custer	23.8	22.1	26.1
D67-2908	21.4	19.6	23.1
D67-2984	21.1	19.9	23.1
D67-3003	21.2	19.9	23.1
D67-3032	22.4	20.9	24.2
D67-3208	19.8	18.9	23.1
D67-3337	22.1	21.2	22.2
D67-3344	21.1	18.9	22.8
D68-3150	19.5	16.7	20.1
D68-3172	22.4	19.6	23.8
D68-3176	19.0	15.8	22.6
D68-3205	18.7	14.5	20.9
D68-3217	18.7	15.3	18.9
D68-3271	18.7	15.5	22.3
D68-3275	18.3	18.1	21.0
D68-3347	18.7	16.5	21.3
D68-4449	21.6	21.6	22.8
D68-4466	19.0	20.1	23.5
L66L-310	22.4	22.1	20.0
L66L-333	22.8	22.1	24.2
Md62-2138-2	22.8	22.1	24.5
Md62-2939	24.2	22.9	26.0
Md62-3505	25.2	22.1	27.1
Md65-3806	22.4	21.1	24.0
Md66-1026	21.9	18.4	23.8
Md66-1049	22.3	21.9	26.0
Md66-1058	23.8	21.1	26.0
Md66-1155	22.9	22.6	24.0
Md66-1207	22.8	19.1	23.7
Md66-1219	22.1	20.7	23.5
Md66-1311	23.8	22.6	24.7
Md66-1312	23.1	21.1	23.3
S65-5696	21.6	22.6	24.3
S66-251	22.1	21.3	23.3
S66-395	22.9	21.3	26.0

Table 12. - Protein percentages for the strains in Preliminary Group IV-S, 1970

Strain	Linkwood, Md.	Warsaw, Va.	Stoneville, Miss.(B)
Kent	40.7	40.8	37.1
Custer	37.4	38.9	32.8
D67-2908	40.6	38.2	35.5
D67-2984	41.1	42.0	38.3
D67-3003	40.6	42.1	35.7
D67-3032	41.4	42.7	38.3
D67-3208	40.0	42.5	35.3
D67-3337	39.0	39.1	38.1
D67-3344	40.0	43.8	36.0
D68-3150	43.1	44.5	41.4
D68-3172	38.0	42.4	34.6
D68-3176	42.3	46.2	34.1
D68-3205	44.8	49.6	41.2
D68-3217	44.4	47.3	42.2
D68-3271	43.6	50.2	38.0
D68-3275	44.5	40.1	38.2
D68-3347	43.6	44.3	36.5
D68-4449	42.6	42.3	38.3
D68-4466	44.4	42.3	41.1
L66L-310	41.8	40.5	41.3
L66L-333	39.5	40.5	36.7
Md62-2138-2	42.0	41.2	39.7
Md62-2939	40.8	40.6	39.7
Md62-3505	38.4	42.0	37.8
Md65-3806	41.1	42.2	36.3
Md66-1026	42.0	44.7	38.7
Md66-1049	39.7	43.1	36.6
Md66-1058	39.9	42.3	36.5
Md66-1155	40.5	40.6	35.8
Md66-1207	41.0	43.1	38.6
Md66-1219	41.7	42.6	38.9
Md66-1311	40.3	40.6	39.4
Md66-1312	38.6	41.0	37.6
S65-5696	37.8	39.1	36.9
S66-251	39.2	41.6	38.3
S66-395	38.0	39.8	31.9

Table 13. - Plant height for the strains in Preliminary Group IV-S, 1970

Strain	George- town, Del.	Link- wood, Md.	Warsaw, Va.	Portage- ville, Mo.	Stone- ville, Miss.(B)	Lubbock, Texas
Kent	42	40	39	18	36	29
Custer	45	49	46	24	42	35
D67-2908	37	29	28	15	21	16
D67-2984	41	33	36	19	30	20
D67-3003	37	32	34	18	29	24
D67-3032	39	29	34	19	26	21
D67-3208	36	35	35	17	27	23
D67-3337	45	40	37	27	35	34
D67-3344	44	44	38	19	37	34
D68-3150	34	27	26	16	24	23
D68-3172	41	36	34	26	31	23
D68-3176	43	37	36	21	32	30
D68-3205	39	37	37	24	31	24
D68-3217	42	33	36	23	33	25
D68-3271	37	33	29	17	29	17
D68-3275	40	36	36	21	31	28
D68-3347	43	40	39	22	29	29
D68-4449	38	24	26	14	30	19
D68-4466	37	37	36	22	32	21
L66L-310	44	45	46	28	47	38
L66L-333	44	41	42	22	34	31
Md62-2138-2	42	37	36	19	37	30
Md62-2939	43	44	41	18	39	31
Md62-3505	42	39	40	21	40	33
Md62-3806	50	42	46	19	47	35
Md66-1026	45	46	44	23	37	36
Md66-1049	47	45	44	21	38	34
Md66-1058	43	37	36	19	33	27
Md66-1155	40	37	44	20	40	34
Md66-1207	47	47	44	22	42	32
Md66-1219	51	45	43	26	43	31
Md66-1311	47	47	44	24	46	40
Md66-1312	50	46	48	29	48	45
S65-5696	44	40	42	23	31	30
S66-251	49	44	44	23	38	34
S66-395	47	45	45	20	41	38

Table 14. - Seed quality scores for the strains in Preliminary Group IV-S, 1970

Strain	George- town, Del.	Link- wood, Md.	Warsaw, Va.	Portage- ville, Mo.	Stone- ville, Miss.(B)	Lubbock, Texas
Kent	3.5	3.0	2.3	4.8	3.5	3.0
Custer	3.5	3.0	2.2	2.1	3.0	4.0
D67-2908	2.8	2.0	1.4	4.8	2.0	2.0
D67-2984	3.0	2.5	1.5	1.5	2.0	1.0
D67-3003	2.0	2.0	1.8	2.5	2.0	1.0
D67-3032	3.0	2.0	1.5	2.3	2.0	2.0
D67-3208	2.0	2.0	1.2	2.0	2.0	2.0
D67-3337	3.3	2.0	1.3	3.5	2.0	2.0
D67-3344	2.8	3.0	1.5	2.3	2.0	2.0
D68-3150	2.3	3.0	1.4	2.0	2.0	1.0
D68-3172	2.5	3.0	1.4	1.8	2.0	1.0
D68-3176	4.0	3.0	1.7	2.3	2.5	1.0
D68-3205	2.8	3.0	1.7	2.3	2.5	2.0
D68-3217	3.0	3.0	1.7	2.3	2.0	2.0
D68-3271	2.8	3.0	1.8	2.5	2.0	2.0
D68-3275	3.5	3.0	1.5	3.3	2.5	2.0
D68-3347	3.0	3.0	1.6	3.3	3.0	1.0
D68-4449	2.5	2.0	1.8	2.3	2.0	2.0
D68-4466	2.8	2.0	1.6	3.5	2.0	2.0
L66L-310	4.0	2.0	2.0	4.8	2.0	4.0
L66L-333	2.5	2.0	1.8	2.5	3.5	2.0
Md62-2138-2	3.3	3.0	1.8	3.8	3.0	4.0
Md62-2939	2.5	3.0	1.5	2.8	2.5	3.0
Md62-3505	3.0	3.0	1.7	4.0	2.0	3.0
Md62-3806	2.8	3.0	1.8	3.3	3.0	2.0
Md66-1026	2.5	2.0	1.5	2.8	4.0	1.0
Md66-1049	3.3	3.0	1.9	3.5	4.0	3.0
Md66-1058	4.0	3.0	1.7	2.5	2.5	2.0
Md66-1155	2.5	3.0	2.3	4.3	3.0	3.0
Md66-1207	3.8	3.0	1.5	4.8	3.0	3.0
Md66-1219	3.5	3.0	2.0	3.8	2.0	3.0
Md66-1311	2.5	3.0	1.6	2.8	2.5	3.0
Md66-1312	2.5	3.0	1.1	4.3	3.0	3.0
S65-5696	3.3	3.0	2.0	2.8	3.0	3.0
S66-251	2.8	3.0	1.8	3.5	3.0	4.0
S66-395	2.8	3.0	2.0	3.8	3.0	3.0

UNIFORM GROUP V

1970

	<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1.	Hill	D632-15 x D49-2525	F5
2.	Dare	Hill x D52-810	F5
3.	York	Dorman x Hood	F7
4.	D64-3253	D49-2491(5) x Hawkeye	F4
5.	R65-12	(R64-168 x Hill) x (Lee x Dortchsoy 110)	F7
6.	V66-12	D56-1192 x Dorman	F8
7.	D68-128	Dyer x Bragg	F5
8.	Md64-338	Sel. from bulk population	
9.	Md64-429	Sel. from bulk population	
10.	N67-3831	Dare x N60-5234	F4
11.	R68-105	Lee recurrent parent; resistant C.N. and P.R.	
12.	V66-180	Lee x S5-7075	F6

Background of strains used as parents:

D632-15 is a selection from Dunfield x Haberlandt, which was included in the Group V nursery for the years 1950 through 1953.

D49-2525 and D49-2491 are sister strains of Lee.

D52-810 is a selection from Roanoke x Ogden of Ogden type and maturity with yellow seed. It is a selection from N48-1101 which was included in the Uniform Group VI nurseries for the years 1951 through 1953.

R54-168 is a sister selection of Davis from the cross D49-2573 x N45-1497.

Dortchsoy 110 is a short, lodging-resistant strain selected from Ogden x Wabash.

D56-1192 is a selection from Perry x Lee.

N60-5234 is a selection from D55-4110 x N56-4071. D55-4110 is a selection from Ogden x CNS. N56-4071 is a selection from N46-1703(Ogden x Volstate) x D49-2525.

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

Thirty-two Uniform Group V nurseries were planted. Results from 31 nurseries are summarized in Tables 15 through 21, with Table 15 giving a general summary of agronomic qualities, chemical composition of seed, and field reaction to several diseases. Two and three-year data are reported for seed yield by production regions and for oil and protein content of the seed.

Seed yield differences among strains were significant at the 5% level of confidence at 25 of the locations. The combined analysis of variance for mean seed yield by production regions showed differences to be significant at the 5% level in the Upper and Central and Delta regions.

Dare and York have higher 3-year mean seed yields in each production region than Hill, but both are 8 to 10 days later in maturity than Hill. York has a slight seed yield advantage over Dare in each region, but is somewhat more susceptible to injury from phytophthora rot and is more susceptible to root knot injury. York appears to have a high level of resistance to soybean mosaic virus. It has shown no leaf symptoms and has been free of any expression of mottling at Halfway, Texas, in each of the past 4 years where soybean mosaic development has been heavy.

D64-3253, which is basically D49-2491 converted to earlier maturity, is the only strain which has been grown 3 years. Seed yield is very similar to that of York in all areas except the West. Perhaps the higher level of resistance of York to soybean mosaic virus contributes to this difference. D64-3253 is superior in seed holding to York, but similar in reaction to root knot nematodes and phytophthora rot.

Two strains, R65-12 and V66-12, have been grown 2 years. Both averaged 4 days later in maturity than Hill. Seed yield was good for both strains.

Five strains were advanced from Preliminary Group V. D68-128 and R68-105, both resistant to cyst nematodes, yielded very well. In addition, D68-128 is resistant to root knot nematodes and R68-105 is resistant to phytophthora rot. D68-128 ranked above Dare at 24 locations. Its performance in the West was poor, because of an apparent nutritional problem. R68-105 ranked above Dare at 21 locations. N67-3831 and V66-180 also yielded extremely well. All 4 of these strains approached Dare in maturity. Md64-338 shattered badly. Neither Md64-338 or Md64-429 was outstanding in seed yield.

Table 15. - General summary of performance for the strains in Uniform Group V, 1970

	Hill	Dare	York	D64-3253	R65-12	V66-12
Seed Yield - 1970						
East Coast	35.0	36.4	37.9	37.8	36.0	39.5
Upper & Central South	43.2	46.8	49.0+	45.2	46.0	47.9+
Delta	32.4	38.3+	36.9+	37.6+	37.6+	36.4
West	36.3	40.6	42.2	39.9	40.2	41.0
- 1969-70						
East Coast	35.9	37.4	39.0	39.4	38.7	39.7
Upper & Central South	41.5	44.3	45.5	44.3	44.7	45.5
Delta	33.8	37.2	38.1	38.5	37.7	37.8
West	38.4	41.0	44.4	40.3	41.6	42.7
- 1968-70						
East Coast	35.4	37.5	39.5	39.2		
Upper & Central South	41.6	43.8	45.7	44.1		
Delta	34.2	37.5	38.1	38.2		
West	38.1	39.7	43.0	39.2		
Oil Content - 1970						
	23.3	23.5	22.6-	22.2-	22.8-	21.3-
- 1969-70	22.9	23.2	22.3	22.1	22.4	21.1
- 1968-70	22.5	23.0	22.1	22.0		
Protein Content - 1970						
	38.7	39.2	39.4+	41.0+	40.6+	40.6+
- 1969-70	39.0	39.3	39.4	41.4	40.9	40.6
- 1968-70	38.5	38.6	38.8	40.9		
Seed size	13.2	13.3	18.6+	14.5+	14.1+	15.1+
Seed quality	2.3	2.2	2.4	2.2	2.5	2.3
Maturity index	10-2	+8	+9	+7	+4	+4
Height	34	36	34	32	37	31
Bacterial pustule	1.0	1.0	2.0	1.0	1.0	1.0
Phytophthora rot	1.0	1.0	2.0	2.0	2.0	1.0
Seed coat mottling (%)	23	10	0	21	15	0
Purple stain	2.0	2.0	3.0	3.0	2.0	3.0
Root knot	1.0	1.0	3.0	4.0	3.0	2.0
Shattering	1.0	2.0	2.0	1.0	1.0	1.0
Flower color	W	W	P	P	W	W
Pubescence color	T	G	G	T	T	G
Pod wall color	T	B	T	T	T	T
Cyst nematode	S	S	S	S	S	S

Table 15. - (continued)

	D68-128	Md64-338	Md64-429	N67-3831	R68-105	V66-180
Seed Yield - 1970						
East Coast	38.7	36.3	35.3	37.0	37.9	37.9
Upper & Central South	50.9+	44.8	43.1	47.7+	45.8	51.3+
Delta	44.4	34.2	38.3+	37.3+	41.2+	43.5+
West	36.6	35.6	42.3	41.1	42.6	42.8
- 1969-70						
East Coast						
Upper & Central South						
Delta						
West						
- 1968-70						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1970	22.2-	22.0-	22.2-	21.9-	23.2	21.8-
- 1969-70						
- 1968-70						
Protein Content - 1970	39.6+	40.4+	39.7+	41.0+	40.0+	41.2+
- 1969-70						
- 1968-70						
Seed size	12.7	15.8+	13.0	13.9+	14.6+	13.8
Seed quality	2.3	2.5	2.4	2.2	2.3	2.5
Maturity index	+7	+1	+5	+7	+6	+6
Height	36	36	35	36	36	32
Bacterial pustule	1.0	3.0	1.0	1.0	1.0	1.0
Phytophthora rot	1.0	2.5	1.0	1.0	1.0	1.0
Seed coat mottling (%)	20	12	19	13	13	0
Purple stain	3.0	2.0	3.0	2.0	2.0	4.0
Root knot	0	1.0	0	4.0	3.0	2.0
Shattering	1.0	4.0	2.0	1.0	1.0	2.0
Flower color	W	W	W	W	P	P
Pubescence color	T	G	G	G	T	G
Pod wall color	T	T	M	T	T	T
Cyst nematode	R	S	S	S	R	S

Table 16. - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1970

Location	Hill	Dare	York	D64-3253	R65-12	V66-12	D68-128
<u>East Coast</u>							
Queenstown, Md.(A)	22.4	35.4+	36.0+	36.5+	30.1	37.6+	38.1+
Queenstown, Md.(B)	34.6	30.0	33.3	34.0	31.4	30.9	28.9
Linkwood, Md.	43.1	45.2	47.6+	47.1+	49.9+	42.8	48.8+
Poplar Hill, Md.(A)	28.5	37.2	36.5	35.5	31.1	50.2+	37.8
Poplar Hill, Md.(B)	28.5	25.8	27.9	28.3	31.2	33.8	28.8
Georgetown, Del.	33.6	28.6	40.4+	37.9	24.3-	42.5+	36.3
Warsaw, Va.	26.1	27.0	28.6+	30.0+	25.8	25.8	29.7+
Petersburg, Va.	35.9	38.1	36.1	35.3	30.8-	38.0	33.9
Holland, Va.	42.4	40.1	54.7+	47.4	39.8	52.6+	48.2
Plymouth, N.C.	48.2	49.5	47.6	50.2	51.7	56.4+	53.8+
Tifton, Ga.	41.3	43.8	28.2-	34.2	49.5	24.3-	40.7
Mean	35.0	36.4	37.9	37.8	36.0	39.5	38.7
<u>Upper and Central South</u>							
Orange, Va.	35.3	35.5	41.5+	34.3	40.5+	41.0+	36.7
Blairsville, Ga.	48.6	46.1	50.0	40.6	45.9	61.9	51.9
Belle Mina, Ala.	38.8	46.1+	50.3+	48.3+	45.2	44.1	54.8+
Experiment, Ga.	41.1	55.5	46.8	46.6	48.5	47.4	52.7
Princeton, Ky.	46.7	41.3	48.4	53.5	47.6	47.9	53.2
Martin, Tenn.	47.0	50.7	48.3	46.2	44.5	41.3	52.9
Jackson, Tenn.	44.6	52.2	57.7+	46.5	53.1+	52.5+	54.1+
Mean	43.2	46.8	49.0+	45.2	46.0	47.9+	50.9+
<u>Delta</u>							
Portageville, Mo.(A)	35.0	39.6+	42.9+	35.2	40.8+	41.5+	53.0+
Portageville, Mo.(B)	14.6	16.2	11.8	10.4	13.2	11.3	14.0
Keiser, Ark.	33.0	39.7+	40.6+	38.8	35.3	37.8	43.8+
Marianna, Ark.	33.0	36.3	34.1	39.1	36.1	34.7	47.4+
Stoneville, Miss.(A)	42.8	51.9+	45.7	49.4+	44.1	44.3	53.4+
Stoneville, Miss.(B)	38.6	42.2	41.9	45.7+	47.0+	42.5	52.0+
St. Joseph, La.	29.5	42.5+	41.1+	44.3+	46.5+	42.3+	47.0+
Mean	32.4	38.3+	36.9+	37.6+	37.6+	36.4	44.4+
<u>West</u>							
Mt. Vernon, Mo.*	36.8	38.4	36.9	36.4	46.2+	44.0	38.9
Stuttgart, Ark.	27.5	33.2+	36.0+	35.1+	32.4+	33.2+	35.8+
Curtis, La.	44.7	53.5	49.5	51.3	47.2	42.9	54.0
Bixby, Okla.	15.4	23.0	21.6	20.6	19.7	19.5	25.7
Halfway, Texas	50.6	51.7	58.9	49.0	54.5	62.1	29.8-
Lubbock, Texas	43.1	41.5	45.1	43.6	47.0	47.0	37.7
Mean	36.3	40.6	42.2	39.9	40.2	41.0	36.6

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

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

* - Not included in mean.

Table 16. - (continued)

Location	Md64-338	Md64-429	N67-3831	R68-105	V66-180	L.S.D. (.05)	C.V.
<u>East Coast</u>							
Queenstown, Md.(A)	28.6	33.3+	35.1+	29.3	33.5+	7.8	14%
Queenstown, Md.(B)	35.7	23.1-	29.5	30.7	24.3-	7.9	15%
Linkwood, Md.	39.4	46.4	46.8	48.1+	52.5+	3.8	5%
Poplar Hill, Md.(A)	35.8	31.9	30.7	31.4	33.6	9.5	16%
Poplar Hill, Md.(B)	28.7	32.1	24.5	31.1	32.2	6.8	14%
Georgetown, Del.	34.8	36.5	36.6	36.5	45.5+	5.8	10%
Warsaw, Va.	26.7	25.7	28.5+	28.6+	31.0+	2.3	5%
Petersburg, Va.	36.9	34.1	34.1	36.7	42.0+	4.3	7%
Holland, Va.	47.9	46.6	46.0	44.8	55.2+	6.3	8%
Plymouth, N.C.	50.5	48.2	54.1+	52.0	54.9+	5.0	6%
Tifton, Ga.	34.2	29.9-	40.9	47.6	45.8	11.1	17%
Mean	36.3	35.3	37.0	37.9	37.9	N.S.	
<u>Upper and Central South</u>							
Orange, Va.	39.8+	32.3-	35.3	33.8	43.0+	2.6	4%
Blairsville, Ga.	51.5	46.2	49.7	50.2	51.3	N.S.	12%
Belle Mina, Ala.	42.6	46.0	50.7+	47.9+	54.7+	7.3	9%
Experiment, Ga.	49.5	44.8	44.9	47.4	43.9	N.S.	13%
Princeton, Ky.	42.1	43.6	53.8	48.7	56.7+	7.3	9%
Martin, Tenn.	39.1	42.3	49.8	43.4	51.4	N.S.	15%
Jackson, Tenn.	49.2	46.3	49.5+	49.1	57.9+	4.8	6%
Mean	44.8	43.1	47.7+	45.8	51.3+	4.0	
<u>Delta</u>							
Portageville, Mo.(A)	41.2+	39.0	44.0+	47.4+	45.6+	4.4	6%
Portageville, Mo.(B)	13.6	15.7	13.9	18.5	12.3	N.S.	25%
Keiser, Ark.	25.9-	32.3	34.0	41.4+	35.2	6.1	10%
Marianna, Ark.	31.1	39.5	30.6	43.2+	46.2+	6.9	11%
Stoneville, Miss.(A)	53.0+	49.8+	53.5+	47.8	56.4+	6.2	7%
Stoneville, Miss.(B)	33.3-	42.5	38.7	47.9+	51.1+	5.0	7%
St. Joseph, La.	41.1+	49.1+	46.6+	42.2+	57.6+	7.3	10%
Mean	34.2	38.3+	37.3+	41.2+	43.5+	4.2	
<u>West</u>							
Mt. Vernon, Mo.*	34.9	39.0	42.1	39.9	48.1+	8.7	15%
Stuttgart, Ark.	33.1+	33.5+	37.3+	35.2+	35.3+	4.2	7%
Curtis, La.	36.5	54.9	51.5	48.5	49.9	N.S.	16%
Bixby, Okla.	23.8	18.8	22.9	24.1	17.6	N.S.	31%
Halfway, Texas	39.4	59.7	51.1	58.4	62.4	12.4	14%
Lubbock, Texas	45.4	44.5	42.6	46.7	48.9	6.4	9%
Mean	35.6	42.3	41.1	42.6	42.8	N.S.	

Table 17. - Chemical composition and seed size for the strains in Uniform Group V, 1970

Location	Hill	Dare	York	D64-3253	R65-12	V66-12	D68-128
<u>Oil Percentage</u>							
Linkwood, Md.	23.8	22.9	21.8	22.4	22.3	21.6	22.6
Warsaw, Va.	21.8	22.8	22.1	22.4	22.3	21.1	22.4
Plymouth, N.C.	23.1	23.8	22.6	22.9	23.3	22.1	22.1
Experiment, Ga.	24.4	25.1	23.4	23.1	23.4	23.1	23.7
Jackson, Tenn.	24.3	24.5	23.1	22.4	23.3	21.2	22.3
Portageville, Mo.(A)	23.5	22.7	22.8	21.7	22.3	21.2	21.6
Keiser, Ark.	24.6	23.9	23.4	22.4	24.5	21.0	23.3
Stoneville, Miss.(B)	24.7	23.8	23.1	22.6	23.5	21.2	21.4
Stuttgart, Ark.	21.9	23.3	22.6	21.6	21.8	21.1	21.8
Halfway, Texas	21.2	21.9	20.6	20.6	21.5	19.7	20.6
Mean	23.3	23.5	22.6-	22.2-	22.8-	21.3-	22.2-
<u>Protein Percentage</u>							
Linkwood, Md.	38.5	39.1	39.5	40.6	39.3	39.0	39.5
Warsaw, Va.	41.2	41.1	40.6	40.9	41.6	42.3	40.0
Plymouth, N.C.	39.2	39.0	39.7	41.9	41.0	40.4	39.0
Experiment, Ga.	39.7	39.5	40.4	41.5	42.5	41.5	40.2
Jackson, Tenn.	38.2	38.6	38.7	41.4	40.3	40.7	39.6
Portageville, Mo.(A)	38.7	39.7	40.9	41.9	41.6	40.5	39.9
Keiser, Ark.	35.5	36.5	36.5	37.9	37.5	37.8	37.8
Stoneville, Miss.(B)	36.8	39.4	39.1	40.8	39.0	41.3	40.6
Stuttgart, Ark.	42.7	40.4	39.9	43.6	44.6	43.2	42.0
Halfway, Texas	36.5	38.6	38.2	39.6	38.3	39.4	37.8
Mean	38.7	39.2	39.4+	41.0+	40.6+	40.6+	39.6+
<u>Grams per 100 Seeds</u>							
Linkwood, Md.	15.9	16.3	20.9	16.8	16.4	16.8	16.0
Warsaw, Va.	12.0	11.9	16.4	13.4	13.3	13.7	12.3
Plymouth, N.C.	14.5	13.1	18.0	15.3	13.8	16.0	12.4
Experiment, Ga.	14.0	13.8	20.1	14.3	15.7	15.9	11.9
Jackson, Tenn.	14.6	15.0	20.0	15.8	15.9	16.5	13.1
Portageville, Mo.(A)	12.0	13.0	19.0	14.0	14.0	14.0	13.0
Keiser, Ark.	11.0	11.3	18.0	12.7	13.0	13.7	11.7
Stoneville, Miss.(B)	13.2	12.4	17.4	14.1	14.2	14.3	12.7
Stuttgart, Ark.	11.0	12.0	17.0	13.7	11.7	13.3	11.0
Halfway, Texas	14.0	14.0	19.0	15.0	13.0	17.0	13.0
Mean	13.2	13.3	18.6+	14.5+	14.1+	15.1+	12.7

Table 17. - (continued)

Location	Md64-338	Md64-429	N67-3831	R68-105	V66-180	L.S.D. (.05)
<u>Oil Percentage</u>						
Linkwood, Md.	22.1	22.9	21.8	23.6	23.4	
Warsaw, Va.	21.4	20.4	21.2	22.9	20.2	
Plymouth, N.C.	22.8	21.9	21.9	23.4	21.6	
Experiment, Ga.	23.7	23.7	23.1	24.2	22.4	
Jackson, Tenn.	22.4	23.1	22.1	23.8	21.4	
Portageville, Mo.(A)	21.2	22.0	21.6	23.0	21.7	
Keiser, Ark.	22.8	23.6	22.4	23.9	23.1	
Stoneville, Miss.(B)	22.6	22.5	22.2	22.8	21.5	
Stuttgart, Ark.	20.9	21.4	22.1	23.3	21.2	
Halfway, Texas	20.4	20.6	20.1	21.4	21.2	
Mean	22.0-	22.2-	21.9-	23.2	21.8-	0.5
<u>Protein Percentage</u>						
Linkwood, Md.	40.0	39.5	40.8	38.8	38.9	
Warsaw, Va.	41.8	42.4	42.6	40.8	43.0	
Plymouth, N.C.	41.2	40.5	41.5	40.2	41.5	
Experiment, Ga.	40.9	40.5	41.7	40.8	42.2	
Jackson, Tenn.	40.9	40.0	41.7	40.0	41.7	
Portageville, Mo.(A)	41.3	39.5	41.9	41.2	41.9	
Keiser, Ark.	36.3	35.5	37.1	37.4	37.8	
Stoneville, Miss.(B)	38.0	38.3	40.7	40.0	40.7	
Stuttgart, Ark.	44.2	42.7	42.3	42.7	43.6	
Halfway, Texas	39.0	38.2	39.4	37.7	40.6	
Mean	40.4+	39.7+	41.0+	40.0+	41.2+	0.7
<u>Grams per 100 Seeds</u>						
Linkwood, Md.	18.4	15.9	16.4	17.6	16.0	
Warsaw, Va.	15.1	10.7	13.5	13.1	10.3	
Plymouth, N.C.	17.6	12.8	15.1	15.4	14.6	
Experiment, Ga.	17.3	14.1	15.2	15.4	14.9	
Jackson, Tenn.	17.7	15.2	15.6	15.1	15.7	
Portageville, Mo.(A)	14.0	12.0	13.0	14.0	13.0	
Keiser, Ark.	13.3	10.7	11.7	13.3	12.7	
Stoneville, Miss.(B)	14.1	14.3	13.3	14.5	14.6	
Stuttgart, Ark.	14.0	11.3	12.0	14.0	11.7	
Halfway, Texas	16.0	13.0	13.0	14.0	14.0	
Mean	15.8+	13.0	13.9+	14.6+	13.8	0.7

Table 18. - Relative maturity, days earlier (-) or later (+) than Hill, for the strains in Uniform Group V, 1970

Location	Date planted	Hill matured	Dare	York	D64-3253	R65-12	V66-12
<u>East Coast</u>							
Queenstown, Md.(A)		10-7	+6	+4	+4	+7	-6
Queenstown, Md.(B)	6-24	10-22	+11	+12	+9	+6	+4
Linkwood, Md.	5-28	10-9	+7	+9	+3	+4	0
Poplar Hill, Md.(A)	6-17	10-20	0	+1	+2	+1	-3
Poplar Hill, Md.(B)	7-8	10-27	+6	+7	+5	+4	+2
Georgetown, Del.	6-4	10-10	+2	+3	+4	0	+1
Warsaw, Va.	5-19	10-4	+8	+7	+4	+5	+3
Petersburg, Va.	5-21	10-2	+3	+6	+2	+3	+2
Holland, Va.	5-21	10-1	+18	+14	+10	0	+6
Plymouth, N.C.	5-7	9-22	+11	+20	+13	+11	+13
Tifton, Ga.	5-5	9-12	+7	+16	+10	+7	+12
Mean		10-7	+7	+9	+6	+4	+3
<u>Upper and Central South</u>							
Orange, Va.	5-27	10-15	+3	+3	+3	+1	-7
Blairsville, Ga.	5-25	10-10	-1	+6	+2	+2	-2
Belle Mina, Ala.	5-7	9-28	+7	+7	+2	0	0
Experiment, Ga.	6-10	9-26	+9	+9	+6	+1	-1
Princeton, Ky.	5-19	10-9	+3	+7	+2	+1	-1
Martin, Tenn.	5-29	10-16	+2	+4	+3	+2	-2
Jackson, Tenn.	5-13	9-22	+16	+20	+18	+8	+8
Mean		10-5	+6	+8	+5	+2	-1
<u>Delta</u>							
Portageville, Mo.(A)	5-13	10-1	+14	+16	+13	+14	+14
Portageville, Mo.(B)	5-15	10-2	+8	+5	+6	+5	+6
Keiser, Ark.	5-14	9-28	+11	-2	+11	-2	+9
Marianna, Ark.	5-19	9-25	+8	+10	+8	+7	+7
Stoneville, Miss.(A)	5-15	9-19	+12	+14	+12	+10	+9
Stoneville, Miss.(B)	5-12	9-22	+10	+13	+13	+1	+12
St. Joseph, La.	5-13	9-8	+16	+13	+13	+13	+13
Mean		9-24	+11	+10	+11	+7	+10
<u>West</u>							
Stuttgart, Ark.	6-10	9-30	+8	+11	+8	+3	+3
Curtis, La.	5-15	9-20	+8	+10	+3	+1	+4
Mean		9-25	+8	+11	+6	+2	+4

Table 18. - (continued)

Location	D68-128	Md64-338	Md64-429	N67-3831	R68-105	V66-180
<u>East Coast</u>						
Queenstown, Md.(A)	+6	0	+4	+7	+5	0
Queenstown, Md.(B)	+8	+3	+8	+12	+10	+4
Linkwood, Md.	+8	0	+4	+8	+3	+1
Poplar Hill, Md.(A)	+1	-1	0	+2	+1	0
Poplar Hill, Md.(B)	+6	+1	+5	+6	+6	+3
Georgetown, Del.	+4	0	0	+3	+1	+3
Warsaw, Va.	+7	0	+7	+9	+6	+3
Petersburg, Va.	+5	-1	-1	+3	+5	+2
Holland Va.	+7	+5	+5	+12	+4	+12
Plymouth, N.C.	+9	+6	+9	+11	+11	+20
Tifton, Ga.	+10	+2	+10	+12	+9	+4
Mean	+6	+1	+5	+8	+6	+5
<u>Upper and Central South</u>						
Orange, Va.	+3	-10	+4	+4	+1	+4
Blairsville, Ga.	+5	+2	0	+3	+5	+2
Belle Mina, Ala.	+7	0	0	+7	+7	+7
Experiment, Ga.	+6	0	+2	+9	+2	+3
Princeton, Ky.	+7	-1	0	+4	+2	0
Martin, Tenn.	+1	-1	-2	+2	+3	+3
Jackson, Tenn.	+14	+5	+14	+8	+10	+19
Mean	+6	-1	+3	+5	+4	+5
<u>Delta</u>						
Portageville, Mo.(A)	+14	+1	+4	+6	+14	+2
Portageville, Mo.(B)	+6	+1	+4	+10	+8	+3
Keiser, Ark.	-2	0	+5	-2	-2	+9
Marianna, Ark.	+10	0	+5	+10	+7	+10
Stoneville, Miss.(A)	+10	+2	+3	+11	+12	+7
Stoneville, Miss.(B)	+12	-1	+12	+12	+13	+12
St. Joseph, La.	+22	0	+20	+21	+13	+13
Mean	+10	0	+8	+10	+9	+8
<u>West</u>						
Stuttgart, Ark.	+7	+4	+7	+10	+7	+3
Curtis, La.	+4	+1	+6	+10	+6	+4
Mean	+6	+3	+2	+10	+7	+4

Table 19. - Plant height data for the strains in Uniform Group V, 1970

Location	Hill	Dare	York	D64-3253	R65-12	V66-12
<u>East Coast</u>						
Queenstown, Md.(A)	39	41	41	40	39	40
Queenstown, Md.(B)	36	37	35	38	37	32
Linkwood, Md.	39	41	40	39	42	36
Poplar Hill, Md.(A)	40	41	40	40	39	40
Poplar Hill, Md.(B)	33	34	34	35	32	32
Georgetown, Del.	44	44	45	44	47	45
Warsaw, Va.	34	37	35	30	40	32
Petersburg, Va.	32	35	35	33	34	34
Holland, Va.	42	43	40	37	45	41
Plymouth, N.C.	40	41	39	42	42	37
Tifton, Ga.	22	20	17	18	22	10
Mean	36	38	39	36	38	34
<u>Upper and Central South</u>						
Orange, Va.	40	40	40	36	47	37
Blairsville, Ga.	37	36	40	34	40	34
Belle Mina, Ala.	34	36	37	35	39	29
Experiment, Ga.	32	34	32	30	39	28
Princeton, Ky.	33	38	36	35	43	38
Martin, Tenn.	30	36	34	30	36	29
Jackson, Tenn.	43	45	48	42	45	41
Mean	36	38	38	35	41	34
<u>Delta</u>						
Portageville, Mo.(A)	29	30	31	26	33	25
Portageville, Mo.(B)	23	20	19	17	20	16
Keiser, Ark.	35	35	30	30	39	27
Marianna, Ark.	33	40	32	33	39	33
Stoneville, Miss.(A)	31	41	37	35	41	29
Stoneville, Miss.(B)	35	37	35	33	38	27
St. Joseph, La.	35	32	36	31	40	28
Mean	32	34	31	29	36	26
<u>West</u>						
Mt. Vernon, Mo.	35	44	37	37	39	35
Stuttgart, Ark.	30	33	30	27	34	30
Curtis, La.	22	27	24	22	23	23
Bixby, Okla.	24	28	26	22	28	27
Halfway, Texas	30	32	30	26	31	30
Lubbock, Texas	29	30	26	28	34	26
Mean	28	32	29	27	32	29

Table 19. - (continued)

Location	D68-128	Md64-338	Md64-429	N67-3831	R68-105	V66-180
	<u>East Coast</u>					
Queenstown, Md.(A)	41	40	40	41	39	32
Queenstown, Md.(B)	39	38	38	37	38	36
Linkwood, Md.	42	42	39	43	40	34
Poplar Hill, Md.(A)	40	41	41	43	42	37
Poplar Hill, Md.(B)	34	37	38	36	36	35
Georgetown, Del.	45	47	45	45	45	47
Warsaw, Va.	41	39	38	38	39	33
Petersburg, Va.	35	33	35	36	36	32
Holland, Va.	44	43	42	41	46	39
Plymouth, N.C.	43	45	41	43	41	41
Tifton, Ga.	21	23	17	20	21	19
Mean	39	39	38	38	38	35
	<u>Upper and Central South</u>					
Orange, Va.	44	45	48	46	43	35
Blairsville, Ga.	39	39	37	36	37	33
Belle Mina, Ala.	37	39	35	37	35	32
Experiment, Ga.	36	39	33	34	34	27
Princeton, Ky.	40	38	37	38	41	32
Martin, Tenn.	37	35	29	35	31	26
Jackson, Tenn.	46	45	41	47	42	44
Mean	40	40	37	39	38	33
	<u>Delta</u>					
Portageville, Mo.(A)	31	37	35	34	33	46
Portageville, Mo.(B)	23	20	21	21	20	18
Keiser, Ark.	32	34	34	33	32	28
Marianna, Ark.	37	39	33	37	36	29
Stoneville, Miss.(A)	39	38	36	39	38	31
Stoneville, Miss.(B)	39	39	35	38	35	30
St. Joseph, La.	34	38	36	38	40	33
Mean	34	35	33	34	33	31
	<u>West</u>					
Mt. Vernon, Mo.	43	39	36	39	40	32
Stuttgart, Ark.	32	31	31	33	33	27
Curtis, La.	26	21	26	26	23	20
Bixby, Okla.	29	30	26	29	28	25
Halfway, Texas	29	27	32	32	29	25
Lubbock, Texas	33	30	31	31	33	25
Mean	32	30	30	32	31	26

Table 20. - Lodging scores for the strains in Uniform Group V, 1970

Location	Hill	Dare	York	D64-3253	R65-12	V66-12
<u>East Coast</u>						
Queenstown, Md.(A)	1.5	1.7	1.3	1.5	1.5	1.0
Queenstown, Md.(B)	2.0	2.0	1.5	1.5	1.0	1.0
Linkwood, Md.	1.5	1.8	1.5	2.0	3.2	1.2
Poplar Hill, Md.(A)	3.7	2.7	2.3	3.0	3.3	1.3
Poplar Hill, Md.(B)	2.0	2.0	1.5	2.5	2.0	1.0
Georgetown, Del.	2.8	2.8	2.2	3.5	3.3	2.0
Warsaw, Va.	1.3	1.3	1.7	1.2	2.8	1.0
Petersburg, Va.	2.0	2.7	1.7	2.7	4.0	1.0
Holland, Va.	1.8	1.7	1.0	2.0	2.8	1.0
Plymouth, N.C.	3.3	3.0	3.0	2.7	3.3	2.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Upper and Central South</u>						
Orange, Va.	1.5	2.2	2.0	1.3	2.7	1.0
Blairsville, Ga.	2.8	3.2	2.2	2.5	3.3	2.0
Belle Mina, Ala.	1.7	2.0	1.0	1.3	3.0	1.0
Experiment, Ga.	1.0	1.7	1.7	1.0	2.0	1.0
Princeton, Ky.	3.0	3.0	3.0	1.7	4.0	2.0
Martin, Tenn.	3.0	2.0	3.0	4.0	3.0	3.0
Jackson, Tenn.	2.0	2.0	1.0	1.0	3.0	1.0
<u>Delta</u>						
Portageville, Mo.(A)	4.2	3.7	3.0	4.0	4.3	2.5
Portageville, Mo.(B)	1.2	1.5	1.3	1.5	1.2	1.2
Keiser, Ark.	2.0	1.7	1.0	1.0	2.0	1.0
Marianna, Ark.	2.3	2.3	2.0	2.3	2.3	1.7
Stoneville, Miss.(A)	3.0	3.0	2.3	3.0	3.7	1.3
Stoneville, Miss.(B)	2.0	2.3	2.0	2.3	3.0	2.0
St. Joseph, La.	5.0	4.7	4.0	4.3	5.0	1.0
<u>West</u>						
Mt. Vernon, Mo.	4.0	3.8	2.5	3.3	4.0	2.4
Stuttgart, Ark.	1.7	2.0	1.0	1.7	3.0	1.0
Curtis, La.	1.5	2.0	2.0	2.0	2.0	1.5
Bixby, Okla.	1.0	1.0	1.0	2.0	1.7	1.0
Halfway, Texas	1.6	1.0	1.0	1.6	1.3	1.0
Lubbock, Texas	1.0	1.0	1.0	1.5	1.5	1.0

Table 20. - (continued)

Location	D68-128	Md64-338	Md64-429	N67-3831	R68-105	V66-180
<u>East Coast</u>						
Queenstown, Md.(A)	1.3	1.2	1.5	1.3	1.3	1.0
Queenstown, Md.(B)	1.5	2.0	2.0	2.0	1.5	1.0
Linkwood, Md.	1.8	2.3	2.3	1.7	2.5	2.7
Poplar Hill, Md.(A)	2.7	2.0	3.3	2.7	4.0	1.7
Poplar Hill, Md.(B)	2.5	2.5	2.0	2.0	2.0	1.5
Georgetown, Del.	3.0	2.8	3.8	2.3	3.2	2.5
Warsaw, Va.	2.3	1.2	1.7	1.2	2.5	1.2
Petersburg, Va.	3.0	2.7	4.0	2.0	3.7	2.0
Holland, Va.	1.0	3.0	3.3	1.2	2.3	1.3
Plymouth, N.C.	3.0	3.0	3.7	2.3	3.0	3.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Upper and Central South</u>						
Orange, Va.	1.7	2.0	3.0	1.5	1.8	1.5
Blairsville, Ga.	2.3	2.8	3.3	2.3	2.8	2.0
Belle Mina, Ala.	1.0	2.0	2.3	1.3	2.0	1.0
Experiment, Ga.	1.3	1.0	1.0	1.3	2.0	1.0
Princeton, Ky.	2.3	3.3	4.3	1.7	3.7	1.7
Martin, Tenn.	3.0	3.0	3.0	3.0	4.0	2.0
Jackson, Tenn.	1.0	3.0	3.0	1.0	3.0	2.0
<u>Delta</u>						
Portageville, Mo.(A)	2.8	3.5	2.3	2.8	4.3	2.7
Portageville, Mo.(B)	1.5	1.0	1.3	1.5	1.8	1.0
Keiser, Ark.	1.0	1.0	2.0	1.0	2.0	1.0
Marianna, Ark.	3.0	2.3	4.3	1.7	3.0	1.3
Stoneville, Miss.(A)	2.3	3.0	3.3	2.7	3.3	2.3
Stoneville, Miss.(B)	2.7	2.3	3.0	2.3	3.0	2.0
St. Joseph, La.	3.7	5.0	5.0	4.0	5.0	3.7
<u>West</u>						
Mt. Vernon, Mos.	2.8	2.3	3.3	2.6	4.0	1.1
Stuttgart, Ark.	1.7	1.0	3.0	1.0	2.0	1.0
Curtis, La.	2.0	1.5	2.0	2.0	2.0	1.0
Bixby, Okla.	1.0	1.0	1.0	1.0	2.7	2.0
Halfway, Texas	1.3	1.0	1.3	1.6	1.6	1.0
Lubbock, Texas	1.5	1.0	1.0	1.0	1.0	1.0

Table 21. - Seed quality scores for the strains in Uniform Group V, 1970

Location	Hill	Dare	York	D64-3253	R65-12	V66-12
<u>East Coast</u>						
Queenstown, Md.(A)	3.0	2.7	2.3	2.0	3.0	2.0
Queenstown, Md.(B)	1.0	2.3	2.0	1.7	2.3	1.3
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Poplar Hill, Md.(A)	1.0	1.0	1.3	1.3	1.0	1.3
Poplar Hill, Md.(B)	1.0	1.7	1.3	1.7	1.3	1.7
Georgetown, Del.	2.2	2.8	1.5	2.5	2.3	2.0
Warsaw, Va.	1.8	1.3	1.9	1.6	1.5	1.8
Petersburg, Va.	1.0	1.0	1.0	2.0	1.0	1.0
Holland, Va.	2.3	2.3	1.7	2.7	3.3	3.0
Plymouth, N.C.	1.0	1.0	1.5	1.0	1.0	1.0
Tifton, Ga.	3.0	2.5	3.5	1.5	2.5	3.5
<u>Upper and Central South</u>						
Orange, Va.	1.0	2.5	1.0	1.0	1.0	5.0
Blairsville, Ga.	2.3	2.3	2.0	2.2	2.2	2.1
Experiment, Ga.	2.3	2.3	2.3	2.0	3.0	1.7
Jackson, Tenn.	3.0	2.0	3.0	3.0	4.0	3.0
<u>Delta</u>						
Portageville, Mo.(A)	4.5	2.7	4.5	3.3	3.8	3.2
Portageville, Mo.(B)	5.0	4.0	4.8	5.0	5.0	5.0
Keiser, Ark.	3.5	2.8	3.5	3.3	3.8	3.3
Marianna, Ark.	3.2	3.2	3.2	2.3	3.5	3.2
Stoneville, Miss.(A)	2.0	2.0	2.3	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.7	2.3	2.0	2.0
St. Joseph, La.	3.8	2.5	2.0	2.0	2.7	1.0
<u>West</u>						
Mt. Vernon, Mo.	2.0	1.7	2.2	2.0	2.0	1.8
Stuttgart, Ark.	3.2	2.7	2.8	2.8	3.2	2.7
Curtis, La.	2.0	2.3	3.0	2.0	3.0	1.7
Bixby, Okla.	2.0	1.7	3.7	2.7	2.7	1.7
Lubbock, Texas	2.0	2.0	1.0	2.0	1.0	2.0

Table 21. (continued)

Location	D68-128	Md64-338	Md64-429	N67-3831	R68-105	V66-180
<u>East Coast</u>						
Queenstown, Md.(A)	2.7	2.3	2.0	2.0	2.7	2.7
Queenstown, Md.(B)	1.5	2.0	1.7	1.3	2.0	2.0
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Poplar Hill, Md.(A)	1.3	1.2	1.7	1.5	1.0	1.0
Poplar Hill, Md.(B)	2.3	1.3	1.3	1.7	1.0	1.0
Georgetown, Del.	2.7	2.3	3.0	2.0	2.5	2.5
Warsaw, Va.	1.6	1.7	1.5	1.7	1.5	1.5
Petersburg, Va.	1.0	2.0	1.0	1.0	2.0	1.0
Holland, Va.	1.3	2.0	3.7	2.3	3.3	3.0
Plymouth, N.C.	1.0	1.0	1.5	1.0	1.0	1.5
Tifton, Ga.	2.5	2.5	3.0	2.5	3.0	3.0
<u>Upper and Central South</u>						
Orange, Va.	1.3	2.0	3.0	1.5	1.0	1.3
Blairsville, Ga.	2.3	2.5	2.5	2.5	2.2	2.0
Experiment, Ga.	2.0	3.0	1.7	2.7	2.3	2.0
Jackson, Tenn.	3.0	3.0	3.0	3.0	3.0	4.0
<u>Delta</u>						
Portageville, Mo.(A)	3.3	4.0	3.8	3.0	3.3	4.0
Portageville, Mo.(B)	5.0	4.8	4.5	4.3	5.0	5.0
Keiser, Ark.	3.7	4.0	3.8	3.3	3.0	3.5
Marianna, Ark.	2.8	3.3	2.5	3.5	2.7	3.3
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.3	2.3	2.3	2.7
St. Joseph, La.	2.5	2.7	2.8	2.0	2.8	1.7
<u>West</u>						
Mt. Vernon, Mo.	2.2	2.5	2.0	1.8	1.5	2.5
Stuttgart, Ark.	3.2	3.3	2.5	3.0	2.5	2.3
Curtis, La.	3.3	3.3	2.3	1.7	2.3	2.7
Bixby, Okla.	2.3	2.3	2.7	1.7	2.3	4.0
Lubbock, Texas	1.0	2.0	2.0	1.0	2.0	2.0

PRELIMINARY GROUP V

1970

Preliminary Group V nurseries, including 34 experimental strains and the two check varieties Hill and Dare, were grown at seven locations. The parentage of these strains is reported in Table 22. Performance data are summarized in Tables 23 through 28. Differences in seed yield were significant at the 5% level of confidence at five locations. The combined analysis of variance also showed differences among strains to be significant. Thirteen strains produced average seed yields significantly higher than that for Hill. All of these higher yielding strains were 5 to 14 days later in maturity than Hill. There were 18 strains with mean seed yields averaging above that for Dare. The general trend in the group was for maturity to be later than for Hill.

D68-4155 has deciduous pubescence. Seed yield was apparently depressed by leaf hopper attack at Georgetown and Linkwood, as its yield was lower in relation to the check varieties at those two locations in relation to the other locations.

Strains which appear to merit being advanced to Uniform Group V are: V68-381, D68-8, V68-2331, V67-453, and N68-96.

Table 22 - Parentage of the strains in Preliminary Group V, 1970

Variety or strain	Parentage	Generation composited
1. Hill		
2. Dare		
3. D65-3168	Hill x PI 96,983	F7
4. D65-3438	D53-142 x PI 96,983	F7
5. D66-12,392	D63-6100 x Dyer	F5
6. D66-12,394	D63-6100 x Dyer	F5
7. D67-3397	Hill x PI 172,902	F5
8. D68-8	Dyer x Bragg	F5
9. D68-18	Dyer x Bragg	F5
10. D68-47	Dyer x Bragg	F5
11. D68-140	Dyer x Bragg	F5
12. D68-399	Dyer x Pickett	F5
13. D68-4155	D53-697(2) x PI 229,350	F5
14. D68-4291	D53-697(2) x PI 229,350	F5
15. D68-4345	PI 229,350(2) x D53-697	F5
16. D68-4501	D62-6289 x D60-9647	F5
17. D68-4816	D59-693 x D60-9647	F5
18. D68-5018	D59-693 x D60-9647	F5
19. D68-2214	D65-3075 x Hood	F3
20. N68-96	Dare x N60-5234	F4
21. N68-197	Dare x N60-5234	F4
22. N68-383	Dare x N60-5234	F4
23. N68-1685	N55-3643 x Hill	F3
24. N68-1696	N55-3643 x Hill	F3
25. R68-226	R54-171-1 x R64-501	F5
26. R68-296	R54-171-1 x R64-501	F5
27. R68-727	Semmes x R64-500	F5
28. V66-217	S5-7075 x Hill	
29. V67-453	S5-7075 x Hill	
30. V68-183	Lee x S5-7075	
31. V68-224	Lee x S5-7075	
32. V68-273	Lee x S5-7075	
33. V68-297	Lee x S5-7075	
34. V68-381	Lee x S5-7075	
35. V68-461	Lee x S5-7075	
36. V68-2331	York x Clark	

Table 23. - General summary of performance for the strains grown in Preliminary Group V, 1970

Strain	Seed yield	Maturity index	Ht.	Oil	Protein	Seed holding	P.R.	% mottled seed
Hill	34.5	9-26	37	23.7	38.3	1.0	1.0	0
Dare	37.6	+12	37	24.2	38.7	1.8	1.5	0
D65-3168	34.2	+11	37	17.8-	43.3+	1.7	1.0	0
D65-3438	38.9	+10	40	21.5-	39.1	1.3	1.0	0
D66-12,392	36.9	+5	33	22.4-	39.5+	1.6	1.0	0
D66-12,394	39.3+	+5	34	22.0-	38.6	2.3	1.0	0
D67-3397	36.2	+7	33	21.0-	42.3+	2.6	1.0	0
D68-8 ¹	42.4+	+8	41	23.1	40.1+	1.8	1.0	0
D68-18 ¹	38.9	+8	39	23.0	39.9+	2.1	3.0	0
D68-47 ¹	38.7	+11	36	23.8	39.4	1.3	2.0	0
D68-140 ¹	36.0	+6	37	23.5	40.0+	2.0	2.0	0
D68-399 ¹	34.2	+12	35	21.6-	40.4+	1.0	2.0	0
D68-4155	33.3	+8	36	22.4-	38.5	2.9	1.0	0
D68-4291	37.4	+8	38	21.8-	36.4	3.0	1.0	50
D68-4345	34.4	+9	31	18.5-	42.0+	3.7	1.0	25
D68-4501	30.4	+6	33	19.0-	48.2+	2.0	1.0	14
D68-4816	37.1	+9	33	21.4-	42.7+	1.9	1.5	3
D68-5018	36.7	+8	33	21.1-	42.9+	2.1	1.5	14
D68-2214	37.8	+14	40	22.1-	40.8+	2.1	1.0	3
N68-96	40.7+	+10	32	22.3-	41.3+	1.5	1.5	0
N68-197	40.3+	+12	36	22.6-	40.8+	2.0	2.0	0
N68-383	39.2+	+11	35	22.8-	41.0+	1.0	1.5	0
N68-1685	37.1	+12	35	23.2	39.9+	1.0	1.0	0
N68-1696	36.0	+10	37	21.9-	40.2+	1.0	1.0	0
R68-226	39.3+	+13	34	21.4-	41.1+	1.0	1.0	0
R68-296	36.3	+14	43	20.8-	41.4+	1.3	1.0	T
R68-727	37.0	+9	36	22.0-	40.0+	1.2	1.0	13
V66-217	37.9	+7	39	21.9-	39.9+	1.7	1.0	0
V67-453	40.9+	+9	36	22.2-	38.7	2.0	2.0	0
V68-183	39.5+	+8	40	22.8-	39.6+	1.2	3.0	0
V68-224	39.7+	+8	34	22.6-	39.6+	1.0	1.5	0
V68-273	39.5+	+10	33	22.9-	40.8+	2.0	1.0	0
V68-297	40.6+	+11	34	22.7-	41.4+	1.4	1.5	0
V68-381	42.9+	+13	34	22.0-	40.5+	1.1	1.5	0
V68-461	37.4	+12	34	22.2-	41.0+	1.3	1.5	0
V68-2331	41.3+	+4	34	23.0	39.4	1.3	1.5	0
L.S.D. (.05)	4.7			0.8	1.2			
L.S.D. (.01)	6.2			1.1	1.5			

¹Resistant to cyst nematodes and root knot nematodes.

Table 24. - Seed yield, in bushels per acre, for the strains in Preliminary Group V, 1970

Strain	George- town, Del.	Link- wood, Md.	Warsaw, Va.	Plymouth, N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.(B)
Hill	34.6	40.5	26.8	40.0	30.3	30.3	39.8
Dare	36.9	44.1	26.6	43.4	36.7	35.6	40.1
D65-3168	33.1	36.1	24.6	41.0	37.2	35.1	32.1
D65-3438	34.1	46.4+	24.6	50.4+	40.8+	42.7+	33.1
D66-12,392	37.5	39.8	24.8	51.9+	37.2	34.0	33.0
D66-12,394	41.0+	41.6	24.4	50.9+	43.5+	35.8	38.2
D67-3397	35.5	42.6	25.4	47.3	35.1	31.0	36.7
D68-8	37.3	45.4	28.1	49.7+	50.3+	43.2+	42.7
D68-18	44.0+	46.5+	27.5	53.1+	54.1+	25.1	21.6
D68-47	36.2	44.6	27.0	47.5	48.2+	35.7	31.4
D68-140	37.5	45.2	27.6	55.0+	35.2	20.8	30.5
D68-399	29.2	37.8	25.8	44.1	42.4+	29.7	30.6
D68-4155	31.4	22.8-	28.4	50.3+	30.0	32.5	37.7
D68-4291	36.2	43.8	24.9	55.8+	35.5	33.2	32.1
D68-4345	33.4	36.9	24.0	50.8+	29.1	30.8	35.7
D68-4501	21.1-	35.4	26.6	42.3	23.6	28.6	35.5
D68-4816	30.9	44.4	31.3	48.7+	34.1	34.3	36.4
D68-5018	37.2	44.1	30.6	46.0	33.9	28.2	36.8
D68-2214	30.0	44.1	27.7	53.6+	31.7	36.0	41.3
N68-96	44.2+	48.3+	30.4	57.9+	29.6	36.7	37.6
N68-197	42.2+	47.5+	26.0	50.8+	39.1	34.1	42.4
N68-383	38.9	43.6	26.8	50.8+	41.4+	35.3	37.7
N68-1685	37.0	39.1	28.6	39.9	38.6	35.7	40.8
N68-1696	28.8	43.1	28.0	46.2	37.9	37.2	30.8
R68-226	42.6+	42.1	26.8	--	28.0	48.1+	38.3
R68-296	31.6	42.7	23.7	43.3	36.7	34.2	41.8
R68-727	32.8	41.1	25.4	47.9+	33.5	36.0	42.3
V66-217	39.1	47.8+	27.9	49.3+	43.4+	23.5	34.6
V67-453	43.4+	46.7+	27.4	48.8+	36.2	41.9+	42.3
V68-183	40.4	53.2+	29.0	50.9+	42.0+	30.1	31.0
V68-224	41.9+	47.5+	27.7	54.4+	30.9	32.2	43.6
V68-273	41.4+	46.7+	29.2	49.2+	32.1	42.4+	35.7
V68-297	41.4+	47.3+	27.3	53.7+	37.6	36.1	40.6
V68-381	38.3	47.8+	28.8	59.5+	42.6+	41.5+	42.3
V68-461	41.0+	49.4+	27.5	49.2+	40.9+	24.8	29.0
V68-2331	41.0+	47.8+	29.4	54.0+	38.9	33.6	44.7
L.S.D. (.05)	6.0	5.6	N.S.	7.7	9.9	10.1	N.S.
C.V.	8%	6%	8%	10%	13%	15%	16%

Table 25. - Oil percentages for the strains in Preliminary Group V, 1970

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)
Hill	24.1	21.8	22.9	23.0	25.7	24.8
Dare	23.8	23.3	24.1	23.7	25.9	24.2
D65-3168	18.3	19.1	17.2	17.4	17.9	16.8
D65-3438	21.2	21.8	21.9	20.7	20.9	22.3
D66-12,392	22.6	21.2	21.8	22.0	23.4	23.1
D66-12,394	23.1	21.1	21.8	21.0	22.1	22.6
D67-3397	21.4	20.2	21.4	20.5	21.6	20.9
D68-8	23.8	23.4	23.3	22.5	22.8	22.8
D68-18	22.9	23.4	22.3	22.0	24.9	22.5
D68-47	23.1	23.3	23.3	23.0	26.4	23.6
D68-140	23.5	22.8	22.3	22.2	26.8	23.3
D68-399	21.7	21.4	21.2	20.9	22.3	22.0
D68-4155	21.9	22.4	23.1	22.3	22.9	21.5
D68-4291	21.6	22.1	21.8	21.2	22.1	22.2
D68-4345	18.3	18.2	19.1	18.1	18.6	18.6
D68-4501	18.7	19.1	19.1	18.3	19.9	18.9
D68-4816	20.9	20.5	21.2	20.9	22.6	22.2
D68-5018	21.2	20.0	20.7	20.0	22.9	21.8
D68-2214	23.1	22.3	21.1	22.3	22.4	21.6
N68-96	21.9	21.8	22.9	21.0	23.4	22.6
N68-197	22.1	22.4	22.4	21.7	23.8	23.1
N68-383	22.8	20.9	23.6	22.5	24.6	22.6
N68-1685	23.6	23.4	23.1	22.8	23.4	23.0
N68-1696	22.1	21.2	22.4	21.0	23.1	21.8
R68-226	21.4	21.2	--	20.5	21.6	22.2
R68-296	21.4	20.9	21.1	20.3	21.0	20.2
R68-727	22.1	21.9	21.9	20.9	23.4	21.6
V66-217	22.1	21.2	21.1	21.2	24.5	21.2
V67-453	22.9	22.1	21.4	20.9	22.8	23.1
V68-183	22.8	22.4	21.9	21.2	24.5	23.8
V68-224	22.8	21.1	21.8	21.4	24.8	23.5
V68-273	23.3	22.4	22.1	23.0	23.9	22.8
V68-297	23.1	21.8	21.9	21.6	24.3	23.5
V68-381	21.4	21.1	22.1	21.2	23.4	22.6
V68-361	21.6	21.6	21.9	21.2	24.1	23.0
V68-2331	22.9	20.3	21.9	23.5	24.5	24.7

Table 26. - Protein percentages for the strains in Preliminary Group V, 1970

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)
Hill	37.7	41.3	39.3	39.7	36.5	35.5
Dare	39.9	40.4	39.4	39.9	36.0	36.5
D65-3168	42.8	43.1	43.3	43.6	42.9	44.0
D65-3438	38.5	38.9	39.7	40.3	38.7	38.4
D66-12,392	38.6	40.1	40.5	40.5	38.6	38.6
D66-12,394	37.8	40.1	40.1	41.1	33.4	39.0
D67-3397	41.1	42.9	43.1	42.5	41.1	42.8
D68-8	38.4	39.9	41.0	40.4	40.7	40.2
D68-18	39.8	38.0	41.4	41.7	38.7	40.0
D68-47	39.0	40.1	40.0	40.3	38.1	38.8
D68-140	39.4	40.4	41.0	42.3	37.6	39.0
D68-399	39.4	42.2	42.1	40.7	38.7	39.4
D68-4155	38.5	39.4	38.7	38.9	37.5	38.4
D68-4291	36.6	36.8	36.3	37.0	35.6	35.8
D68-4345	42.3	42.6	41.8	41.5	40.8	42.8
D68-4501	48.8	46.6	49.1	49.6	45.5	49.4
D68-4816	43.0	43.0	43.6	44.0	42.3	40.1
D68-5018	42.3	44.5	43.6	44.3	40.8	41.6
D68-2214	39.9	41.6	41.4	41.8	38.6	41.5
N68-96	42.1	42.6	41.5	42.8	38.9	39.8
N68-197	41.1	41.7	42.2	42.9	37.1	39.6
N68-383	41.0	43.2	41.9	41.4	38.2	40.5
N68-1685	38.9	40.2	40.6	40.9	38.6	40.2
N68-1696	38.5	41.6	40.6	41.2	38.7	40.5
R68-226	40.2	42.6	--	43.1	39.0	39.6
R68-296	40.6	41.8	42.1	42.4	39.2	42.0
R68-727	39.4	40.6	40.8	40.9	37.5	40.8
V66-217	40.0	41.2	41.7	41.2	35.2	40.0
V67-453	38.7	39.2	40.0	41.1	36.0	37.1
V68-183	40.3	39.7	41.5	42.4	35.9	37.7
V68-224	39.4	39.3	42.5	42.0	36.0	38.1
V68-273	40.6	41.8	42.2	42.2	38.5	39.3
V68-297	41.6	43.0	42.0	43.0	38.9	39.9
V68-381	41.4	41.8	40.9	41.1	38.4	39.6
V68-461	42.0	42.0	42.8	41.9	38.1	38.9
V68-2331	38.2	41.8	40.9	41.0	37.6	36.9

Table 27. - Plant height for the strains in Preliminary Group V, 1970

Strain	George- town, Del.	Link- wood, Md.	Warsaw, Va.	Plymouth, N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.(B)
Hill	46	39	35	40	28	33	36
Dare	39	40	38	39	34	32	36
D65-3168	40	39	40	38	35	32	33
D65-3438	49	43	41	39	36	36	34
D66-12,392	39	36	34	34	30	27	28
D66-12,394	39	36	34	35	30	30	31
D67-3397	40	36	34	36	27	25	30
D68-8	47	43	41	47	35	34	37
D68-18	50	40	36	41	36	32	36
D68-47	44	37	36	40	31	30	32
D68-140	46	41	38	43	27	32	35
D68-399	43	35	30	39	34	30	32
D68-4155	38	27	40	48	33	30	35
D68-4291	45	39	39	46	38	30	30
D68-4345	35	33	33	35	27	25	27
D68-4501	37	35	36	36	26	31	30
D68-4816	37	35	34	38	28	29	30
D68-5018	38	36	32	37	28	29	30
D68-2214	45	41	40	43	34	38	36
N68-96	42	34	28	35	24	28	30
N68-197	42	40	37	38	30	30	34
N68-383	44	37	34	38	33	30	31
N68-1685	40	39	36	41	27	33	31
N68-1696	43	41	36	43	33	30	35
R68-226	40	36	40	--	32	28	29
R68-296	55	42	44	46	38	37	36
R68-727	44	37	36	40	34	32	32
V66-217	45	41	38	45	32	33	36
V67-453	43	40	36	39	30	32	32
V68-183	48	44	42	45	34	36	34
V68-224	42	37	34	39	27	32	29
V68-273	38	37	33	35	27	33	25
V68-297	44	38	34	38	24	31	31
V68-381	38	37	34	39	30	29	28
V68-461	43	35	34	41	28	30	29
V68-2331	45	38	34	38	27	28	27

Table 28. - Seed quality scores for the strains in Preliminary Group V, 1970

Strain	George- town, Del.	Link- wood, Md.	Warsaw, Va.	Plymouth, N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.(B)
Hill	2.3	2.0	1.4	1.0	3.8	3.5	2.0
Dare	2.3	2.0	1.3	1.0	2.0	3.0	2.0
D65-3168	2.0	2.5	1.6	1.0	3.3	3.0	2.0
D65-3438	2.3	3.0	2.7	1.0	3.8	3.8	2.0
D66-12,392	3.0	3.0	1.6	1.0	4.5	3.8	2.0
D66-12,394	2.5	3.0	1.3	1.0	3.8	3.5	2.0
D67-3397	2.8	3.0	1.5	1.0	3.3	3.3	2.5
D68-8	1.8	2.0	2.4	1.0	2.5	3.3	2.0
D68-18	2.3	3.0	2.4	1.0	2.5	4.0	3.5
D68-47	2.3	3.0	3.1	1.0	3.0	3.0	2.5
D68-140	2.5	3.0	3.0	1.0	5.0	5.0	3.0
D68-399	2.5	2.0	1.7	1.0	3.8	2.8	2.5
D68-4155	2.3	2.0	1.8	1.0	3.3	3.3	2.5
D68-4291	3.0	3.0	3.0	2.0	2.5	5.0	2.5
D68-4345	2.3	3.0	1.7	2.0	2.8	2.8	2.0
D68-4501	3.0	3.0	2.1	1.5	4.8	5.0	2.0
D68-4816	2.3	3.0	2.2	2.0	4.3	4.3	2.0
D68-5018	2.0	2.0	2.5	2.0	3.8	3.5	2.0
D68-2214	2.5	3.0	2.0	1.0	2.3	3.0	3.0
N68-96	2.0	2.0	1.5	1.0	3.0	3.3	2.0
N68-197	2.5	2.0	1.6	1.5	2.8	3.3	2.0
N68-383	2.0	2.0	1.5	1.5	2.3	3.0	2.5
N68-1685	1.5	2.0	1.6	1.0	3.0	2.8	2.0
N68-1696	2.0	2.0	2.0	1.0	3.0	2.5	2.0
R68-226	2.0	2.0	2.2	---	3.5	2.0	2.5
R68-296	2.3	2.0	2.3	1.5	3.5	3.5	2.0
R68-727	2.5	2.0	2.1	1.5	2.3	3.0	2.0
V66-217	1.5	2.0	1.8	1.5	3.5	3.8	2.5
V67-453	2.0	2.0	1.2	1.0	3.0	3.3	2.0
V68-183	1.5	2.0	1.5	1.5	4.0	3.8	2.5
V68-224	2.0	2.0	1.1	1.0	3.5	3.3	2.0
V68-273	2.0	3.0	1.8	1.5	3.3	3.5	2.5
V68-297	2.3	2.0	1.7	2.0	3.3	3.3	2.0
V68-381	1.8	2.0	1.8	1.5	3.0	3.5	2.0
V68-461	2.3	2.0	1.5	1.5	3.0	3.8	2.0
V68-2331	1.5	2.0	1.2	2.0	5.0	4.0	2.0

UNIFORM GROUP VI

1970

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Hood	Roanoke x N45-745	F ₆
2. Lee 68	Lee(6) x Arksoy	Sel. F ₃ lines
3. Davis	D49-2573 x N45-1497	F ₆
4. D64-4636	Hill x D58-3311	F ₅
5. Pickett 71 (D68-B4)	Pickett x P.R.-resistant Lee	Comp. F ₄ lines
6. N66-1231	N56-4202 x N57-6801	F ₄
7. N66-1783	N56-4202 x N57-6801	F ₄
8. D65-3622	Hill x PI 187,155	F ₇
9. D65-4206	Hill x PI 227,557	F ₇
10. D67-3951	D63-6107 x D60-9647	F ₅
11. D67-4106	D63-6107 x D60-9647	F ₅
12. D67-4601	D61-618 x D60-9647	F ₅

Background of strains used as parents:

N45-745 is a bacterial-pustule-resistant selection from Ogden x CNS.

D49-2573 is a selection from Roanoke x N45-745 similar in maturity to Hood, but taller.

N45-1497 is a high oil line selected from Ral soy x Ogden which carries the Arksoy type resistance to phytophthora rot.

D58-3311 is a bacterial-pustule-resistant strain selected from Jackson(4) x D49-2491.

N56-4202 is a selection from N46-1703 x D49-2525 which was grown in Uniform Group VI for the years 1959-61. N46-1703 is a selection from Ogden x Volstate.

N57-6801 is a selection from Jackson x D49-2491.

D63-6107 is a phytophthora-rot-resistant selection from Hill(4) x PI 171,442.

D61-618 is a phytophthora-rot-resistant selection from Hill(2) x PI 171,442.

D60-9647 is a high protein line selected from FC31745 x D49-2510, which was included in Uniform Group VI 1963-1965.

Thirty-three Uniform Group VI nurseries were planted. Results from 31 nurseries are summarized in Tables 29 through 35. Table 29 gives a general summary of agronomic qualities, chemical composition of the seed, and field reaction to several diseases. Two and three-year data are reported for seed yield, and oil and protein percentages.

Seed yield differences among strains were significant at the 5% level of confidence at 22 locations. The combined analysis of variance for mean seed yield by production regions showed differences to be significant at the 5% level in all but the Delta region.

D64-4636 has been included for a fourth year. Its 4-year mean seed yield ranks above that for the named varieties in the East Coast and Delta regions. Maturity is similar to that of Hood. The mean seed yield of D64-4636 is below that for Hood only in the West. It has a high level of resistance to root-knot nematodes, good field resistance to phytophthora rot, and is superior to Hood in seed holding.

The strain grown the past 2 years as D68-B4 has been released as Pickett 71. This strain carries resistance to phytophthora rot as well as to cyst nematodes. The 2-year mean seed yields closely approximate those for Lee 68 in all areas except the West. However, differences in the West were smaller in 1970 than in 1969.

N66-1231 and N66-1783 have also been grown 2 years. N66-1231 is of Hood and D64-4636 maturity. Seed yield averaged below that for D64-4636. N66-1783 yielded less than Lee 68 in the Southeast but more than Lee in the Delta. Both N66-1231 and N66-1783 suffered from a nutritional problem on the high plains.

Five strains, D65-3622, D65-4206, D67-3751, D67-4106, and D67-4601, were grown only one year. D65-3622 and D65-4206 had plant introduction lines as one parent. Neither proved to be outstanding. D67-4106 was of Hood maturity but averaged lower in seed yield than D64-4636 in all areas. D67-3751 and D67-4601 appear most promising of these lines. Both have higher protein and lower oil than Lee 68. Both have good resistance to phytophthora rot but are susceptible to root-knot nematodes.

Ratings for worm feeding are reported in Table 29 for Quincy, Florida. Lee 68, Pickett 71, N66-1783, and D67-4601 all had relatively lower ratings than the other strains. Even with 60% leaf feeding, reasonably good seed yields were produced. For example, Lee 68 with 60% feeding produced at the rate of 26.5 bu per acre and Davis with 95% feeding produced at the rate of 8.1 bu per acre. Davis usually averages higher in yield than Lee 68 in the Southeast.

Table 29. - General summary of the performance for the strains in Uniform Group VI, 1970

	Hood	Lee 68	Davis	D64-4636	Pickett 71	N66-1231
Seed Yield - 1970						
East Coast	34.3	34.9	36.6	38.6+	36.5	37.5
Southeast	36.0	42.1	48.9+	37.7	43.2+	36.5
Upper & Central South	42.7	36.3	40.6	44.2	42.7	43.9
Delta	34.5	32.0	34.7	37.6	31.7	38.9
West	38.4	34.3	38.3	36.9	33.2	32.8
- 1969-70						
East Coast	35.9	37.0	38.3	40.7	36.9	40.2
Southeast	35.5	38.9	43.9	37.2	41.0	36.0
Upper & Central South	41.9	38.3	40.2	43.3	41.1	41.6
Delta	35.2	34.4	36.6	39.5	33.3	38.9
West	37.2	34.2	37.0	33.4	31.8	29.4
- 1968-70						
East Coast	36.2	35.9	36.7	39.4		
Southeast	34.1	36.0	41.3	34.3		
Upper & Central South	44.8	41.8	45.0	45.0		
Delta	36.1	35.8	38.3	39.9		
West	39.5	36.5	38.5	34.7		
Oil Content - 1970	23.1	21.4-	22.0-	21.4-	21.4-	22.6-
- 1969-70	22.9	21.6	22.1	21.5	21.6	22.6
- 1968-70	22.8	21.5	22.0	21.4		
Protein Content - 1970	39.3	41.7+	40.3+	41.1+	41.0+	41.2+
- 1969-70	39.5	41.8	40.3	41.0	40.9	41.1
- 1968-70	39.1	41.0	39.6	40.6		
Seed size	14.3	13.3-	13.8	13.8	12.5-	14.3
Maturity index	10-4	+9	+8	+1	+10	+1
Height	31	31	37	30	30	33
Phytophthora rot	2.3	1.0	1.0	1.0	1.0	1.7
Root knot	4.0	4.0	4.0	1.0	4.0	1.0
Cyst nematode	S	S	S	S	R	S
Seed coat mottling (%) ¹	0	13	0	11	21	13
Seed holding	2.0	1.0	2.3	1.0	1.0	1.3
Flower color	P	P	W	W	P	W
Pubescence color	G	T	G	G	G	T
Pod wall color ²	T	T	T	T	T	Br
Worm feeding (%)	83	60	95	98	58	78

¹Halfway, Texas; Plymouth, N.C.; Petersburg, Va.

²Quincy, Florida

Table 29. - (continued)

	N66-1783	D65-3622	D65-4206	D67-3951	D67-4106	D67-4601
Seed Yield - 1970						
East Coast	34.4	35.4	32.4	36.9	32.9	36.4
Southeast	33.4	28.2-	33.2	35.9	36.4	40.2
Upper & Central South	40.6	33.0-	37.7	39.6	37.1	37.0
Delta	36.0	33.0	32.7	32.8	31.9	34.8
West	27.5-	33.6	36.6	35.5	33.6	36.8
- 1969-70						
East Coast	37.2					
Southeast	33.4					
Upper & Central South	39.4					
Delta	37.3					
West	25.6					
- 1968-70						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
Oil Content - 1970	22.2-	20.8-	21.8-	18.3-	20.0-	19.8-
- 1969-70	22.1					
- 1968-70						
Protein Content - 1970	41.5+	42.3+	40.3+	43.7+	43.8+	44.2+
- 1969-70	41.4					
- 1968-70						
Seed size	15.0	18.8+	14.6	15.7+	15.7+	15.5+
Maturity index	+7	+1	-2	+6	0	+8
Height	38	28	29	28	34	35
Phytophthora rot	2.0	1.0	1.0	1.0	1.0	1.0
Root knot	1.0	3.0	2.0	4.0	4.0	4.0
Cyst nematode	S	S	S	S	S	S
Seed coat mottling (%) ¹	3	45	40	19	17	7
Seed holding	1.6	3.0	1.0	1.3	1.4	1.2
Flower color	W	W	P	W	P	W
Pubescence color	G	G	T	T	T	T
Pod wall color ²	M	T	T	T	T	T
Worm feeding (%)	65	77	82	80	95	63

Table 30. - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1970

Location	Hood	Lee 68	Davis	D64-4636	Pickett 71	N66-1231	N66-1783
<u>East Coast</u>							
Warsaw, Va.	27.4	26.4	21.7-	28.5	23.1-	29.3	24.8-
Petersburg, Va.	30.7	27.6	27.0	32.5	22.9-	33.4	27.7
Holland, Va.	41.2	36.7	41.0	42.8	40.3	39.9	44.4
Plymouth, N.C.	43.2	38.8	44.2	46.1	50.1	48.9	42.7
Willard, N.C.	38.2	49.0+	49.4+	50.9+	41.7	47.2+	42.4
Clayton, N.C.	28.1	29.4	37.8+	28.8	39.3+	33.8	30.4
Florence, S.C.	37.7	39.2	39.7	44.3	42.1	38.2	35.8
Hartsville, S.C.	27.9	31.8	32.0	35.1+	32.1	29.6	26.6
Mean	34.3	34.9	36.6	38.6+	36.5	37.5	34.4
<u>Southeast</u>							
Newton, Miss.*	25.7	21.5-	22.3-	23.4	19.3-	26.5	25.4
Tifton, Ga.	49.6	47.2	65.1+	42.5-	44.6-	44.9-	49.8
Quincy, Fla.*	19.5	26.5+	8.1-	9.0-	24.9	20.0	29.1+
Jay, Fla.	39.1	40.6	47.7+	39.6	43.2	38.0	35.8
Fairhope, Ala.	29.6	49.8	45.3	36.9	49.7	33.6	30.9
Baton Rouge, La.	25.8	30.8	37.3+	31.8	35.2+	29.4	17.0-
Mean	36.0	42.1	48.9+	37.7	43.2+	36.5	33.4
<u>Upper and Central South</u>							
Belle Mina, Ala.	40.9	37.1	38.9	50.3+	44.7	41.4	46.3
Experiment, Ga.	42.9	29.8-	42.5	36.5	39.5	40.3	33.3
Jackson, Tenn.	44.3	42.1	40.3	45.9	44.0	50.1	42.3
Mean	42.7	36.3	40.6	44.2	42.7	43.9	40.6
<u>Delta</u>							
Portageville, Mo.(A)	37.1	31.1-	33.0	37.6	35.7	34.5	37.7
Portageville, Mo.(B)	15.5	26.0	22.6	23.4	20.5	21.4	19.8
Keiser, Ark.	33.0	39.8	38.4	38.8	39.5	41.9	35.2
Marianna, Ark.	35.6	38.3	43.2	35.2	40.1	41.9	41.0
Stoneville, Miss.(A)	35.2	15.8-	26.6-	39.4	19.2-	35.8	32.2
Stoneville, Miss.(B)	38.8	41.6	43.0	43.8	41.6	47.7+	40.4
St. Joseph, La.	46.1	31.2-	35.9-	45.2	24.8-	48.9	45.8
Mean	34.5	32.0	34.7	37.6	31.7	38.9	36.0
<u>West</u>							
Stuttgart, Ark.	36.9	32.7-	38.9	39.6	35.0	38.7	38.1
Curtis, La.	48.5	45.4	49.7	49.7	44.4	50.6	29.7
Crowley, La.	44.2	37.1	48.1	34.9-	32.9-	41.0	37.8
Bixby, Okla.	18.6	14.9	17.3	14.0	14.6	9.0	12.4
Halfway, Texas	49.4	47.6	39.5	54.7	42.3	31.4-	20.6-
Lubbock, Texas	44.1	34.7-	35.0-	39.0	35.8-	35.4-	28.5-
Beaumont, Texas	27.2	27.9	39.5+	27.8	27.5	23.3	25.2
Mean	38.4	34.3	38.3	36.9	33.2	32.8	27.5-

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

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

* - Not included in mean.

Table 30. - (continued)

Location	D65-3622	D65-4206	D67-3951	D67-4106	D67-4601	L.S.D. (.05)	C.V.
<u>East Coast</u>							
Warsaw, Va.	28.5	27.8	29.1	25.8	27.1	2.3	5%
Petersburg, Va.	32.2	25.5	33.3	29.0	24.1-	5.5	11%
Holland, Va.	40.8	37.6	44.6	42.5	47.3	N.S.	11%
Plymouth, N.C.	47.5	39.9	46.2	40.9	49.7	N.S.	11%
Willard, N.C.	40.3	36.3	44.4	37.4	44.2	7.2	10%
Clayton, N.C.	31.9	25.0	26.3	23.2	25.4	8.0	11%
Florence, S.C.	40.9	38.5	38.5	37.5	39.7	N.S.	7%
Hartsville, S.C.	21.0-	28.3	32.3	26.5	33.2+	4.5	9%
Mean	35.4	32.4	36.9	32.9	36.4	3.4	
<u>Southeast</u>							
Newton, Miss.*	23.9	22.4-	19.7-	21.6-	22.6-	3.0	8%
Tifton, Ga.	34.0-	37.0-	38.0-	41.7-	49.1	4.6	6%
Quincy, Fla.*	15.9	16.2	20.1	14.1	26.2+	6.0	18%
Jay, Fla.	33.2-	36.8	35.6	32.7-	40.3	5.3	8%
Fairhope, Ala.	34.5	33.1	41.2	36.9	44.4	N.S.	30%
Baton Rouge, La.	11.2-	25.8	29.0	34.3+	27.1	8.5	18%
Mean	28.2-	33.2	35.9	36.4	40.2	7.1	
<u>Upper and Central South</u>							
Belle Mina, Ala.	33.9	37.4	39.4	35.6	34.5	8.0	12%
Experiment, Ga.	20.5-	33.6	34.3	36.0	36.8	10.4	17%
Jackson, Tenn.	44.5	42.1	45.0	39.7	39.6	N.S.	13%
Mean	33.0-	37.7	39.6	37.1	37.0	7.1	
<u>Delta</u>							
Portageville, Mo.(A)	31.6-	32.7-	29.8-	34.7	37.9	4.3	8%
Portageville, Mo.(B)	17.4	22.3	20.8	19.1	21.4	N.S.	18%
Keiser, Ark.	33.8	36.1	39.9	38.7	39.4	N.S.	8%
Marianna, Ark.	40.7	32.3	38.0	37.3	37.5	N.S.	13%
Stoneville, Miss.(A)	31.4	33.9	24.9-	20.6-	19.6-	5.9	13%
Stoneville, Miss.(B)	38.1	36.1	41.0	35.6	46.4+	5.6	8%
St. Joseph, La.	37.9-	35.2-	35.1-	37.1-	41.5	5.2	8%
Mean	33.0	32.7	32.8	31.9	34.8	N.S.	
<u>West</u>							
Stuttgart, Ark.	35.1	33.4	35.2	29.4-	32.7-	4.1	16%
Curtis, La.	41.5	49.0	37.2	45.1	45.1	N.S.	18%
Crowley, La.	29.7-	37.4	34.4-	41.7	41.7	8.2	13%
Bixby, Okla.	13.0	20.8	18.3	8.9	13.3	7.1	28%
Halfway, Texas	51.3	43.9	53.1	47.0	57.2	13.8	18%
Lubbock, Texas	42.5	40.7	42.0	35.4-	34.2-	5.8	9%
Beaumont, Texas	22.0	30.9	28.1	27.6	33.5	7.3	7%
Mean	33.6	36.6	35.5	33.6	36.8	5.7	

Table 31. - Chemical composition and seed size for the strains in Uniform Group VI, 1970

Location	Hood	Lee 68	Davis	D64-4636	Pickett 71	N66-1231	N66-1783
<u>Oil Percentage</u>							
Warsaw, Va.	22.4	22.1	21.9	21.2	21.8	22.3	22.9
Plymouth, N.C.	22.9	22.8	22.4	21.4	22.3	23.1	21.8
Willard, N.C.	25.6	22.9	22.4	21.6	22.4	23.6	22.1
Jay, Fla.	25.1	22.9	24.2	22.0	23.5	24.5	24.7
Portageville, Mo.(A)	23.5	21.6	23.2	21.6	22.5	23.2	22.8
Keiser, Ark.	22.6	21.3	22.1	22.3	21.3	21.9	22.4
Stoneville, Miss.(A)	21.6	19.0	20.4	21.4	19.3	21.7	21.7
Stoneville, Miss.(B)	23.1	21.4	21.6	20.9	21.4	22.8	21.1
Stuttgart, Ark.	22.9	20.5	20.9	21.2	20.9	22.3	22.1
Halfway, Texas	20.9	19.6	20.6	20.6	18.8	20.9	19.9
Mean	23.1	21.4-	22.0-	21.4-	21.4-	22.6-	22.2-
<u>Protein Percentage</u>							
Warsaw, Va.	40.0	40.3	40.8	41.1	40.6	41.1	40.5
Plymouth, N.C.	40.3	41.6	40.9	41.9	41.6	40.2	42.1
Willard, N.C.	40.9	43.5	41.8	44.0	41.9	43.9	44.3
Jay, Fla.	39.6	40.6	39.8	41.4	39.6	42.7	42.0
Portageville, Mo.(A)	39.3	41.2	39.9	40.2	40.0	39.4	40.0
Keiser, Ark.	36.9	39.9	39.2	39.2	37.9	39.5	39.2
Stoneville, Miss.(A)	40.8	44.0	41.8	41.9	43.8	42.3	42.8
Stoneville, Miss.(B)	36.6	40.4	39.2	41.5	40.7	40.3	42.1
Stuttgart, Ark.	40.8	45.1	41.1	42.1	44.0	43.3	42.4
Halfway, Texas	38.1	40.4	38.8	37.2	40.2	39.5	39.5
Mean	39.3	41.7+	40.3+	41.1+	41.0+	41.2+	41.5+
<u>Grams per 100 Seeds</u>							
Warsaw, Va.	14.2	13.3	14.0	12.5	12.0	13.8	14.2
Plymouth, N.C.	15.0	14.2	16.0	15.2	13.9	16.5	14.9
Willard, N.C.	14.9	15.3	15.8	16.0	13.8	16.5	17.7
Jay, Fla.	16.7	14.2	15.9	15.9	13.9	16.1	16.7
Portageville, Mo.(A)	14.0	13.0	13.0	14.0	11.0	13.0	15.0
Keiser, Ark.	13.3	12.0	13.0	13.3	11.0	13.7	14.0
Stoneville, Miss.(A)	12.2	10.3	11.3	12.8	10.6	12.2	13.5
Stoneville, Miss.(B)	14.2	13.2	12.7	14.0	12.0	13.8	14.0
Stuttgart, Ark.	14.0	13.0	13.3	12.0	13.0	14.0	15.0
Halfway, Texas	14.0	14.0	13.0	12.7	13.3	13.3	15.3
Mean	14.3	13.3-	13.8	13.8	12.5-	14.3	15.0

Table 31. - (continued)

Location	D65-3622	D65-4206	D67-3951	D67-4106	D67-4601	L.S.D. (.05)
<u>Oil Percentage</u>						
Warsaw, Va.	22.4	22.4	20.2	21.2	20.0	
Plymouth, N.C.	19.6	22.1	19.9	20.4	20.3	
Willard, N.C.	21.1	22.9	20.1	21.1	20.3	
Jay, Fla.	22.5	24.2	21.3	21.5	21.5	
Portageville, Mo.(A)	21.2	22.5	19.5	20.2	20.2	
Keiser, Ark.	20.4	21.9	18.9	19.9	21.0	
Stoneville, Miss.(A)	19.9	20.7	18.0	18.2	17.7	
Stoneville, Miss.(B)	20.4	21.7	18.7	19.0	19.9	
Stuttgart, Ark.	21.4	20.3	19.4	19.6	19.3	
Halfway, Texas	19.1	19.7	17.0	18.6	17.6	
Mean	20.8-	21.8-	18.3-	20.0-	19.8-	0.5
<u>Protein Percentage</u>						
Warsaw, Va.	39.8	39.0	41.3	42.3	42.4	
Plymouth, N.C.	44.2	40.2	44.9	43.5	44.6	
Willard, N.C.	45.7	42.6	43.8	47.3	46.4	
Jay, Fla.	43.7	39.4	45.6	42.0	41.7	
Portageville, Mo.(A)	40.5	38.3	43.3	43.1	42.9	
Keiser, Ark.	40.4	38.2	41.9	41.5	42.9	
Stoneville, Miss.(A)	43.9	42.9	46.6	47.0	48.5	
Stoneville, Miss.(B)	43.1	40.4	44.5	44.6	42.8	
Stuttgart, Ark.	41.4	43.3	45.6	44.6	46.9	
Halfway, Texas	40.0	38.5	39.9	42.0	42.5	
Mean	42.3+	40.3+	43.7+	43.8+	44.2+	0.9
<u>Grams per 100 Seeds</u>						
Warsaw, Va.	17.5	13.0	15.2	15.8	15.8	
Plymouth, N.C.	22.4	16.9	17.0	17.1	18.6	
Willard, N.C.	21.6	16.3	18.2	17.1	17.5	
Jay, Fla.	23.4	17.6	19.9	16.8	18.2	
Portageville, Mo.(A)	18.0	13.0	16.0	17.0	15.0	
Keiser, Ark.	18.3	14.0	15.0	16.0	15.0	
Stoneville, Miss.(A)	15.1	12.7	11.6	12.0	11.3	
Stoneville, Miss.(B)	17.6	13.7	13.7	14.3	15.4	
Stuttgart, Ark.	17.0	13.7	15.7	15.0	14.7	
Halfway, Texas	17.0	14.7	15.0	16.3	13.7	
Mean	18.8+	14.6	15.7+	15.7+	15.5+	0.8

Table 32. - Relative maturity data, days earlier (-) or later (+) than Hood, for the strains in Uniform Group VI, 1970

Location	Date planted	Hood matured	Lee 68	Davis	D64-4636	Pickett 71	N66-1231
<u>East Coast</u>							
Warsaw, Va.	5-19	10-15	+8	+9	-2	+8	+1
Petersburg, Va.	5-21	10-10	+6	+10	-1	+6	+3
Holland, Va.	5-21	10-12	+4	+8	+4	+8	+6
Plymouth, N.C.	5-7	10-10	+6	+8	+2	+6	+2
Willard, N.C.	5-11	10-10	+11	+14	0	+9	0
Clayton, N.C.	5-14	10-7	+7	+18	+3	+16	+5
Florence, S.C.	5-15	10-6	+15	+13	+4	+14	+6
Hartsville, S.C.	5-21	10-5	+13	+9	-1	+15	0
Mean		10-9	+9	+11	+1	+10	+3
<u>Southeast</u>							
Newton, Miss.*	6-12	10-5	+4	0	0	0	+2
Tifton, Ga.	5-5	9-25	+12	+9	+1	+13	-3
Jay, Fla.	5-21	9-27	+12	+8	-3	+12	+2
Fairhope, Ala.	6-9	10-1	+11	0	-6	+13	+4
Baton Rouge, La.	5-14	10-9	+17	+12	+4	+17	+7
Mean		10-1	+13	+7	-1	+14	+3
<u>Upper and Central South</u>							
Belle Mina, Ala.	5-7	10-11	0	-1	+1	+1	+1
Experiment, Ga.	6-10	10-8	+3	+3	-5	+3	-3
Jackson, Tenn.	5-13	10-16	+2	+5	-4	+9	+1
Mean		10-12	+2	+2	-3	+4	0
<u>Delta</u>							
Portageville, Mo.(A)	5-13	10-23	+9	+11	0	+13	0
Portageville, Mo.(B)	5-15	10-23	+13	+14	+8	+14	+1
Marianna, Ark.	5-19	10-14	+11	+6	-6	+14	-6
Stoneville, Miss.(A)	5-15	10-1	+6	+1	-2	+7	-2
Stoneville, Miss.(B)	5-12	10-16	+8	+8	-1	+6	-1
St. Joseph, La.	5-13	9-27	+19	+15	+29	+17	+9
Mean		10-12	+11	+8	+3	+11	0
<u>West</u>							
Stuttgart, Ark.	6-10	10-11	+10	+11	+2	+12	0
Curtis, La.	5-15	10-3	+8	+9	+2	+9	-2
Beaumont, Texas	5-29	10-5	+3	+1	0	0	0
Mean		10-6	+7	+7	+1	+7	0

Table 32. - (continued)

Location	N66-1783	D65-3622	D65-4206	D67-3951	D67-4106	D67-4601
<u>East Coast</u>						
Warsaw, Va.	+2	-2	-5	-1	-4	+3
Petersburg, Va.	+7	-1	-3	+2	--	+1
Holland, Va.	+8	0	0	+2	+2	+6
Plymouth, N.C.	+8	+8	0	+2	-5	+8
Willard, N.C.	+9	+9	-3	+9	-3	+14
Clayton, N.C.	+5	+1	-2	+16	+5	+7
Florence, S.C.	+19	+7	0	+17	0	+17
Hartsville, S.C.	+4	0	-1	+7	+1	+17
Mean	+8	+3	-2	+7	0	+9
<u>Southeast</u>						
Newton, Miss.*	+4	+4	0	0	+2	+2
Tifton, Ga.	+10	-2	0	+10	-1	+9
Jay, Fla.	0	+3	-4	+12	+1	+1
Fairhope, Ala.	0	+9	-6	+9	0	+11
Baton Rouge, La.	+19	+13	+4	+17	+6	+22
Mean	+7	+6	-2	+12	+2	+11
<u>Upper and Central South</u>						
Belle Mina, Ala.	+1	+2	+2	+1	+2	+1
Experiment, Ga.	0	-4	-6	+1	-5	+2
Jackson, Tenn.	+9	+3	-6	+3	0	+4
Mean	+3	0	-3	+2	-1	+2
<u>Delta</u>						
Portageville, Mo.(A)	+10	0	-4	+3	-2	+9
Portageville, Mo.(B)	+8	+5	0	+11	+8	+14
Marianna, Ark.	+2	0	-9	+4	-6	+11
Stoneville, Miss.(A)	+1	-1	-3	+3	-2	+5
Stoneville, Miss.(B)	+7	-9	-10	+1	-1	+3
St. Joseph, La.	+19	+2	0	+12	+1	+10
Mean	+8	-1	-5	+5	-1	+8
<u>West</u>						
Stuttgart, Ark.	+11	-1	+8	+7	-1	+9
Curtis, La.	+7	-5	-1	+2	0	+4
Beaumont, Texas	+4	+1	0	+3	+1	+4
Mean	+7	-2	+2	+4	0	+6

* - Not included in mean

Table 33. - Plant height for the strains in Uniform Group VI, 1970

Location	Hood	Lee 68	Davis	D64-4636	Pickett 71	N66-1231
<u>East Coast</u>						
Warsaw, Va.	39	39	47	38	36	41
Petersburg, Va.	34	36	41	32	37	38
Holland, Va.	41	38	42	39	40	47
Plymouth, N.C.	43	39	48	37	40	47
Willard, N.C.	28	34	39	31	31	33
Clayton, N.C.	33	32	40	30	32	34
Florence, S.C.	31	34	37	30	34	32
Hartsville, S.C.	31	29	38	28	28	29
Mean	35	35	42	33	35	38
<u>Southeast</u>						
Newton, Miss.*	20	23	22	17	20	18
Tifton, Ga.	23	19	37	20	18	24
Quincy, Fla.	17	19	27	22	20	20
Jay, Fla.	24	25	31	22	26	24
Fairhope, Ala.	27	33	35	23	23	27
Baton Rouge, La.	21	26	32	26	26	28
Mean	22	24	26	23	23	25
<u>Upper and Central South</u>						
Belle Mina, Ala.	31	36	40	34	34	41
Experiment, Ga.	29	27	31	32	26	36
Jackson, Tenn.	43	44	51	47	43	52
Mean	34	36	41	38	34	43
<u>Delta</u>						
Portageville, Mo.(A)	32	32	47	31	33	34
Portageville, Mo.(B)	21	25	25	23	24	23
Keiser, Ark.	34	33	41	31	34	35
Marianna, Ark.	35	35	44	33	34	37
Stoneville, Miss.(A)	37	37	41	31	33	40
Stoneville, Miss.(B)	38	36	39	35	35	37
St. Joseph, La.	36	34	41	38	35	43
Mean	33	32	39	31	32	35
<u>West</u>						
Stuttgart, Ark.	31	34	36	28	33	34
Curtis, La.	26	28	34	25	22	31
Crowley, La.	22	17	28	19	19	24
Bixby, Okla.	26	31	30	25	28	26
Halfway, Texas	33	34	35	29	31	28
Lubbock, Texas	33	33	37	31	34	34
Beaumont Texas	25	26	31	24	27	24
Mean	28	29	33	26	28	29

*- Not included in mean

Table 33. - (continued)

Location	N66-1783	D65-3622	D65-4206	D67-3951	D67-4106	D67-4601
<u>East Coast</u>						
Warsaw, Va.	52	33	38	31	43	40
Petersburg, Va.	44	33	31	32	33	40
Holland, Va.	49	37	38	35	41	45
Plymouth, N.C.	50	38	41	39	46	46
Willard, N.C.	43	30	27	32	35	35
Clayton, N.C.	40	31	33	30	32	35
Florence, S.C.	38	30	30	31	34	35
Hartsville, S.C.	36	25	26	26	33	36
Mean	44	32	33	32	37	39
<u>Southeast</u>						
Newton, Miss.*	28	23	19	17	17	24
Tifton, Ga.	30	16	16	18	22	22
Quincy, Fla.	23	18	18	16	21	21
Jay, Fla.	27	20	26	22	28	27
Fairhope, Ala.	31	23	19	27	34	34
Baton Rouge, La.	35	20	23	23	34	31
Mean	29	19	20	21	28	27
<u>Upper and Central South</u>						
Belle Mina, Ala.	47	26	34	32	37	37
Experiment, Ga.	41	26	27	26	34	30
Jackson, Tenn.	58	45	43	40	44	47
Mean	49	32	35	33	38	38
<u>Delta</u>						
Portageville, Mo.(A)	43	31	31	29	37	38
Portageville, Mo.(B)	25	20	24	25	24	28
Keiser, Ark.	31	31	29	32	40	37
Marianna, Ark.	41	34	33	33	37	39
Stoneville, Miss.(A)	42	35	35	30	40	38
Stoneville, Miss.(B)	41	28	32	31	40	41
St. Joseph, La.	44	30	32	26	39	44
Mean	38	30	30	29	36	38
<u>West</u>						
Stuttgart, Ark.	40	32	28	29	34	36
Curtis, La.	29	25	24	25	35	36
Crowley, La.	29	18	19	20	24	26
Bixby, Okla.	33	28	28	27	29	29
Halfway, Texas	27	29	32	34	38	38
Lubbock, Texas	41	26	29	29	39	38
Beaumont, Texas	32	22	23	24	27	29
Mean	33	26	26	27	32	33

Table 34. - Lodging scores for the strains in Uniform Group VI, 1970

Location	Hood	Lee 68	Davis	D64-4636	Pickett 71	N66-1231
<u>East Coast</u>						
Warsaw, Va.	1.5	2.5	1.8	1.0	2.0	1.0
Petersburg, Va.	3.3	2.3	4.0	2.3	3.3	1.3
Holland, Va.	3.5	4.3	3.3	3.8	3.2	1.2
Plymouth, N.C.	3.0	3.3	3.7	4.0	3.0	3.0
Willard, N.C.	2.7	3.0	2.0	2.0	2.0	2.0
Clayton, N.C.	3.0	3.7	3.0	3.0	3.7	3.0
Florence, S.C.	2.0	3.0	1.0	1.0	3.0	1.0
Hartsville, S.C.(A)	2.3	2.2	2.7	2.0	1.7	1.2
<u>Southeast</u>						
Tifton, Ga.	1.0	1.0	2.0	1.0	1.3	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.0	1.0	1.1	1.1	1.3	1.1
<u>Upper and Central South</u>						
Belle Mina, Ala.	1.7	1.3	1.3	1.3	2.3	1.0
Experiment, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Jackson, Tenn.	1.0	2.0	1.0	1.0	2.0	1.0
<u>Delta</u>						
Portageville, Mo.(A)	3.8	4.8	3.8	2.8	4.3	3.5
Portageville, Mo.(B)	1.5	2.2	1.7	1.5	2.0	1.5
Keiser, Ark.	1.7	1.7	1.0	1.3	1.0	1.0
Marianna, Ark.	2.3	2.7	2.7	2.3	2.7	2.0
Stoneville, Miss.(A)	2.0	3.3	4.0	2.3	2.3	2.3
Stoneville, Miss.(B)	2.3	2.3	3.0	2.0	2.3	2.0
St. Joseph, La.	5.0	4.3	5.0	5.0	4.7	3.7
<u>West</u>						
Stuttgart, Ark.	1.7	3.0	1.3	1.7	2.0	1.0
Curtis, La.	2.0	2.0	1.3	1.7	1.3	1.7
Bixby, Okla.	1.0	1.7	1.0	1.0	1.3	1.0
Halfway, Texas	1.0	3.0	2.0	1.0	2.3	1.3
Lubbock, Texas	1.0	2.0	1.5	1.0	2.0	1.0
Beaumont, Texas	1.0	1.0	3.0	1.0	1.0	1.0

Table 34. - (continued)

Location	N66-1783	D65-3622	D65-4206	D67-3951	D67-4106	D67-4601
<u>East Coast</u>						
Warsaw, Va.	1.7	1.7	1.8	1.3	2.7	2.2
Petersburg, Va.	2.0	2.3	3.3	4.0	2.7	2.7
Holland, Va.	3.0	3.0	4.0	3.7	3.0	2.0
Plymouth, N.C.	4.0	3.7	3.7	3.0	3.7	3.0
Willard, N.C.	3.0	2.0	2.0	2.3	2.3	2.7
Clayton, N.C.	3.0	3.7	4.0	3.7	3.7	3.0
Florence, S.C.	2.0	2.0	2.0	2.0	2.0	2.0
Hartsville, S.C.(A)	2.7	1.3	1.8	1.5	2.0	2.5
<u>Southeast</u>						
Tifton, Ga.	2.7	1.0	1.0	1.0	1.0	1.3
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.0	1.0	1.7	1.0	2.0	1.5
<u>Upper and Central South</u>						
Belle Mina, Ala.	2.0	1.0	1.0	1.0	1.3	1.3
Experiment, Ga.	1.3	1.0	1.0	1.0	1.3	1.0
Jackson, Tenn.	2.0	1.0	2.0	2.0	1.0	1.0
<u>Delta</u>						
Portageville, Mo.(A)	3.3	3.3	4.5	4.3	4.5	3.8
Portageville, Mo.(B)	1.5	1.5	1.5	1.3	1.5	1.8
Keiser, Ark.	1.0	1.7	1.3	1.3	1.3	1.0
Marianna, Ark.	2.7	3.0	2.0	3.0	2.0	3.0
Stoneville, Miss.(A)	3.3	2.3	3.3	2.3	3.0	3.3
Stoneville, Miss.(B)	3.0	2.0	2.0	2.0	3.0	3.0
St. Joseph, La.	4.7	2.7	5.0	5.0	5.0	4.7
<u>West</u>						
Stuttgart, Ark.	2.0	2.3	2.0	1.7	2.3	2.0
Curtis, La.	1.7	2.0	2.0	1.3	2.7	2.0
Bixby, Okla.	1.0	1.0	1.7	1.0	1.0	1.0
Halfway, Texas	1.0	2.0	2.0	1.6	2.3	2.3
Lubbock, Texas	2.0	2.0	2.0	1.0	2.0	2.0
Beaumont, Texas	2.0	1.0	1.0	1.0	1.0	1.0

Table 35. - Seed quality scores for the strains in Uniform Group VI, 1970

Location	Hood	Lee 68	Davis	D64-4636	Pickett 71	N66-1231
<u>East Coast</u>						
Warsaw, Va.	1.6	1.7	1.7	2.4	1.6	2.7
Petersburg, Va.	1.0	2.0	1.0	1.0	1.0	1.0
Holland, Va.	3.0	2.7	2.0	3.0	2.0	2.0
Plymouth, N.C.	3.5	2.0	2.0	2.0	2.0	3.0
Willard, N.C.	4.5	2.0	2.5	2.5	2.0	4.0
Clayton, N.C.	3.0	1.5	2.0	2.0	1.5	2.0
<u>Southeast</u>						
Tifton, Ga.	2.0	3.0	2.0	2.5	2.0	2.5
Quincy, Fla.	4.0	2.0	3.0	4.0	2.0	3.0
Jay, Fla.	3.0	1.0	2.0	2.0	1.0	3.0
Fairhope, Ala.	2.3	1.3	2.0	2.0	1.7	2.7
Baton Rouge, La.	2.2	1.6	1.4	2.3	4.0	3.8
<u>Upper and Central South</u>						
Experiment, Ga.	2.3	1.7	2.3	2.7	1.7	3.0
Jackson, Tenn.	2.0	2.0	3.0	2.0	2.0	3.0
<u>Delta</u>						
Portageville, Mo.(A)	4.2	3.8	4.8	4.2	4.0	4.7
Portageville, Mo.(B)	5.0	4.8	5.0	5.0	5.0	5.0
Keiser, Ark.	3.3	2.2	3.0	3.2	2.0	3.2
Marianna, Ark.	3.2	2.3	2.8	3.0	2.0	3.3
Stoneville, Miss.(A)	3.0	3.0	3.0	2.3	3.0	3.0
Stoneville, Miss.(B)	3.0	2.0	3.0	2.0	2.0	3.0
St. Joseph, La.	1.5	1.7	1.5	1.1	1.6	2.0
<u>West</u>						
Stuttgart, Ark.	3.0	1.7	2.2	2.5	2.0	3.2
Curtis, La.	3.3	1.7	1.7	2.3	1.7	2.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.7
Lubbock, Texas	1.0	2.0	1.0	1.0	2.0	1.0
Beaumont, Texas	4.0	4.0	4.0	4.0	4.0	4.0

Table 35. - (continued)

Location	N66-1783	D65-3622	D65-4206	D67-3951	D67-4106	D67-4601
<u>East Coast</u>						
Warsaw, Va.	1.9	3.2	3.4	2.6	2.8	2.4
Petersburg, Va.	1.0	2.0	3.0	3.0	3.0	2.0
Holland, Va.	2.7	2.7	2.3	1.0	3.0	2.3
Plymouth, N.C.	3.5	3.5	3.0	2.0	2.5	2.0
Willard, N.C.	3.5	4.0	4.5	2.5	3.5	2.0
Clayton, N.C.	2.0	3.0	3.0	2.0	2.0	2.5
<u>Southeast</u>						
Tifton, Ga.	2.5	3.0	2.5	3.0	2.5	2.5
Quincy, Fla.	1.0	3.0	4.0	3.0	4.0	2.0
Jay, Fla.	3.0	4.0	3.0	3.0	3.0	2.0
Fairhope, Ala.	3.0	4.0	3.7	3.0	2.0	2.3
Baton Rouge, La.	1.4	3.8	3.8	3.2	2.8	4.0
<u>Upper and Central South</u>						
Experiment, Ga.	3.7	4.0	3.7	3.3	3.3	3.3
Jackson, Tenn.	4.0	5.0	5.0	5.0	3.0	2.0
<u>Delta</u>						
Portageville, Mo.(A)	5.0	5.0	5.0	5.0	4.3	3.7
Portageville, Mo.(B)	5.0	5.0	5.0	5.0	5.0	5.0
Keiser, Ark.	3.2	3.5	3.5	3.3	2.7	3.2
Marianna, Ark.	3.2	3.5	3.8	2.8	3.0	3.3
Stoneville, Miss.(A)	3.7	3.0	3.7	2.7	3.0	3.0
Stoneville, Miss.(B)	3.0	3.0	3.0	2.0	3.0	2.0
St. Joseph, La.	1.4	1.7	2.3	2.5	2.0	1.7
<u>West</u>						
Stuttgart, Ark.	2.7	3.5	3.5	3.0	3.3	3.0
Curtis, La.	3.3	2.0	2.0	2.3	3.3	2.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Lubbock, Texas	1.0	3.0	2.0	1.0	2.0	1.0
Beaumont, Texas	4.0	4.0	4.0	4.0	4.0	4.0

PRELIMINARY GROUP VI

1970

Preliminary Group VI nurseries, including 34 experimental strains and the two check strains Lee 68 and D64-4636, were grown at seven locations. The parentage of these strains is reported in Table 36. Performance data are summarized in Tables 37 through 42. Differences in seed yield were significant at the 5% level of confidence at all locations. The combined analysis of variance for seed yield showed differences among strains to be significant. D64-4636 was substituted for Hood as a check variety. D64-4636 has been more productive than Hood, especially on clay. This gives us a better early maturing check strain for the group. As a mean of all locations, D64-4636 yielded significantly better than Lee 68. Only one strain, D69-8178, ranked above D64-4636 in seed yield. Only these two strains produced mean seed yields significantly higher than that of Lee 68. Fourteen additional strains produced mean seed yields which averaged slightly higher than Lee 68. Only three strains produced average yields significantly lower than Lee 68.

Six strains produced seed having a significantly higher protein content than Lee 68. D67-4694, the strain having the highest protein content, was 16% higher in protein and 19% lower in oil than Lee 68. Seed yield averaged somewhat lower than for Lee 68. The greatest difference was at Jay, Florida.

D68-180, a strain resistant to cyst and root-knot nematodes, averaged slightly higher in seed yield than Lee 68 and had good agronomic qualities. D69-8178, a selection from Hood x Semmes, was selected for resistance to pythium, phytophthora rot, and soybean mosaic virus. All qualities were good, although it did show more shattering than desired.

Other strains in addition to D69-8178 and D68-180 which appear to merit being advanced to Uniform Group VI are N68-358, R67-141, R58-208, and V67-447.

Table 36. - Parentage of the strains in Preliminary Group VI, 1970

Variety or strain	Parentage	Generation composited
1. Lee 68		
2. D64-4636	Hill x D58-3311	F5
3. D70-B1	Lee type, resistant to C.N. and P.R.	
4. D65-4226	Hill x PI 227,557	F7
5. D67-3963	D63-6107 x D60-9647	F5
6. D67-4055	D63-6107 x D60-9647	F5
7. D67-4128	D63-6107 x D60-9647	F5
8. D67-4607	D61-618 x D60-9647	F5
9. D67-4694	D62-3286 x D60-9647	F5
10. D67-4793	D62-3286 x D60-9647	F5
11. D68-180	Dyer x Bragg	F5
12. D68-216	Dyer x Bragg	F5
13. D68-391	Pickett x Dyer	F5
14. D68-5031	D59-693 x D60-9647	F5
15. D68-5206	Semmes x D61-2694	F5
16. D68-5358	Semmes x D61-2694	F5
17. D69-8178	Hood x Semmes	F6
18. N68-46	Dare x N60-5234	F4
19. N68-106	Dare x N60-5234	F4
20. N68-154	Dare x N60-5234	F4
21. N68-210	Dare x N60-5234	F4
22. N68-300	Dare x N60-5234	F4
23. N68-356	Dare x N60-5234	F4
24. N68-357	Dare x N60-5234	F4
25. N68-358	Dare x N60-5234	F4
26. N68-1001	N55-47 x York	F4
27. N68-1036	N55-47 x York	F4
28. R66-873	Jackson x Semmes	F5
29. R67-141	R56-49 x R54-171-1	F5
30. R67-269	R56-49 x R54-171-1	F5
31. R68-106	Multiple cross; resistant C.N. and P.R.	
32. R68-193	R54-171-1 x R64-501	F5
33. R68-208	R54-171-1 x R64-501	F5
34. S66-642	Lee type, resistant to C.N.	F4
35. S66-700	Lee type, resistant to C.N.	F4
36. V67-447	S5-7075 x Hill	

Table 37. - General summary of performance for the strains in Preliminary Group VI, 1970

Strain	Seed yield	Maturity index	Ht.	Percent		Seed holding	P.R.	% mottled ¹ seed	
				Oil	Protein				
Lee 68	36.3	10-17	34	21.7	40.8	1.0	1.0	8.5	I
D64-4636	41.6+	-10	32	21.8	40.8	1.0	1.0	0.5	D
D70-B1	35.1	+1	33	21.6	40.7	1.0	1.0	5.0	D
D65-4226	34.4	-12	34	21.8	40.4	1.3	1.0	0.5	D
D67-3963	33.9	-10	36	19.7-	42.3	2.0	1.0	14.0	D
D67-4055	34.5	-8	36	20.9-	41.8	1.3	1.0	13.5	D
D67-4128	34.7	-10	39	20.7-	42.8	1.3	1.0	6.5	D
D67-4607	36.0	-1	40	19.7-	44.5+	1.7	2.0	29.5	D
D67-4694	33.6	-3	31	17.5-	47.3+	1.3	1.0	19.5	D
D67-4793	33.5	-1	30	16.4-	46.6+	1.0	1.0	5.0	D
D68-180	37.0	-1	36	21.7	41.4	1.0	1.0	7.0	D
D68-216	32.8	0	34	20.6-	40.5	1.0	1.0	4.5	D
D68-391	28.9-	-6	26	21.3	39.9	1.7	3.0	3.5	D
D68-5031	37.1	-10	34	20.5-	43.9+	3.0	2.0	5.5	D
D68-5206	32.2	0	30	18.3-	44.8+	1.0	1.0	3.0	D
D68-5358	31.3-	-1	34	16.4-	46.7+	1.0	1.0	6.5	D
D69-8178	42.6+	-6	35	21.3	41.9	1.9	1.0	0	D
N68-46	37.6	-1	36	20.8-	41.1	1.3	1.0	1.5	N
N68-106	36.2	-4	36	21.1	41.6	2.0	2.0	1.0	N
N68-154	32.7	-5	36	22.3	40.7	2.0	4.0	3.5	N
N68-210	38.1	+1	37	21.0-	42.0	2.0	3.0	1.5	N
N68-300	37.6	0	38	21.8	41.7	1.0	2.0	0	N
N68-356	36.6	0	37	21.4	41.7	1.0	1.5	1.5	N
N68-357	36.5	-2	37	21.6	41.3	1.3	2.0	0	N
N68-358	40.4	-4	37	22.0	40.9	1.7	1.0	3.0	N
N68-1001	34.4	0	37	20.3-	41.7	1.3	2.0	0	N
N68-1036	33.5	+1	39	23.1+	38.6-	1.3	1.5	0	N
R66-873	36.4	-1	35	21.8	40.6	1.3	1.0	1.0	R
R67-141	39.7	-2	37	22.5+	39.8	1.5	1.0	0	R
R67-269	37.2	-3	39	21.9	40.7	2.0	1.0	0	R
R68-106	34.3	-3	32	21.9	40.2	1.3	1.0	1.0	R
R68-193	38.3	-2	38	21.3	40.7	1.8	1.0	0	R
R68-208	39.7	-4	35	21.6	41.9	1.2	1.0	1.0	R
S66-642	33.0	-2	32	21.5	40.7	1.0	4.0	3.0	S
S66-700	31.0-	+1	33	21.1	40.8	1.0	2.0	2.5	S
V67-447	36.9	-10	31	21.9	40.7	2.0	1.0	0	V
L.S.D. (.05)	4.7			0.7	2.2				L.
L.S.D. (.01)	6.1			1.0	2.8				C.

¹Petersburg and Plymouth data.

Table 38. - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1970

Strain	Peters- burg, Va.	Plymouth, N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Jay, Fla.
Lee 68	25.7	42.0	35.2	35.6	30.8	39.6	45.6
D64-4636	36.4+	45.2	39.8	31.3	47.7+	43.1	48.1
D70-B1	23.7	38.6	34.7	41.1	23.2	38.7	45.9
D65-4226	35.4+	32.4-	32.9	30.4	29.4	39.4	41.3
D67-3963	32.8+	39.8	34.0	38.3	21.5	35.0	36.0-
D67-4055	30.0	42.2	34.0	32.7	31.8	37.6	33.5-
D67-4128	27.9	45.9	32.8	36.2	34.5	39.5	26.3-
D67-4607	27.5	37.6	37.4	41.6	21.3	40.9	45.9
D67-4694	34.6+	38.5-	35.9	30.6	29.4	36.8	34.9-
D67-4793	28.0	38.7	27.7	25.4	32.5	40.1	42.0
D68-180	30.4	40.9	43.9+	30.9	36.6	38.6	37.7
D68-216	27.6	39.7	33.2	29.3	25.5	32.7	42.0
D68-391	23.8	39.5	39.8	18.2-	23.1	26.1-	31.7-
D68-5031	37.0+	46.6	34.8	31.5	38.3	38.9	32.8-
D68-5206	30.6	31.1-	29.2	34.2	27.6	35.2	37.7
D68-5358	29.0	38.6	27.8	26.9	26.5	31.3	38.8
D69-8178	35.8+	46.6	42.7	40.9	41.5	46.9	44.2
N68-46	30.6	51.2+	36.9	36.4	26.5	39.6	42.4
N68-106	23.3	45.8	37.3	32.3	36.0	35.9	42.7
N68-154	28.4	36.9	38.9	18.8-	30.0	30.1-	45.9
N68-210	33.4+	48.6	39.3	30.3	31.9	38.2	44.9
N68-300	31.0+	42.6	38.4	31.7	26.3	42.9	50.6
N68-356	35.5+	46.8	32.9	28.9	29.1	37.6	45.2
N68-357	31.9+	39.9	37.3	28.8	31.7	40.6	45.2
N68-358	34.8+	52.6+	35.1	37.8	33.2	40.6	48.4
N68-1001	27.9	41.0	35.9	31.7	28.4	33.1	43.1
N68-1036	29.2	38.8	32.2	29.8	29.0	29.8-	45.9
R66-873	31.1+	43.9	35.6	34.8	25.6	38.8	45.2
R67-141	32.9+	43.6	38.8	30.4	39.5	45.8	47.3
R67-269	26.2	34.5-	38.0	42.7	34.7	44.5	40.2
R68-106	23.3	37.2	36.4	37.0	27.0	39.5	39.9
R68-193	32.3+	40.9	33.4	33.3	38.7	48.0	41.6
R68-208	28.6	50.2+	39.2	41.5	24.0	40.6	42.0
S66-642	32.0+	38.9	31.0	26.9	33.8	27.2	41.0
S66-700	25.8	35.9	32.6	27.0	19.5-	37.6	38.5
V67-447	34.0+	43.1	40.4	23.4-	38.8	36.4	42.0
L.S.D. (.05)	5.0	7.2	8.0	11.4	10.9	9.5	8.7
C.V.	8%	9%	11%	17%	17%	12%	10%

Table 39. - Oil percentages for the strains in Preliminary Group VI, 1970

Strain	Petersburg, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)
Lee 68	20.0	22.4	22.0	22.4	21.6
D64-4636	20.2	22.3	21.7	23.3	21.6
D70-B1	19.3	21.9	22.7	22.6	21.7
D65-4226	18.8	22.4	22.7	23.8	21.1
D67-3963	17.9	20.9	20.2	19.6	19.7
D67-4055	18.8	21.6	21.0	21.8	21.1
D67-4128	19.2	21.9	21.4	20.6	20.3
D67-4607	17.2	21.1	20.5	19.6	20.2
D67-4694	16.3	18.2	17.6	18.1	17.3
D67-4793	15.9	16.5	16.4	17.9	15.5
D68-180	21.0	22.8	21.7	21.0	21.9
D68-216	18.9	21.6	20.5	21.3	20.5
D68-391	19.1	21.9	21.0	22.8	21.7
D68-5031	18.4	21.4	20.3	21.0	21.6
D68-5206	17.9	18.7	18.5	18.7	17.8
D68-5358	14.9	17.2	16.3	16.7	16.7
D69-8178	19.7	21.4	21.4	23.4	20.5
N68-46	18.2	22.3	21.4	21.6	20.6
N68-106	19.2	21.9	21.2	22.1	21.2
N68-154	21.3	22.9	21.6	23.4	22.1
N68-210	19.7	21.6	20.5	21.8	21.4
N68-300	19.8	22.8	21.4	22.1	22.8
N68-356	19.7	21.4	21.2	22.6	21.9
N68-357	19.7	21.9	21.0	23.9	21.4
N68-358	19.4	23.1	22.3	22.9	22.3
N68-1001	18.1	20.4	20.3	21.3	21.4
N68-1036	21.0	23.1	23.3	24.1	24.0
R66-873	20.2	22.1	22.2	22.6	21.9
R67-141	20.6	23.1	22.3	23.7	22.6
R67-269	19.3	23.1	21.6	23.2	22.4
R68-106	19.8	22.9	22.2	22.4	22.4
R68-193	20.0	22.3	21.0	21.6	21.4
R68-208	19.2	22.4	21.6	22.1	22.8
S66-642	19.2	22.1	21.6	22.8	21.7
S66-700	19.7	21.8	20.9	22.3	20.9
V67-447	19.1	22.6	22.0	23.5	22.4

Table 40. - Protein percentages for the strains in Preliminary Group VI, 1970

Strain	Petersburg, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)
Lee 68	43.9	41.3	39.4	38.8	40.7
D64-4636	44.7	41.6	40.0	37.3	40.5
D70-B1	43.6	41.2	38.2	39.4	40.9
D65-4226	44.5	41.1	38.3	38.0	39.9
D67-3963	46.7	42.6	40.0	40.1	42.0
D67-4055	46.2	43.5	39.6	39.0	40.7
D67-4128	46.2	42.9	40.9	40.5	43.7
D67-4607	49.2	44.2	42.5	42.9	43.5
D67-4694	50.9	47.5	45.8	43.8	48.3
D67-4793	48.8	48.3	46.4	41.6	48.0
D68-180	41.4	42.2	41.0	41.0	41.6
D68-216	44.2	42.0	37.2	37.9	41.1
D68-391	44.2	42.0	39.0	35.0	39.5
D68-5031	47.1	44.4	44.2	41.1	42.5
D68-5206	46.7	45.6	43.1	43.4	45.3
D68-5358	48.8	48.1	45.6	44.4	46.4
D69-8178	44.1	42.5	41.4	38.4	43.0
N68-46	46.0	42.1	39.9	35.9	41.5
N68-106	44.4	42.6	40.5	39.3	41.0
N68-154	44.6	42.1	41.5	33.4	41.9
N68-210	44.8	43.0	42.0	38.6	41.7
N68-300	45.0	42.5	40.8	38.8	41.6
N68-356	44.6	42.6	40.8	38.8	41.6
N68-357	44.9	43.0	41.3	35.6	41.9
N68-358	44.9	41.7	39.1	38.4	40.5
N68-1001	44.7	42.6	41.1	39.1	40.9
N68-1036	42.3	39.2	36.9	36.6	38.1
R66-873	43.9	41.9	39.9	37.5	39.6
R67-141	42.1	40.8	39.9	36.3	39.8
R67-269	44.8	40.6	39.7	38.7	39.6
R68-106	44.7	40.6	39.2	36.6	39.9
R68-193	42.8	41.3	40.3	38.2	40.8
R68-208	45.9	42.4	42.0	39.7	39.4
S66-642	44.1	42.7	39.1	36.9	40.7
S66-700	44.0	41.9	40.3	37.2	40.6
V67-447	44.8	43.4	39.3	35.0	40.8

Table 41. - Plant height for the strains in Preliminary Group VI, 1970

Strain	Peters- burg, Va.	Plymouth, N.C.	Portage- ville, Mo.	Kesier, Ark.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Jay, Fla.
Lee 68	34	40	36	32	37	34	23
D64-4636	32	39	36	29	31	35	25
D70-B1	36	37	31	32	32	36	25
D65-4226	32	37	38	38	35	37	24
D6--3963	34	40	37	37	38	41	24
D67-4055	36	43	38	35	37	39	23
D67-4128	38	41	42	35	43	41	31
D67-4607	40	43	46	42	40	41	28
D67-4694	38	35	29	30	31	33	20
D67-4793	32	37	28	33	28	30	22
D68-180	37	44	39	32	37	41	22
D68-216	38	38	37	29	34	35	25
D68-391	30	30	28	26	24	26	18
D68-5031	35	39	36	35	36	36	21
D68-5206	30	36	31	29	33	31	22
D68-5358	32	40	35	34	37	32	25
D69-8178	33	42	36	33	36	38	25
N68-46	31	41	39	40	35	39	26
N68-106	35	43	43	35	36	39	24
N68-154	30	42	46	31	40	36	26
N68-210	36	41	41	39	38	40	26
N68-300	34	40	48	38	35	42	26
N68-356	38	43	39	38	37	41	26
N68-357	36	44	44	33	38	41	25
N68-358	36	43	36	39	37	41	26
N68-1001	35	45	40	38	37	39	25
N68-1036	37	41	47	40	39	41	27
R66-873	46	44	36	33	31	37	20
R67-141	36	44	42	32	37	41	26
R67-269	42	46	45	37	39	38	27
R68-106	35	38	38	31	31	30	23
R68-193	36	45	45	37	38	40	24
R68-208	34	42	42	35	33	33	23
S66-642	37	35	32	32	32	30	23
S66-700	33	39	37	30	30	38	23
V67-447	32	39	35	31	30	33	20

Table 42. - Seed quality scores for the strains in Preliminary Group VI, 1970

Strain	Peters- burg, Va.	Plymouth, N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Jay, Fla.
Lee 68	3.0	2.0	3.8	2.5	2.5	2.0	1.0
D64-4636	2.5	2.0	4.5	3.5	2.0	3.0	1.0
D70-B1	3.0	2.0	4.0	2.0	2.5	2.0	1.0
D65-4226	4.5	4.0	5.0	3.5	3.0	3.0	3.0
D67-3963	4.0	3.0	4.5	3.0	3.0	2.0	2.0
D67-4055	3.5	2.0	4.3	3.0	3.0	2.0	3.0
D67-4128	4.5	3.0	5.0	3.0	3.0	2.5	4.0
D67-4607	4.0	2.0	4.8	3.3	2.5	2.0	2.0
D67-4694	1.0	3.0	4.3	2.0	2.0	2.0	2.0
D67-4793	3.0	1.5	4.0	2.5	2.5	2.0	1.0
D68-180	3.5	2.0	5.0	3.0	3.0	2.5	2.0
D68-216	3.5	2.0	4.4	1.8	3.0	2.0	2.0
D68-391	4.0	2.5	4.5	3.0	3.0	3.0	2.0
D68-5031	2.5	4.0	5.0	4.0	3.0	3.0	3.0
D68-5206	4.0	2.0	4.5	2.0	2.5	2.0	2.0
D68-5358	2.0	2.5	4.8	2.3	3.0	2.5	1.0
D69-8178	3.5	3.0	4.3	3.3	2.5	2.5	2.0
N68-46	3.0	2.0	3.8	3.0	3.5	3.0	1.0
N68-106	3.0	2.5	4.0	2.3	2.5	2.5	1.0
N68-154	4.0	3.0	4.3	3.8	2.5	3.0	2.0
N68-210	2.5	2.5	5.0	3.0	2.5	2.5	2.0
N68-300	3.0	2.5	3.5	3.3	2.5	3.0	1.0
N68-356	2.5	2.0	3.8	2.3	2.5	3.0	1.0
N68-357	3.5	2.5	4.5	3.3	3.0	3.5	1.0
N68-358	2.0	2.5	4.5	2.8	2.5	3.0	2.0
N68-1001	3.5	2.0	5.0	3.0	3.0	2.5	1.0
N68-1036	3.0	2.5	4.3	3.3	3.0	3.0	1.0
R66-873	2.0	2.5	4.8	2.8	3.0	2.0	1.0
R67-141	3.0	3.0	4.3	3.3	3.0	3.0	2.0
R67-269	4.0	4.0	4.8	3.0	3.5	3.0	2.0
R68-106	3.0	3.0	4.5	2.0	2.5	2.0	2.0
R68-193	4.0	2.5	4.5	3.5	3.0	3.0	3.0
R68-208	1.5	2.0	4.5	2.5	3.0	2.5	1.0
S66-642	2.5	2.5	4.5	2.8	3.0	3.0	2.0
S66-700	1.5	2.0	5.0	2.5	2.5	2.0	1.0
V67-447	1.0	3.0	4.8	3.5	3.0	3.0	2.0

UNIFORM GROUP VII

1970

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Bragg	Jackson x D49-2491	F ₆
2. Semmes	D51-5427 x D49-2491	F ₆
3. Ransom (N64-2430)	(N55-5931 x N55-3818) x D56-1185	F ₅
4. F65-1753	Bragg x D60-8107	F ₄
5. D66-8666	Bragg x Semmes	F ₅
6. F66-242	F55-822 x (Roanoke x CNS)	F ₉
7. F66-550	Ogden x D53-1301	F ₆
8. D66-8556	Bragg x Semmes	F ₅
9. D67-5940	Semmes x D60-8107	F ₅
10. D67-6021	Semmes x D60-8107	F ₅
11. D67-6215	Semmes x D60-7965	F ₅
12. F67-3944	Bragg(2) x D60-7965	F ₄

Background of strains used as parents:

D49-2491 is a sister strain to Lee selected from S100 x CNS.

D51-5427 is a subline of N45-1497, a high oil line selected from Ral soy x Ogden which has the Arksoy type resistance to phytophthora rot.

N55-5931 is a selection from Roanoke x Lee which was grown in Uniform Group VII in 1958.

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

D56-1185 is a selection from Perry x Lee.

D60-8107 is a selection from D51-4877 x D55-4168 which was grown in Uniform Group VII in 1963-65.

F55-822 is the parent line of Bragg.

D53-1301 is a selection from the same cross as Hill, but is of Lee maturity.

D60-7965 is a high protein selection from D55-4090 x D55-4159.

Thirty-one Uniform Group VII nurseries were planted. Results from 28 nurseries are summarized in Tables 43 through 49. Table 43 gives a general summary of agronomic qualities, chemical composition of the seed, and field reaction to several diseases. Two and three-year data are reported for seed yield and oil and protein percentages.

Seed yield differences among strains were significant at the 5% level of confidence at 15 locations. The combined analysis of variance for mean seed yields by production regions showed differences among strains to be significant in the East, Southeast, and Delta and West.

The strain N64-2430 has been named Ransom and released for production. Three-year mean seed yields average above Bragg in each production region. Maturity is very similar to that for Bragg.

F65-1753 has been grown three years. Its performance has been good, but it shows essentially no advantage over Bragg. Three strains, D66-8666, F66-242, and F66-550, have been included two years. D66-8666 combines resistance to root-knot nematodes with resistance to phytophthora rot. Two-year average yields are superior to those for Semmes but average lower than for Bragg. F66-242 averages 3 days later than Bragg. Seed yields average higher than Bragg in all production regions. It also has good resistance to root-knot nematodes. Protein content of the seed averages slightly above that for Bragg. F66-550 averaged 5 days later than Bragg in 1969 and 4 days later in 1970. Seed yield has been slightly above that for Bragg in all but the East Coast region.

Five strains were advanced from the 1969 Preliminary Group VII nursery. D66-8556, like D66-8666, carries resistance to root-knot and phytophthora rot. Seed yield was better than D66-8666 in the Delta and West. D67-5940 averaged 8 days earlier than Bragg. Both oil and protein averaged significantly higher than for Bragg. Seed yield was lower than for Bragg in the Southeast and 2.5 bu higher in the Delta and West. D67-6021, D67-6215, and F67-3944 averaged higher in protein content than Bragg. D67-6021 appeared to be the best of these three in seed yield.

As for Group VI, worm feeding ratings were made at Quincy. Ratings ranged from 70% feeding to 97%. Semmes had the most severe worm feeding and produced the lowest seed yields.

Table 43. - General summary of performance for the strains in Uniform Group VII, 1970

	Bragg	Semmes	Ransom	F65-1753	D66-8666	F66-242
Seed Yield - 1970						
East Coast	38.5	36.0	38.6	38.4	36.4	41.1
Southeast	35.5	32.9	37.6	34.9	35.3	36.5
Upper & Central South	28.7	30.1	36.2	27.3	31.3	34.7
Delta & West	34.6	30.4-	34.3	34.2	31.4-	38.4+
- 1969-70						
East Coast	40.3	36.5	41.2	40.2	37.7	42.5
Southeast	36.5	33.0	39.3	37.1	36.0	37.0
Upper & Central South	37.9	35.6	43.2	36.6	37.4	41.1
Delta and West	35.2	32.1	35.1	36.8	33.8	38.5
- 1968-70						
East Coast	36.3	33.5	37.7	36.0		
Southeast	34.2	31.3	36.3	34.9		
Upper & Central South	37.2	34.3	42.5	37.1		
Delta & West	37.8	34.4	38.6	38.8		
Oil Content - 1970						
	21.3	21.0	23.9+	21.6	21.1	20.6-
- 1969-70	21.7	21.4	24.2	21.9	21.4	21.0
- 1968-70	21.7	21.4	24.0	21.9		
Protein Content - 1970						
	41.4	41.7	40.0-	41.3	41.2	42.6+
- 1969-70	41.1	41.5	39.7	41.2	41.3	42.5
- 1968-70	41.0	41.4	39.6	40.9		
Seed size	14.6	14.4	15.2+	14.3	11.8-	16.9+
Maturity index	10-24	-5	-1	0	-2	+3
Height	40	35	34	40	36	38
Shattering	1.0	1.4	1.3	1.0	1.1	1.1
Phytophthora rot	1.0	1.0	2.0	1.0	1.0	1.0
Root knot ¹	1.0	5.0	4.0	2.0	0	0
Percent mottled seed ²	10	5	2	7	4	15
Worm feeding (% defoliation) ³	77	97	90	70	92	75
Flower color	W	P	P	W	W	P
Pubescence color	T	G	T	T	G	T
Pod wall color	T	T	T	T	T	T

¹West Florida

²Plymouth

³Quincy, Fla.

Table 43. - (continued)

	F66-550	D66-8556	D67-5940	D67-6021	D67-6215	F67-3944
Seed Yield - 1970						
East Coast	39.9	35.7	38.8	35.9	35.6	36.0
Southeast	35.0	36.5	32.4-	34.1	31.9-	33.7
Upper & Central South	32.4	30.8	27.3	29.5	29.7	27.6
Delta & West	34.3	35.6	37.1	35.1	33.5	33.4
- 1969-70						
East Coast	39.9					
Southeast	37.6					
Upper & Central South	39.7					
Delta & West	36.3					
- 1968-70						
East Coast						
Southeast						
Upper & Central South						
Delta & West						
Oil Content - 1970						
	21.8+	22.4+	21.8+	18.6-	20.4-	19.2-
- 1969-70	22.0					
- 1968-70						
Protein Content - 1970						
	40.4-	41.0	42.4+	44.6+	44.9+	44.7+
- 1969-70	40.4					
- 1968-70						
Seed size						
	12.8-	14.8	14.6	11.6-	15.8+	14.8
Maturity index	+4	-6	-8	-2	-4	-2
Height	33	35	34	36	33	37
Shattering	1.1	1.2	1.6	1.1	1.1	1.1
Phytophthora rot	1.0	1.0	1.0	1.0	1.0	1.0
Root knot ¹	4.0	0	5.0	5.0	5.0	1.0
Percent mottled seed ²	0	.9	20	8	3	0
Worm feeding (% defoliation) ³	73	80	95	93	85	95
Flower color	P	W	P	P	P	W
Pubescence color	G	T	G	G	G	G
Pod wall color	T	T	T	T	T	B

Table 44. - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1970

Location	Bragg	Semmes	Ransom	F65-1753	D66-8666	F66-242	F66-550
<u>East Coast</u>							
Plymouth, N.C.	43.2	41.6	42.6	41.6	39.2	37.7	41.5
Rocky Mt., N.C.	25.1	27.7	31.8	22.6	23.3	31.1	26.4
Clayton, N. C.	34.6	35.8	34.8	39.3	34.4	40.1	42.3
Willard, N. C.	52.8	40.9-	46.1-	48.5	44.8-	57.4	47.8
Florence, S.C.(A)	38.2	36.6	39.9	39.2	42.8	43.6+	45.5+
Florence, S.C.(B)	43.8	44.5	39.3	46.0	40.6	41.9	40.4
Hartsville, S.C.	32.2	25.3-	35.3	31.5	29.4	35.7	35.3
Mean	38.5	36.0	38.6	38.4	36.4	41.1	39.9
<u>Southeast</u>							
Blackville, S.C.	16.7	19.1	22.9	17.1	19.4	20.6	17.5
Tifton, Ga.	50.9	39.0-	49.4	48.5	45.1-	55.2+	47.5
Gainesville, Fla.	43.8	34.3	41.5	40.5	42.7	42.8	40.5
Live Oak, Fla.	26.1	25.1	23.2	24.4	26.7	30.7	26.0
Marianna, Fla.	26.7	26.4	32.2	28.3	30.4	28.4	28.9
Quincy, Fla.*	26.5	9.5-	20.7	28.2	22.3	24.9	21.9
Jay, Fla.	49.8	40.3-	48.6	49.3	48.9	47.4	48.8
Fairhope, Ala.	41.3	44.6	52.3	44.2	44.7	41.2	43.2
Newton, Miss.*	24.1	24.0	25.4	24.9	23.9	21.1	23.1
Poplarville, Miss.	27.5	31.0	35.8	35.8	32.9	32.9	33.3
Baton Rouge, La.	36.4	35.8	32.6	25.9-	26.8-	28.9-	29.3-
Mean	35.5	32.9	37.6	34.9	35.3	36.5	35.0
<u>Upper and Central South</u>							
Clemson, S.C.	23.1	26.3	32.3+	21.8	27.6	29.4+	31.4+
Experiment, Ga.	34.3	33.9	40.1	32.8	35.0	40.0	33.3
Mean	28.7	30.1	36.2	27.3	31.3	34.7	32.4
<u>Delta and West</u>							
Stoneville, Miss.(A)	27.2	26.5	29.2	26.2	25.7	31.9	30.5
Stoneville, Miss.(B)	35.1	30.0	34.6	35.2	36.8	39.1	36.1
Stuttgart, Ark.	30.5	31.4	31.0	33.4	32.4	32.0	31.7
Rohwer, Ark.	25.3	23.6	18.8	27.0	28.7+	31.4+	24.2
St. Joseph, La.	35.0	27.2-	30.7	39.6	24.2-	36.3	34.2
Curtis, La.	47.2	38.3	46.5	39.4	34.7	50.6	45.1
Crowley, La.	46.9	41.7	51.2	44.6	44.0	53.3+	45.8
Beaumont, Texas	29.7	24.1-	32.5	28.1	24.4-	32.9	26.9
Mean	34.6	30.4-	34.3	34.2	31.4-	38.4+	34.3

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

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

* - Not included in mean.

Table 44. - (continued)

Location	D66-8556	D67-5940	D67-6021	D67-6215	F67-3944	L.S.D. (.05)	C.V.
<u>East Coast</u>							
Plymouth, N.C.	43.0	47.9	41.3	43.8	40.4	N.S.	13%
Rocky Mt. N.C.	24.5	28.6	27.3	26.9	27.1	N.S.	17%
Clayton, N.C.	33.9	30.4	30.3	32.0	29.6	N.S.	19%
Willard, N.C.	40.5-	47.8	40.9-	39.5-	45.9-	6.6	9%
Florence, S.C.(A)	39.0	43.1	40.0	38.5	37.5	5.4	8%
Florence, S.C.(B)	41.6	43.3	41.9	43.5	41.4	N.S.	8%
Hartsville, S.C.	27.0-	30.4	29.4	25.2-	29.9	3.7	7%
Mean	35.7	38.8	35.9	35.6	36.0	3.3	
<u>Southeast</u>							
Blackville, S.C.	19.7	23.8	21.5	20.9	20.2	N.S.	13%
Tifton, Ga.	46.0-	42.8-	41.3-	41.4-	44.5-	4.0	5%
Gainesville, Fla.	42.8	30.1-	37.9-	37.1-	38.2-	4.7	5%
Live Oak, Fla.	26.7	20.5-	29.5	18.5-	23.1	5.1	12%
Marianna, Fla.	30.6	27.3	28.2	28.1	26.5	N.S.	10%
Quincy, Fla.*	23.0	14.4-	15.3-	21.7	17.1-	8.1	24%
Jay, Fla.	46.5	46.7	41.3-	43.6-	45.3	6.0	8%
Fairhope, Ala.	43.9	40.4	39.7	45.3	44.2	N.S.	21%
Newton, Miss.*	20.5	25.0	18.6	20.9	19.8	N.S.	13%
Poplarville, Miss.	35.6	33.5	34.6	31.0	29.4	N.S.	12%
Baton Rouge, La.	36.4	26.6-	33.2	20.7-	31.5	5.8	11%
Mean	36.5	32.4-	34.1	31.9-	33.7	3.0	
<u>Upper and Central South</u>							
Clemson, S.C.	26.2	27.2	25.0	23.9	23.0	6.0	13%
Experiment, Ga.	35.5	27.3	34.0	35.5	32.1	N.S.	15%
Mean	30.8	27.3	29.5	29.7	27.6	N.S.	
<u>Delta and West</u>							
Stoneville, Miss.(A)	29.1	26.1	29.5	30.9	27.8	N.S.	19%
Stoneville, Miss.(B)	39.7	41.1+	37.4	42.5+	35.7	5.9	10%
Stuttgart, Ark.	35.9	36.4	32.2	32.2	32.7	N.S.	7%
Rohwer, Ark.	30.0+	31.3+	29.9+	28.1+	24.2	2.6	6%
St. Joseph, La.	34.3	27.6-	31.9	23.6-	26.2-	6.6	13%
Curtis, La.	40.1	47.8	47.9	41.5	45.3	N.S.	14%
Crowley, La.	45.3	51.2	45.6	41.0	47.6	6.1	8%
Beaumont, Texas	29.9	35.3+	26.8	28.4	27.9	4.5	9%
Mean	35.6	37.1	35.1	33.5	33.4	3.1	

Table 45. - Chemical composition and seed size for the strains in Uniform Group VII, 1970

Location	Bragg	Semmes	Ransom	F65-1753	D66-8666	F66-242	F66-550
<u>Oil Content</u>							
Willard, N.C.	21.6	21.1	24.3	21.8	21.2	21.4	21.6
Hartsville, S.C.	22.4	21.8	24.5	22.4	22.1	21.8	22.9
Tifton, Ga.	21.9	21.6	24.3	21.3	21.9	20.4	22.4
Gainesville, Fla.	21.6	22.1	25.4	22.2	22.3	21.2	22.7
Jay, Fla.	21.8	21.5	25.1	21.7	21.8	20.8	21.8
Clemson, S.C.	20.2	20.2	21.7	19.8	19.8	19.7	22.0
Stoneville, Miss.(A)	21.7	21.1	23.6	22.2	20.6	20.6	22.8
Stoneville, Miss.(B)	20.9	19.7	22.9	21.3	19.7	19.7	20.3
St. Joseph, La.	20.7	20.4	23.7	21.7	21.1	20.2	21.5
Beaumont, Texas	20.4	20.4	23.3	21.3	20.1	19.9	20.3
Mean	21.3	21.0	23.9+	21.6	21.1	20.6-	21.8+
<u>Protein Content</u>							
Willard, N.C.	43.0	41.9	41.7	42.0	42.3	43.7	41.2
Hartsville, S.C.	38.5	39.8	37.3	38.5	38.6	39.0	37.3
Tifton, Ga.	40.3	41.3	39.7	41.0	40.5	42.8	40.7
Gainesville, Fla.	42.6	42.0	39.8	42.3	41.1	43.7	40.3
Jay, Fla.	41.6	41.9	39.1	41.1	41.6	44.0	40.6
Clemson, S.C.	42.5	43.0	41.8	42.9	42.0	44.1	41.2
Stoneville, Miss.(A)	40.7	41.4	40.4	41.0	41.5	41.2	40.0
Stoneville, Miss.(B)	40.3	40.6	39.9	41.1	41.5	41.2	40.9
St. Joseph, La.	42.8	43.4	40.3	41.9	41.7	44.2	41.0
Beaumont, Texas	41.4	41.4	39.9	41.4	41.1	42.3	40.9
Mean	41.4	41.7	40.0-	41.3	41.2	42.6+	40.4-
<u>Grams per 100 Seeds</u>							
Willard, N.C.	16.6	17.7	16.4	16.4	13.5	18.8	13.8
Hartsville, S.C.	12.9	13.5	13.6	13.6	11.9	15.5	12.4
Tifton, Ga.	16.4	14.5	17.4	13.5	11.8	18.5	13.5
Gainesville, Fla.	16.2	16.0	16.7	16.0	13.4	19.0	14.1
Jay, Fla.	17.3	18.2	18.0	16.6	13.6	19.9	14.8
Clemson, S.C.	12.5	12.4	13.2	12.0	10.8	14.7	11.9
Stoneville, Miss.(A)	12.6	13.0	14.5	12.2	10.4	14.8	11.7
Stoneville, Miss.(B)	13.3	12.5	12.8	13.6	10.5	15.2	11.4
St. Joseph, La.	15.0	13.2	14.6	15.6	10.9	17.5	12.5
Beaumont, Texas	13.1	13.1	14.8	13.4	11.5	15.1	11.5
Mean	14.6	14.4	15.2+	14.3	11.8-	16.9+	12.8-

Table 45. - (continued)

Location	D66-8556	D67-5940	D67-6021	D67-6215	F67-3944	L.S.D. (.05)
<u>Oil Content</u>						
Willard, N.C.	22.4	21.4	18.9	19.9	20.1	
Hartsville, S.C.	22.8	23.4	20.1	21.6	20.1	
Tifton, Ga.	22.9	21.9	18.4	20.8	19.1	
Gainesville, Fla.	23.3	22.7	19.2	21.6	20.2	
Jay, Fla.	24.2	22.4	19.2	20.9	19.2	
Clemson, S.C.	20.3	21.0	17.4	19.5	18.3	
Stoneville, Miss.(A)	22.4	21.7	18.4	21.0	19.3	
Stoneville, Miss.(B)	21.3	20.8	17.8	19.7	19.0	
St. Joseph, La.	22.5	21.7	18.8	19.5	19.4	
Beaumont, Texas	21.6	21.0	17.5	19.4	17.7	
Mean	22.4+	21.8+	18.6-	20.4-	19.2-	0.4
<u>Protein Content</u>						
Willard, N.C.	42.6	44.4	46.6	46.1	45.9	
Hartsville, S.C.	38.5	39.7	40.9	41.5	41.2	
Tifton, Ga.	40.2	43.2	44.2	45.7	44.4	
Gainesville, Fla.	40.9	43.7	46.0	46.6	44.1	
Jay, Fla.	41.3	42.0	44.8	44.8	45.5	
Clemson, S.C.	42.0	42.3	45.7	46.1	45.7	
Stoneville, Miss.(A)	40.9	40.6	43.7	43.9	44.1	
Stoneville, Miss.(B)	41.0	42.0	44.7	44.3	45.2	
St. Joseph, La.	40.3	42.9	46.0	45.8	44.7	
Beaumont, Texas	41.8	42.8	43.5	43.9	45.8	
Mean	41.0	42.4+	44.6+	44.9+	44.7+	0.6
<u>Grams per 100 Seeds</u>						
Willard, N.C.	17.0	18.6	12.7	18.0	17.0	
Hartsville, S.C.	13.8	13.0	11.7	14.6	13.9	
Tifton, Ga.	14.7	14.0	11.2	16.5	16.1	
Gainesville, Fla.	17.0	16.8	12.5	18.3	16.0	
Jay, Fla.	16.8	17.0	14.2	18.9	16.5	
Clemson, S.C.	11.9	12.6	10.7	13.3	13.1	
Stoneville, Miss.(A)	13.3	12.4	10.4	14.5	13.2	
Stoneville, Miss.(B)	14.2	13.7	10.8	15.0	13.3	
St. Joseph, La.	15.3	13.6	11.0	14.0	14.0	
Beaumont, Texas	13.7	14.7	11.0	15.3	14.7	
Mean	14.8	14.6	11.6-	15.8+	14.8	0.6

Table 46. - Relative maturity data, days earlier (-) or later (+), than Bragg for the strains in Uniform Group VII, 1970

Location	Date planted	Bragg matured	Semmes	Ransom	F65-1753	D66-8666
<u>East Coast</u>						
Plymouth, N.C.	5-7	10-26	-2	0	+2	0
Rocky Mt., N.C.	5-25	10-18	-3	0	-3	-3
Clayton, N.C.	5-11	11-3	-3	0	0	-6
Willard, N.C.	5-14	10-26	-2	+2	+4	+2
Florence, S.C.(A)	5-15	10-30	-2	-7	+1	+3
Florence, S.C.(B)	6-15	10-30	-5	-3	0	-3
Hartsville, S.C.(A)	5-21	10-29	-5	0	-1	-6
Mean		10-28	-3	-1	0	-2
<u>Southeast</u>						
Blackville, S.C.	5-22	10-16	-2	-4	0	0
Tifton, Ga.	5-5	10-17	-4	+7	0	-3
Gainesville, Fla.	6-9	10-17	-7	+1	+1	-4
Jay, Fla.	5-21	10-21	-10	-3	-1	-5
Fairhope, Ala.	6-9	10-20	-5	+2	0	-2
Newton, Miss.*	6-12	10-22	-5	-4	-6	-2
Poplarville, Miss.	5-21	10-20	-13	-3	0	-4
Baton Rouge, La.	5-14	11-1	-3	-3	0	+1
Mean		10-20	-6	0	0	-2
<u>Upper and Central South</u>						
Clemson, S.C.	5-20	10-28	-8	-4	0	-2
Experiment, Ga.	6-10	10-28	-15	-12	-8	-10
Mean		10-28	-12	-8	-1	-6
<u>Delta and West</u>						
Stoneville, Miss.(A)	5-15	10-27	-5	-5	-4	-7
Stoneville, Miss.(B)	5-11	10-30	-5	0	0	-3
Stuttgart, Ark.	6-10	10-27	-8	+3	+7	+5
Rohwer, Ark.	6-10	10-17	-8	+3	+8	+7
St. Joseph, La.	5-13	10-29	-4	-6	0	-6
Curtis, La.	5-15	10-25	-2	-1	0	-1
Beaumont, Texas	5-29	10-15	-3	+2	+2	-3
Mean		10-24	-5	0	+2	-1

* - Not included in mean.

Table 46. - (continued)

Location	F66-242	F66-550	D66-8556	D67-5940	D67-6021	D67-6215	F67-3944
<u>East Coast</u>							
Plymouth, N.C.	+2	0	-10	-8	+2	-6	-8
Rocky Mt., N.C.	+6	+4	-6	-6	-2	-6	-3
Clayton, N.C.	0	-4	-6	-11	-6	0	-6
Willard, N.C.	+2	+4	-5	-2	+2	-2	-2
Florence, S.C.(A)	+1	+3	-7	-7	-4	-5	-4
Florence, S.C.(B)	+4	+6	-5	-7	-7	-7	0
Hartsville, S.C.(A)	0	+4	-6	-12	-4	-4	-4
Mean	+2	+2	-6	-8	-3	-4	-4
<u>Southeast</u>							
Blackville, S.C.	+2	+14	-8	-7	-3	-7	-2
Tifton, Ga.	+2	+3	-11	-8	+2	+2	+2
Gainesville, Fla.	+4	+5	-8	-9	0	+1	0
Jay, Fla.	+2	+3	-12	-8	-1	-3	0
Fairhope, Ala.	0	+3	-2	-6	-5	0	-6
Newton, Miss.*	-4	-4	-2	-4	-4	-3	-4
Poplarville, Miss.	0	-2	-17	-16	-8	-14	-4
Baton Rouge, La.	-4	-2	-2	-2	0	-1	+3
Mean	0	+3	+9	-8	-2	-3	-1
<u>Upper and Central South</u>							
Clemson, S.C.	+12	+14	-11	-13	-7	-10	-2
Experiment, Ga.	-5	-2	-14	-15	-13	-18	-12
Mean	+4	+6	-13	-14	-10	-14	-7
<u>Delta and West</u>							
Stoneville, Miss.(A)	+1	+2	-9	-12	0	-8	-6
Stoneville, Miss.(B)	+4	+4	-3	-3	-3	-2	-1
Stuttgart, Ark.	+8	+9	-1	-2	+2	+2	+6
Rohwer, Ark.	+8	+14	+3	-2	+2	0	+5
St. Joseph, La.	+4	-4	0	-11	+4	-3	-3
Curtis, La.	+1	+2	-2	-10	+1	0	+1
Beaumont, Texas	+4	+5	-5	-5	-5	-6	-5
Mean	+4	+5	-2	-6	0	-2	0

Table 47. - Plant height for the strains in Uniform Group VII, 1970

Location	Bragg	Semmes	Ransom	F65-1753	D66-8666	F66-242	
<u>East Coast</u>							
Plymouth, N.C.	53	46	41	50	49	46	P
Rocky Mt., N.C.	50	43	42	50	43	41	R
Clayton, N.C.	42	37	37	42	41	39	C
Willard, N.C.	43	41	39	42	38	43	W
Florence, S.C.(A)	40	34	33	42	40	39	F
Florence, S.C.(B)	30	33	35	35	36	31	F
Hartsville, S.C.(A)	41	31	33	41	37	42	H
Mean	43	38	37	43	41	40	
<u>Southeast</u>							
Blackville, S.C.	41	29	30	38	30	35	B
Tifton, Ga.	31	27	21	36	30	35	T
Gainesville, Fla.	39	31	29	38	34	36	G
Live Oak, Fla.	35	28	25	36	28	31	L
Marianna, Fla.	45	42	41	43	43	44	M
Jay, Fla.	34	28	26	32	27	27	J
Fairhope, Ala.	42	33	32	37	38	37	F
Newton, Miss.*	31	25	24	28	25	27	N
Poplarville, Miss.	43	34	38	43	36	36	P
Baton Rouge, La.	36	30	28	32	30	31	B
Mean	38	31	30	37	33	35	
<u>Upper and Central South</u>							
Clemson, S.C.	38	31	29	36	32	35	C
Experiment, Ga.	41	31	35	42	34	36	E
Mean	40	31	32	39	33	36	
<u>Delta and West</u>							
Stoneville, Miss.(A)	51	41	42	47	45	45	St
Stoneville, Miss.(B)	49	41	41	49	43	48	St
Stuttgart, Ark.	42	37	38	42	40	39	St
Rohwer, Ark.	37	31	30	37	35	35	Ro
St. Joseph, La.	46	44	43	44	45	46	St
Curtis, La.	30	38	31	31	25	34	Cu
Crowley, La.	36	27	28	35	30	33	Cr
Beaumont, Texas	37	32	31	36	35	34	Be
Mean	41	36	36	40	37	39	

* - Not included in mean.

Table 47. - (continued)

Location	F66-550	D66-8556	D67-5940	D67-6021	D67-6215	F67-3944
<u>East Coast</u>						
Plymouth, N.C.	46	51	48	47	44	49
Rocky Mt., N.C.	41	45	44	47	37	45
Clayton, N.C.	34	40	37	36	33	37
Willard, N.C.	35	40	39	38	33	42
Florence, S.C.(A)	32	35	34	33	32	35
Florence, S.C.(B)	29	34	32	35	37	37
Hartsville, S.C.(A)	31	35	33	34	29	37
Mean	35	40	38	39	35	40
<u>Southeast</u>						
Blackville, S.C.	30	28	28	33	29	36
Tifton, Ga.	24	25	24	32	24	34
Gainesville, Fla.	35	31	33	35	31	35
Live Oak, Fla.	26	25	27	32	26	31
Marianna, Fla.	40	42	43	43	41	42
Jay, Fla.	27	26	28	25	26	25
Fairhope, Ala.	35	35	31	35	31	34
Newton, Miss.*	23	21	22	22	20	25
Poplarville, Miss.	38	36	36	41	36	36
Baton Rouge, La.	28	32	29	32	27	32
Mean	31	31	31	34	30	34
<u>Upper and Central South</u>						
Clemson, S.C.	30	31	29	30	30	33
Experiment, Ga.	31	33	31	34	29	35
Mean	31	32	30	32	30	34
<u>Delta and West</u>						
Stoneville, Miss.(A)	36	45	41	44	42	45
Stoneville, Miss.(B)	39	45	42	43	39	45
Stuttgart, Ark.	36	37	36	38	36	37
Rohwer, Ark.	31	36	34	35	32	33
St. Joseph, La.	39	43	41	44	39	39
Curtis, La.	31	30	26	30	28	42
Crowley, La.	28	29	30	31	28	32
Beaumont, Texas	31	32	34	33	33	36
Mean	34	37	36	37	35	39

Table 48. - Lodging scores for the strains in Uniform Group VII, 1970

Location	Bragg	Semmes	Ransom	F65-1753	D66-8666	F66-242	
<u>East Coast</u>							
Plymouth, N.C.	3.3	3.0	3.3	3.3	3.0	4.0	I
Rocky Mt., N.C.	4.0	4.3	3.3	4.0	3.3	4.7	I
Clayton, N.C.	3.0	2.3	2.7	3.0	2.3	3.0	C
Willard, N.C.	2.7	2.7	2.7	2.7	2.3	2.0	V
Florence, S.C.(A)	2.0	2.0	1.0	3.0	1.0	1.0	F
Florence, S.C.(B)	1.0	2.0	1.0	1.0	2.0	2.0	F
Hartsville, S.C.(A)	2.5	1.8	2.0	2.5	1.8	2.5	H
<u>Southeast</u>							
Blackville, S.C.	1.7	1.0	1.0	1.7	1.0	1.3	B
Tifton, Ga.	1.7	1.0	1.0	1.0	1.0	2.3	T
Gainesville, Fla.	1.7	1.0	1.0	2.0	1.0	1.7	G
Live Oak, Fla.	1.7	1.0	1.0	1.3	1.0	1.0	L
Marianna, Fla.	2.0	1.0	1.0	2.0	1.0	1.0	M
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0	Q
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0	J
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0	F
Poplarville, Miss.	1.0	2.0	1.3	1.0	1.0	1.3	P
Baton Rouge, La.	1.3	1.0	1.0	1.3	1.0	1.0	B
<u>Upper and Central South</u>							
Clemson S.C.	2.7	1.7	1.8	2.8	1.7	2.3	C
Experiment, Ga.	1.0	1.0	1.3	1.0	1.0	1.0	E
<u>Delta and West</u>							
Stoneville, Miss.(A)	4.3	3.3	3.7	4.7	3.0	4.3	St
Stoneville, Miss.(B)	4.0	2.0	3.0	4.0	2.0	4.0	St
Stuttgart, Ark.	3.0	1.0	1.3	2.7	1.7	2.3	St
Rohwer, Ark.	2.0	1.0	2.0	2.0	1.0	1.7	Rc
St. Joseph, La.	5.0	4.7	4.3	5.0	5.0	5.0	St
Curtis, La.	2.0	2.0	1.5	2.5	1.0	2.0	Cu
Beaumont, Texas	1.0	1.0	1.0	2.0	1.0	2.0	Be

Table 48. - (continued)

Location	F66-550	D66-8556	D67-5940	D67-6021	D67-6215	F67-3944
<u>East Coast</u>						
Plymouth, N.C.	3.7	3.0	3.0	2.3	3.7	3.7
Rocky Mt., N.C.	5.0	3.3	3.0	2.3	3.7	4.0
Clayton, N.C.	3.3	3.0	2.3	3.0	3.0	3.0
Willard, N.C.	3.0	2.3	2.7	2.3	2.0	3.0
Florence, S.C.(A)	3.0	1.0	1.0	1.0	1.0	2.0
Florence, S.C.(B)	1.0	2.0	2.0	2.0	2.0	3.0
Hartsville, S.C.(A)	1.7	2.0	1.5	2.0	1.5	2.3
<u>Southeast</u>						
Blackville, S.C.	2.0	1.0	1.0	1.3	1.3	1.8
Tifton, Ga.	1.7	1.0	1.0	1.7	1.0	1.7
Gainesville, Fla.	2.0	1.0	1.0	1.3	1.0	1.3
Live Oak, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Poplarville, Miss.	1.3	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Upper and Central South</u>						
Clemson, S.C.	2.2	1.2	1.2	1.5	1.3	1.8
Experiment, Ga.	1.3	1.0	1.0	1.0	1.0	1.0
<u>Delta and West</u>						
Stoneville, Miss.(A)	4.0	4.0	2.7	3.0	2.7	4.0
Stoneville, Miss.(B)	3.3	3.0	2.0	2.0	3.0	3.7
Stuttgart, Ark.	2.7	2.0	1.0	1.3	1.7	2.0
Rohwer, Ark.	2.7	1.3	1.0	1.0	1.7	1.3
St. Joseph, La.	5.0	5.0	4.3	5.0	5.0	5.0
Curtis, La.	2.5	2.0	1.0	1.0	1.5	2.5
Beaumont, Texas	2.0	1.0	1.0	1.0	3.0	1.0

Table 49. - Seed quality scores for the strains in Uniform Group VII, 1970

Location	Bragg	Semmes	Ransom	F65-1753	D66-8666	F66-242
<u>East Coast</u>						
Plymouth, N.C.	1.5	3.0	1.5	1.5	2.0	2.0
Rocky Mt., N.C.	1.5	3.0	2.0	2.0	2.0	2.0
Clayton, N.C.	2.0	2.5	2.0	2.5	2.5	2.0
Willard, N.C.	2.0	3.0	3.0	2.0	2.0	2.0
Hartsville, S.C.(A)	2.5	3.0	3.0	2.0	1.5	2.5
<u>Southeast</u>						
Blackville, S.C.	1.7	1.3	2.0	1.7	1.0	1.7
Tifton, Ga.	2.5	2.5	2.5	2.5	2.0	2.5
Gainesville, Fla.	1.0	1.7	1.0	1.3	1.0	1.0
Live Oak, Fla.	4.3	2.3	2.7	4.7	1.7	2.7
Quincy, Fla.	3.0	5.0	3.0	2.0	2.0	2.0
Jay, Fla.	1.0	2.0	2.0	1.0	1.0	2.0
Fairhope, Ala.	1.3	2.7	1.7	1.7	1.0	1.3
Baton Rouge, La.	1.8	2.1	2.0	2.0	1.5	2.0
<u>Upper and Central South</u>						
Clemson, S.C.	3.5	2.5	1.5	2.5	2.0	2.5
Experiment, Ga.	2.3	2.3	3.0	2.3	1.7	3.0
<u>Delta and West</u>						
Stoneville, Miss.(A)	2.0	2.3	2.3	2.3	2.0	2.0
Stoneville, Miss.(B)	2.0	2.7	2.0	2.0	2.0	2.0
Stuttgart, Ark.	2.2	2.2	2.3	2.2	1.5	2.2
Rohwer, Ark.	2.0	3.0	3.5	2.3	1.8	2.3
St. Joseph, La.	2.3	2.3	1.7	2.1	1.8	2.1
Curtis, La.	2.0	1.7	2.3	1.3	1.0	2.0
Beaumont, Texas	2.0	3.0	2.0	2.0	2.0	3.0

Table 49. - (continued)

Location	F66-550	D66-8556	D67-5940	D67-6021	D67-6215	F67-3944
<u>East Coast</u>						
Plymouth, N.C.	2.0	2.0	3.0	2.0	2.0	2.0
Rocky Mt., N.C.	3.0	2.0	3.0	3.0	3.0	3.0
Clayton, N.C.	2.0	2.0	3.0	2.0	2.0	2.0
Willard, N.C.	2.0	2.0	3.0	2.5	2.0	2.0
Hartsville, S.C.(A)	1.5	3.0	3.5	2.0	2.5	2.8
<u>Southeast</u>						
Blackville, S.C.	3.0	1.7	2.3	1.7	1.7	2.0
Tifton, Ga.	2.5	2.0	2.0	3.0	2.5	2.5
Gainesville, Fla.	1.0	1.3	2.0	1.0	1.3	1.3
Live Oak, Fla.	2.0	3.3	3.7	1.7	3.0	4.0
Quincy, Fla.	3.0	3.0	4.0	4.0	2.0	3.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.3	2.0	3.3	2.0	2.0	1.3
Baton Rouge, La.	1.3	1.7	2.3	1.5	2.1	1.1
<u>Upper and Central South</u>						
Clemson, S.C.	2.5	1.5	2.0	2.5	1.5	2.5
Experiment, Ga.	2.7	2.0	3.3	2.0	2.0	2.3
<u>Delta and West</u>						
Stoneville, Miss.(A)	2.0	2.0	2.3	2.3	2.0	2.3
Stoneville, Miss.(B)	2.0	2.0	2.7	2.3	2.0	2.0
Stuttgart, Ark.	2.3	3.0	2.5	2.2	2.2	3.0
Rohwer, Ark.	2.2	2.8	2.3	2.2	2.5	2.5
St. Joseph, La.	1.7	2.0	3.0	2.2	2.1	2.3
Curtis, La.	1.7	1.7	2.3	1.3	1.7	1.3
Beaumont, Texas	3.0	2.0	2.0	3.0	2.0	2.0

PRELIMINARY GROUP VII

1970

Preliminary Group VII nurseries, including 34 experimental strains and the two check varieties Bragg and Lee 68, were grown at eight locations. The parentage of these strains is reported in Table 50. Performance data from seven locations are summarized in Tables 51 through 56. Planting seed had been damaged for four strains so data from these strains were omitted from most averages. Differences among strains for seed yield were significant at 5 locations. The combined analysis of variance showed differences among strains to be significant. There were no strains having a mean seed yield significantly higher than that for Bragg. Only two strains had average yields above that for Bragg. Nine strains had mean seed yields significantly lower than for Bragg.

Thirteen strains produced seed having a significantly higher protein content of the seed than Bragg. All but one strain having significantly higher protein content had significantly lower oil content. D67-6117, which equalled Bragg in seed production, produced seed 13% higher in protein and 16% lower in oil.

Strains which appear to merit being advanced to Uniform Group VII are: N68-97, N66-1336, F66-698, D67-6117, and D68-78.

Table 50. - Parentage of strains in Preliminary Group VII, 1970

Variety or strain	Parentage	Generation composited
1. Bragg		
2. Lee 68		
3. D67-5726	Semmes x D60-8107	F ₅
4. D67-5762	Semmes x D60-8107	F ₅
5. D67-5808	Semmes x D60-8107	F ₅
6. D67-5830	Semmes x D60-8107	F ₅
7. D67-5929	Semmes x D60-8107	F ₅
8. D67-6117	Semmes x D60-8107	F ₅
9. D67-6159	Semmes x D60-8107	F ₅
10. D67-6799	PI 192,868 x D61-4179	F ₅
11. D68-78	Bragg x Dyer	F ₅
12. D68-80	Bragg x Dyer	F ₅
13. D68-185	Bragg x Dyer	F ₅
14. D68-201	Bragg x Dyer	F ₅
15. D68-214	Bragg x Dyer	F ₅
16. F66-698	(F55-224 x D55-4073) x (F58-5788 x D56-4065)	F ₅
17. F68-1222	Bragg(3) x D60-7965	F ₄
18. F68-1350	Bragg(3) x D60-7965	F ₄
19. F68-1527	Bragg(3) x D60-7965	F ₄
20. F68-1564	Bragg(3) x D60-7965	F ₄
21. F68-1568	Bragg(3) x D60-7965	F ₄
22. F68-1724	Bragg(3) x PI 96,035	F ₄
23. F68-1805	Bragg(3) x PI 96,035	F ₄
24. F68-2017	Bragg(3) x D60-7965	F ₄
25. F68-2159	Bragg(3) x D60-7965	F ₄
26. F68-2573	Bragg(3) x D60-7965	F ₄
27. F68-3530	Bragg x F59-1505	F ₄
28. N66-1136	N56-4202 x N57-6801	F ₄
29. N66-1336	N56-4202 x N57-6801	F ₄
30. N68-97	Dare x N60-5234	F ₄
31. N68-419	Dare x N60-5234	F ₄
32. N68-1235	N55-47 x York	F ₄
33. N68-1831	D59-693 x N55-47	F ₄
34. N68-1948	D59-693 x N55-47	F ₄
35. N68-1999	N56-4202 x D57-1501	F ₃
36. N68-2058	N56-4202 x D57-1501	F ₃

Table 51. - General summary of performance for the strains in Preliminary Group VII, 1970

Strain	Seed yield	Maturity index	Ht.	Percent		Seed holding	P.R.	T.S.	% mottled seed
				Oil	Protein				
Bragg	34.8	10-21	41	21.2	41.9	1.0	1.0	1.0	4
Lee 68	31.1	-7	29	21.9	43.0	1.0	1.0	1.0	4
D67-5726	30.8	-6	33	19.2-	44.9+	1.4	1.0	1.0	8
D67-5762	32.5	-9	34	18.3-	46.0+	1.3	1.0	1.0	12
D67-5808	29.8-	-8	29	18.8-	46.1+	1.0	1.0	1.0	3
D67-5830	31.5	-8	31	19.1-	45.7+	1.3	1.0	1.0	5
D67-5929	30.6	-7	32	18.5-	44.8+	1.2	1.0	1.0	53
D67-6117	34.6	-8	31	17.7-	47.2+	1.3	1.0	1.0	5
D67-6159	30.0-	-4	35	18.4-	46.5+	1.3	1.0	1.0	3
D67-6799	27.9-	-9	31	21.9	42.4	1.4	1.0	1.0	2
D68-78 ¹	33.0	-2	37	21.0	42.8	1.1	1.0	1.0	0
D68-80 ¹	32.6	0	35	20.8-	43.5+	1.0	2.0	1.0	0
D68-185 ¹	30.2-	-6	29	21.3	42.7	1.0	1.0	1.0	0
D68-201 ¹	31.9	-2	39	20.8-	42.8	1.0	1.0	1.0	2
D68-214 ¹	29.1-	-2	30	21.3	41.4	1.0	1.0	1.0	0
F66-698	34.7	+2	35	20.3-	45.1+	1.0	1.0	1.0	0
F68-1222	34.6	0	37	21.9	41.5	1.0	1.0	1.0	0
F68-1350	--	-	--	--	--	-	-	-	-
F68-1527	--	-	--	--	--	-	-	-	-
F68-1564	28.5-	0	36	20.6-	42.6	1.0	1.0	1.0	4
F68-1568	--	-	--	--	--	-	-	-	-
F68-1724	32.3	0	37	21.0	42.2	1.1	1.0	1.0	4
F68-1805	33.3	-3	37	20.9-	42.0	1.0	1.0	1.0	5
F68-2017	29.4-	-3	36	19.4-	44.4+	1.0	1.0	1.0	0
F68-2159	32.8	0	34	20.6-	43.3+	1.0	1.0	1.0	0
F68-2573	31.5	0	40	21.2	41.8	1.1	1.0	1.0	0
F68-3530	32.3	+2	39	21.9	40.0-	1.0	1.0	1.0	5
N66-1136	34.6	-3	41	22.2+	41.5	1.2	1.0	1.0	0
N66-1336	36.6	-4	32	21.7	41.0	1.5	1.0	1.0	3
N68-97	37.0	-1	34	21.3	43.0	1.0	1.0	1.0	2
N68-419	34.2	-2	37	21.1	42.3	1.1	1.0	3.0	0
N68-1235	26.0-	-7	34	20.7-	41.8	1.2	1.0	3.0	0
N68-1831	29.0-	-9	32	21.7	42.0	1.2	1.0	2.5	2
N68-1948	30.5	-7	39	21.0	44.1+	2.0	1.0	3.5	8
N68-1999	34.0	-4	34	21.8	42.6	1.2	1.0	0	3
N68-2058	34.7	-3	37	20.3-	43.4+	2.0	2.0	1.0	0
L.S.D. (.05)	4.6			1.0	1.3				
L.S.D. (.01)	6.1			1.3	1.7				

¹Resistant to cyst and root-knot nematodes.

Table 52. - Seed yield, in bushels per acre for the strains in Preliminary Group VII, 1970

Strain	Willard, N.C.	Blackville, S.C.	Live Oak Fla.	Jay, Fla.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Beaumont, Texas
Bragg	49.9	19.9	31.4	46.6	32.3	34.4	29.0
Lee 68	38.2-	27.9+	12.1-	39.9	34.1	40.8	24.7
D67-5726	40.9	25.5+	20.1-	43.8	31.1	37.7	16.4-
D67-5762	43.4	26.2+	24.2	38.8	33.6	35.7	25.9
D67-5808	38.4-	19.7	15.1-	45.6	29.2	34.9	25.8
D67-5830	35.5-	22.0	28.3	44.1	29.8	34.6	26.1
D67-5929	39.5-	19.6	21.4-	43.4	26.7	36.6	27.2
D67-6117	41.8	28.2+	19.0-	46.7	36.1	39.2	31.5
D67-6159	41.8	23.2	19.5-	31.6	32.0	34.3	27.7
D67-6799	32.5-	21.2	22.7	37.8	20.1	30.5	30.7
D68-78	42.2	19.1	21.9-	44.9	35.7	36.5	30.8
D68-80	33.6-	19.3	24.0	46.7	30.0	39.4	34.9+
D68-185	32.7-	25.3+	15.9	42.7	32.8	37.0	25.0
D68-201	35.4-	23.3	22.0-	40.6	31.1	38.5	32.5
F68-214	38.9-	19.1	24.9	34.2	23.6	36.1	26.6
F66-698	43.5	22.0	27.2	43.5	36.0	42.0+	28.7
F68-1222	45.0	19.3	26.7	48.0	33.8	38.4	30.8
F68-1350	--	--	--	29.2	--	--	16.7-
F68-1527	--	--	--	29.6	--	--	15.4-
F68-1564	37.0-	--	--	41.3	19.0	35.2	23.3-
F68-1568	--	--	--	35.6	--	--	16.2-
F68-1724	48.9	17.6	28.7	41.0	29.6	37.4	22.9-
F68-1805	39.9-	19.1	34.1	49.1	28.6	42.0+	20.2-
F68-2017	45.4	19.7	25.2	42.4	19.9	33.8	19.4-
F68-2159	50.2	21.3	24.0	39.5	29.0	41.7+	24.1
F68-2573	41.3	15.0-	28.2	45.2	29.4	38.1	23.3-
F68-3530	42.7	18.2-	23.1	49.5	26.0	39.2	27.6
N66-1136	46.0	22.8	18.6-	45.9	36.3	41.9+	35.9+
N66-1336	43.8	22.2	29.0	45.5	33.4	39.5	34.1
N68-97	44.7	20.7	32.0	59.1	32.8	37.9	31.9
N68-419	38.9-	22.4	29.6	44.9	31.1	38.7	33.6
N68-1235	40.4-	17.4	21.3-	41.0	17.7	19.9-	24.5
N68-1831	32.9-	21.7	25.6	37.0	25.0	30.3	30.6
N68-1948	42.6	20.8	27.8	48.5	20.9	28.2	26.5
N68-1999	41.8	20.8	19.3-	40.6	36.0	44.6+	34.8+
N68-2058	45.5	20.2	24.9	43.1	31.9	44.1+	33.1
L.S.D.(.05)	9.5	4.4	9.1	N.S.	N.S.	7.0	5.2
C.V.	11%	11%	18%	17%	19%	9%	9%

Table 53. - Oil percentages for the strains in Preliminary Group VII, 1970

Strain	Willard, N.C.	Jay, Fla.	Stoneville, Miss.(B)	Beaumont, Texas
Bragg	21.4	21.9	20.8	20.8
Lee 68	23.1	22.9	21.0	20.4
D67-5726	18.6	18.8	21.3	18.2
D67-5762	18.9	19.7	17.3	17.4
D67-5808	18.9	20.5	17.7	17.9
D67-5830	19.4	19.4	18.5	18.9
D67-5929	18.7	19.9	17.7	17.7
D67-6117	18.6	17.5	17.2	17.5
D67-6159	18.6	20.4	18.3	16.4
D67-6799	21.9	23.2	21.3	21.0
D68-78	21.4	22.5	20.6	19.6
D68-80	21.1	21.8	20.5	19.9
D68-185	21.8	22.5	20.6	20.4
D68-201	21.6	21.4	20.0	20.3
D68-214	21.6	22.5	20.6	20.3
F66-698	19.9	20.0	22.1	19.3
F68-1222	22.1	22.9	21.3	21.1
F68-1350	22.8	22.7	--	21.0
F68-1527	22.4	22.5	--	21.8
F68-1564	21.8	19.7	20.0	20.8
F68-1568	21.9	22.4	--	20.6
F68-1724	21.9	21.4	20.6	19.9
F68-1805	21.2	21.9	20.5	20.1
F68-2017	20.7	20.5	18.8	17.7
F68-2159	21.1	21.4	20.2	19.6
F68-2573	21.8	21.7	20.5	20.8
F68-3530	21.9	23.4	21.0	21.1
N66-1136	22.4	23.4	21.3	21.6
N66-1336	21.9	23.5	21.3	19.9
N68-97	21.4	22.5	20.3	20.8
N68-419	22.3	21.9	20.3	19.8
N68-1235	20.3	22.2	19.7	20.6
N68-1831	21.8	22.5	21.7	20.9
N68-1948	21.1	21.6	20.0	21.2
N68-1999	22.1	22.4	21.1	21.4
N68-2058	21.4	19.2	20.5	20.2

Table 54. - Protein percentages for the strains in Preliminary Group VII, 1970

Strain	Willard, N.C.	Jay, Fla.	Stoneville, Miss.(B)	Beaumont, Texas
Bragg	42.7	42.5	40.2	42.2
Lee 68	43.1	43.0	42.0	43.8
D67-5726	46.5	44.9	44.2	44.0
D67-5762	47.6	44.4	45.7	46.2
D67-5808	47.0	44.3	46.6	46.3
D67-5830	46.7	44.6	45.8	45.5
D67-5929	46.0	43.9	45.1	44.1
D67-6117	48.3	47.1	46.7	46.8
D67-6159	48.9	44.7	46.2	46.3
D67-6799	44.1	39.8	42.8	42.8
D68-78	41.8	43.1	42.4	43.9
D68-80	43.0	44.0	43.1	43.7
D68-185	43.2	42.3	42.0	43.2
D68-201	42.0	43.0	42.7	43.3
D68-214	41.4	41.2	41.0	42.1
F66-698	44.2	44.7	45.9	45.4
F68-1222	42.4	41.8	41.2	40.6
F68-1350	42.1	42.8	--	41.6
F68-1527	41.3	43.2	--	40.9
F68-1564	42.3	45.1	41.0	42.0
F68-1568	42.0	41.0	--	41.5
F68-1724	42.6	42.5	41.6	42.0
F68-1805	42.3	41.9	41.1	42.7
F68-2017	44.8	44.7	44.1	44.1
F68-2159	43.6	43.9	42.7	43.0
F68-2573	42.6	41.8	41.1	41.8
F68-3530	40.2	39.4	39.9	40.3
N66-1136	40.5	42.0	41.1	42.4
N66-1336	39.9	40.9	41.3	41.8
N68-97	43.3	42.4	43.0	43.2
N68-419	42.0	42.3	42.1	42.9
N68-1235	42.0	41.2	42.3	41.6
N68-1831	42.4	42.3	41.6	41.8
N68-1948	44.4	43.6	44.4	44.1
N68-1999	42.8	42.5	42.2	42.7
N68-2058	42.2	46.5	42.0	42.9

Table 55. - Plant height for the strains in Preliminary Group VII, 1970

Strain	Willard, N.C.	Blackville, S.C.	Live Oak, Fla.	Jay, Fla.	Stone- ville. Miss.(A)	Stone- ville, Miss.(B)	Beaumont, Texas
Bragg	43	41	34	34	50	45	38
Lee 68	28	31	21	24	36	37	27
D67-5726	37	30	25	27	41	41	33
D67-5762	36	31	23	28	45	41	32
D67-5808	29	30	21	22	36	38	30
D67-5830	29	29	27	26	38	39	31
D67-5929	38	25	20	29	45	37	31
D67-6117	37	28	22	24	41	38	30
D67-6159	35	32	28	30	40	42	35
D67-6799	30	29	26	26	39	38	30
D68-78	39	35	30	29	47	41	37
D68-80	38	34	27	27	46	42	32
D68-185	28	30	23	26	35	38	26
D68-201	40	37	32	30	56	45	36
D68-214	31	31	19	26	38	38	28
F66-698	38	32	30	30	44	38	34
F68-1222	41	39	28	27	43	44	34
F68-1350	--	--	--	30	--	--	28
F68-1527	--	--	--	30	--	--	28
F68-1564	37	--	--	28	42	40	32
F68-1568	--	--	--	26	--	--	30
F68-1724	42	41	24	27	45	44	39
F68-1805	40	37	26	27	54	42	30
F68-2017	43	35	26	26	46	42	33
F68-2159	42	30	24	26	42	42	32
F68-2573	41	40	28	31	50	48	39
F68-3530	39	43	31	33	50	42	37
N66-1136	48	36	30	32	52	49	40
N66-1336	37	33	21	25	40	36	32
N68-97	38	28	28	29	44	41	33
N68-419	37	37	32	30	41	42	38
N68-1235	39	36	23	26	44	41	31
N68-1831	36	28	23	25	40	41	28
N68-1948	43	39	30	32	47	44	35
N68-1999	34	32	25	26	44	40	34
N68-2058	39	32	31	30	43	45	36

Table 56. - Seed quality scores for the strains in Preliminary Group VII, 1970

Strain	Willard, N.C.	Blackville, S.C.	Live Oak, Fla.	Jay, Fla.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Beaumont, Texas
Bragg	2.0	2.0	4.0	1.0	2.0	3.0	2.0
Lee 68	2.5	2.0	4.0	1.0	2.5	2.0	3.0
D67-5726	3.0	1.5	3.5	1.0	2.0	3.0	2.0
D67-5762	3.0	2.5	2.5	1.0	2.0	2.0	3.0
D67-5808	3.0	2.0	4.0	1.0	2.0	2.0	3.0
D67-5830	3.0	2.0	3.0	1.0	2.5	2.0	3.0
D67-5929	3.0	2.0	3.0	1.0	2.0	2.5	4.0
D67-6117	2.0	2.0	3.5	1.0	2.5	2.0	2.0
D67-6159	3.0	2.0	4.0	1.0	2.0	3.0	3.0
D67-6799	4.0	2.5	2.0	1.0	3.0	3.0	2.0
D68-78	3.0	2.0	4.0	1.0	2.0	3.0	2.0
D68-80	3.0	2.0	4.5	2.0	2.0	3.0	2.0
D68-185	3.0	2.0	4.5	1.0	2.0	2.0	3.0
D68-201	2.0	2.0	4.5	1.0	2.0	3.5	2.0
D68-214	2.0	2.0	4.0	1.0	3.0	3.0	2.0
F66-698	2.0	1.5	2.5	1.0	2.0	2.5	2.0
F68-1222	2.0	2.0	4.5	1.0	2.0	3.5	2.0
F68-1350	-	-	-	1.0	-	-	2.0
F68-1527	-	-	-	1.0	-	-	1.0
F68-1564	3.0	-	-	1.0	2.0	3.0	2.0
F68-1568	-	-	-	1.0	-	-	3.0
F68-1724	3.0	2.0	3.5	1.0	2.0	3.0	2.0
F68-1805	2.0	2.0	2.0	1.0	2.0	2.5	2.0
F68-2017	2.5	2.0	3.5	1.0	3.0	3.0	3.0
F68-2159	2.0	2.0	3.5	1.0	2.0	3.0	2.0
F68-2573	2.5	1.5	4.0	1.0	2.0	3.0	2.0
F68-3530	3.0	2.0	3.5	2.0	2.5	4.0	1.0
N66-1136	2.5	2.0	5.0	1.0	2.0	3.5	2.0
N66-1336	2.5	3.0	2.5	1.0	2.5	2.5	3.0
N68-97	3.0	1.0	2.0	1.0	2.0	3.0	1.0
N68-419	2.5	3.0	3.5	1.0	2.5	3.0	2.0
N68-1235	2.5	1.5	3.0	1.0	2.5	2.5	2.0
N68-1831	2.0	2.0	2.0	1.0	2.0	2.0	2.0
N68-1948	2.5	2.5	2.0	1.0	3.0	3.0	3.0
N68-1999	2.0	2.0	3.0	1.0	2.0	3.0	2.0
N68-2058	2.5	2.0	2.5	1.0	2.0	3.5	2.0

UNIFORM GROUP VIII

1970

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Hampton 266A	Majos x Lee	
2. Hardee	D49-772 x Improved Pelican	F7
3. F63-4000	F55-822 x (Roanoke x CNS-4)	F6
4. F66-1109	F57-735 x D58-3358	F6
5. F66-1166	F57-735 x D58-3358	F6
6. F66-1689	Hardee x D58-3358	F6
7. F66-270	F55-822 x (Roanoke x CNS)	F9
8. F66-1016	Hardee x D58-3358	F7
9. F67-1749	F57-1471 x F58-3726	F8
10. F67-1806	F57-1471 x F58-3726	F8
11. F67-3970	Bragg(2) x D60-7965	F4
12. Co6718	Stuart x F56-3492	

Background of strains used as parents:

D49-772 is a selection from Roanoke x N45-745 which was tested in Uniform Group VII. It is resistant to bacterial pustule and target spot.

F55-822 is the parent line of Bragg.

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

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

F57-1471 is a selection from the cross D49-2491 x Majos.

F58-3726 is a selection from D49-772 x Improved Pelican.

D60-7965 is a high protein selection from D55-4090(Ogden x CNS) x D55-4159 (Ogden x Biloxi).

F56-3492 is a selection from Jackson x D49-2491 which was evaluated in Uniform Group VIII.

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Twenty-five Uniform Group VIII nurseries were planted. Results from 22 nurseries are summarized in Tables 57 through 63. Table 57 gives a general summary of agronomic qualities, chemical composition of the seed, and field reaction to several diseases. Two and three-year data are reported for seed yield and oil and protein percentages.

Seed yield differences were significant at the 5% level of confidence at only nine locations. The combined analysis of variance for seed yield showed differences among strains to be significant. F66-270 was significantly higher in seed yield than Hampton 266A. Hardee and F66-1016 averaged significantly lower in seed yield. F63-4000 averaged 1.5 bu higher than Hampton 266A.

F63-4000 is the only strain grown three years. It averages one day earlier than Hampton 266A. One and two-year data show a 1.5 to 1.7 bu yield advantage over Hampton 266A, but three-year data shows only a 0.4 bu yield advantage.

Three strains, F66-1109, F66-1166, and F66-1689, have been grown two years. F66-1166 is of Hardee maturity but has a two-year average 4.2 bu higher than Hardee. It is more resistant to root-knot nematodes but more susceptible to phytophthora rot.

F66-270, a subline of F63-4000, produced extremely well. F66-1016 averaged lower in yield than Hardee. F67-1749 averaged higher in yield than Hardee but lower than F66-1166. F67-1806 was the latest maturing strain. It averaged 3 days later than Hardee and 3 bu higher in seed yield. Co6718 was similar to Hampton 266A in seed yield and maturity.

Table 57. - General summary of performance for the strains in Uniform Group VIII, 1970

	Hampton 266A	Hardee	F63-4000	F66-1109	F66-1166	F66-1689	
Seed Yield - 1970	35.3	32.6-	36.8	35.5	35.6	34.8	Seed
- 1969-70	37.0	34.0	38.7	37.4	38.2	37.1	
- 1968-70	36.0	33.0	36.4				
Oil Content - 1970	23.0	21.3-	21.0-	22.5-	22.7	22.1-	Oil
- 1969-70	23.2	21.8	21.5	23.2	23.1	22.8	
- 1968-70	22.9	21.7	21.2				
Protein Content - 1970	39.0	41.3+	42.2+	41.2+	39.7	40.4+	Prote
- 1969-70	39.1	41.5	41.9	40.8	40.0	40.2	
- 1968-70	39.0	41.7	42.1				
Seed size	15.8	14.1-	17.7+	16.3	13.9-	13.5-	Seed
Maturity index	10-31	+4	-1	+2	+5	0	Matur
Height	37	41	35	37	40	36	Heigh
Root-knot nematodes	4.0	4.0	0	3.0	0	3.0	Root-
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0	Bacte
Phytophthora rot	3.0	1.0	3.0	3.0	3.0	1.0	Phyto
Leaf feeding (%) ¹	67	67	65	68	78	87	Leaf
Flower color	P	W	P	W	W	W	Flowe
Pubescence color	G	G	T	G	G	G	Pubes
Pod wall color	B	T	T	T	T	T	Pod w

¹Quincy, Fla.

Table 57. - (continued)

	F66-270	F66-1016	F67-1749	F67-1806	F67-3970	Co6718
Seed Yield - 1970	38.6+	31.6	34.3	35.8	34.0	35.2
- 1969-70						
- 1968-70						
Oil Content - 1970	21.1-	21.3-	20.9-	20.7-	22.4-	22.1-
- 1969-70						
- 1968-70						
Protein Content - 1970	42.5+	40.4+	40.3+	39.9+	40.9+	39.6
- 1969-70						
- 1968-70						
Seed size	17.5+	13.5-	14.7-	15.1	16.9+	16.1
Maturity index	-2	+4	+6	+7	-2	0
Height	35	41	37	40	35	36
Root-knot nematodes	0	3.5	3.5	3.0	1.0	0
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	3.0	1.0	1.0	1.0	3.0	2.0
Leaf feeding (%) ¹	63	70	78	72	62	70
Flower color	P	W	P	P	P	P
Pubescence color	T	G	G	G	T	G
Pod wall color	T	T	T	T	B	B

Table 58. - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1970

Location	Hampton						
	266A	Hardee	F63-4000	F66-1109	F66-1166	F66-1689	F66-270
Willard, N.C.	51.4	42.2	50.4	42.9	41.3	47.3	55.9
Florence, S.C.(A)	41.7	38.9	40.9	43.8	45.5	41.9	47.4
Florence, S.C.(B)	36.3	39.7	41.4	41.9	37.3	38.7	39.7
Hartsville, S.C.(A)	33.5	35.3	37.0	36.7	37.2	34.9	37.6
Hartsville, S.C.(B)	34.9	40.0+	40.9+	39.6	37.8	38.9	37.3
Blackville, S.C.(A)	19.1	16.2	19.8	19.4	20.4	19.0	19.6
Blackville, S.C.(B)	24.6	24.4	34.4	30.9	29.0	29.3	33.3
Experiment, Ga.	21.7	23.8	25.3	26.8	26.0	26.1	24.8
Tifton, Ga.	53.0	50.5	59.2+	50.7	55.2	58.8+	58.5+
Live Oak, Fla.	36.3	31.4	35.5	34.4	38.5	34.1	38.1
Gainesville, Fla.	42.5	36.4	42.5	37.9	40.6	41.0	44.4
Marianna, Fla.	22.0	17.0-	27.7	21.6	24.1	21.2	27.7+
Quincy, Fla.	33.1	34.9	33.6	32.7	21.8-	28.7	36.5
Jay, Fla.	50.5	47.7	50.5	50.5	47.0	54.1	54.1
Fairhope, Ala.	42.9	35.3	26.1	41.4	42.4	40.9	45.9
Poplarville, Miss.	31.8	35.6	37.5	40.6	39.6	40.2	42.9
Baton Rouge, La.	39.7	36.2	31.5-	36.9	37.9	38.7	31.2-
Stoneville, Miss.	24.2	18.5	22.6	23.2	22.4	23.0	22.8
St. Joseph, La.	26.4	24.3	35.2+	33.5+	28.1	24.1	37.8+
Curtis, La.	36.5	24.7-	40.1	33.6	35.6	25.2-	37.2
Crowley, La.	44.9	38.3	52.8	38.5	41.2	38.5	49.1
Beaumont, Texas	27.2	24.9	22.8	25.9	27.1	22.4	29.3
Mean	35.3	32.6-	36.8	35.5	35.6	34.8	38.6+

(+) - Strains yielding significantly more (odds 19:1 or greater) than Hampton 266A.
 (-) - Strains yielding significantly less (odds 19:1 or greater) than Hampton 266A.

Table 58. - (continued)

Location	F66-1016	F67-1749	F67-1806	F67-3970	Co6718	L.S.D. (.05)	C.V.
Willard, N.C.	47.6	45.5	48.0	44.2	46.2	N.S.	12%
Florence, S.C.(A)	39.7	45.3	44.1	42.1	44.5	N.S.	9%
Florence, S.C.(B)	38.5	43.8	31.9	37.8	43.1	N.S.	15%
Hartsville, S.C.(A)	34.0	39.7+	40.6+	33.1	37.7	4.3	7%
Hartsville, S.C.(B)	37.4	35.6	40.1+	35.5	38.9	4.6	7%
Blackville, S.C.(A)	19.7	19.4	19.5	16.1	18.1	N.S.	11%
Blackville, S.C.(B)	26.1	29.2	24.9	30.9	29.7	N.S.	14%
Experiment, Ga.	20.6	25.6	29.1	26.0	23.6	N.S.	19%
Tifton, Ga.	52.7	56.2	55.2	51.3	54.4	5.3	6%
Live Oak, Fla.	33.3	32.3	32.4	31.3	35.9	N.S.	12%
Gainesville, Fla.	34.4	40.3	33.2	40.8	41.8	N.S.	9%
Marianna, Fla.	19.0	17.9-	15.0-	27.0+	22.3	3.6	11%
Quincy, Fla.	31.9	30.3	34.3	35.2	36.1	7.5	14%
Jay, Fla.	54.1	54.8	58.4	50.5	47.0	N.S.	6%
Fairhope, Ala.	15.9	32.2	42.2	34.4	41.5	N.S.	29%
Poplarville, Miss.	36.2	36.5	45.4	38.1	37.9	N.S.	11%
Baton Rouge, La.	37.2	33.3	41.4	27.3-	32.4-	6.7	11%
Stoneville, Miss.	18.3	19.1	26.1	18.6	26.3	N.S.	20%
St. Joseph, La.	24.4	29.7	36.4+	33.5+	18.3-	6.9	14%
Curtis, La.	24.0-	28.4	26.5-	32.7	27.7-	6.0	11%
Crowley, La.	30.6-	30.4-	31.3-	35.3-	44.6	8.2	12%
Beaumont, Texas	23.4	29.9	30.7	24.9	21.9	N.S.	14%
Mean	31.6-	34.3	35.8	34.0	35.2	2.3	

Table 59. - Chemical composition and seed size for the strains in Uniform Group VIII, 1970

Location	Hampton 266A	Hardee	F63-4000	F66-1109	F66-1166	F66-1689
<u>Oil Percentage</u>						
Hartsville, S.C.(A)	24.1	21.9	22.8	23.9	23.2	22.4
Blackville, S.C.(B)	21.1	20.9	19.9	21.1	20.9	20.1
Tifton, Ga.	22.4	21.0	20.4	23.1	22.4	22.6
Live Oak, Fla.	24.4	22.3	21.9	23.1	23.3	22.4
Gainesville, Fla.	23.7	20.5	21.2	23.3	23.8	23.0
Jay, Fla.	23.0	21.9	21.4	22.7	23.5	22.7
Baton Rouge, La.	22.9	21.5	20.2	21.9	22.2	21.9
Beaumont, Texas	22.4	20.6	20.4	20.8	22.1	21.6
Mean	23.0	21.3-	21.0-	22.5-	22.7	22.1-
<u>Protein Percentage</u>						
Hartsville, S.C.(A)	36.3	38.9	38.6	37.5	36.6	38.1
Blackville, S.C.(B)	39.1	41.1	42.5	41.0	39.5	40.0
Tifton, Ga.	39.6	41.5	42.3	41.4	39.0	41.2
Live Oak, Fla.	40.1	41.7	44.5	42.9	41.1	41.4
Gainesville, Fla.	39.1	42.8	43.1	42.1	41.1	40.5
Jay, Fla.	39.7	42.1	42.8	40.4	38.9	40.8
Baton Rouge, La.	39.5	41.4	43.6	43.4	42.3	42.2
Beaumont, Texas	38.6	41.2	40.5	41.0	39.2	39.0
Mean	39.0	41.3+	42.2+	41.2+	39.7	40.4+
<u>Grams per 100 Seeds</u>						
Hartsville, S.C.(A)	15.2	12.7	16.1	14.7	13.7	12.8
Blackville, S.C.(B)	12.0	13.5	14.0	12.8	10.0	11.0
Tifton, Ga.	15.8	13.6	19.1	17.7	15.0	15.1
Live Oak, Fla.	17.1	15.1	20.1	17.7	15.6	14.9
Gainesville, Fla.	16.8	13.5	19.7	18.6	14.9	14.0
Jay, Fla.	18.4	16.7	20.1	18.9	15.7	14.1
Baton Rouge, La.	16.0	13.6	16.7	15.6	14.3	13.5
Beaumont, Texas	15.0	13.9	15.5	14.0	12.3	12.3
Mean	15.8	14.1-	17.7+	16.3	13.9-	13.5-

Table 59. - (continued)

Location	F66-270	F66-1016	F67-1749	F67-1806	F67-3970	Co6718	L.S.D. (.05)
<u>Oil Percentage</u>							
Hartsville, S.C.(A)	22.4	22.4	21.8	21.1	23.6	22.4	
Blackville, S.C.(B)	20.4	20.1	20.9	19.3	20.1	20.3	
Tifton, Ga.	21.1	21.3	21.0	20.6	22.3	22.3	
Live Oak, Fla.	21.8	22.1	21.4	21.9	24.0	22.9	
Gainesville, Fla.	21.6	21.2	21.6	21.2	22.7	23.4	
Jay, Fla.	21.2	21.6	21.1	21.1	23.0	22.5	
Baton Rouge, La.	20.4	21.3	20.0	20.4	21.9	21.1	
Beaumont, Texas	20.1	20.6	19.1	19.8	21.9	21.8	
Mean	21.1-	21.3-	20.9-	20.7-	22.4-	22.1-	0.5
<u>Protein Percentage</u>							
Hartsville, S.C.(A)	39.4	36.3	37.6	36.7	37.6	36.9	
Blackville, S.C.(B)	42.4	39.6	38.9	39.2	41.8	42.1	
Tifton, Ga.	42.0	41.3	40.5	41.0	40.4	39.6	
Live Oak, Fla.	45.0	42.2	41.8	39.2	42.6	40.4	
Gainesville, Fla.	42.4	41.4	40.3	40.5	41.2	39.3	
Jay, Fla.	43.3	40.6	40.6	40.6	40.5	37.9	
Baton Rouge, La.	44.0	41.9	42.6	41.7	43.3	41.1	
Beaumont, Texas	41.6	40.0	40.4	40.2	40.0	39.5	
Mean	42.5+	40.4+	40.3+	39.9+	40.9+	39.6	0.8
<u>Grams per 100 Seeds</u>							
Hartsville, S.C.(A)	15.8	13.5	13.5	14.2	15.6	15.0	
Blackville, S.C.(B)	13.3	9.8	11.0	10.5	13.3	13.3	
Tifton, Ga.	18.6	13.1	15.9	15.6	17.6	17.7	
Live Oak, Fla.	20.0	14.8	16.2	16.9	18.5	18.7	
Gainesville, Fla.	18.8	13.3	14.7	15.3	17.9	17.0	
Jay, Fla.	21.6	16.1	18.4	18.6	20.5	18.3	
Baton Rouge, La.	16.2	14.3	14.8	15.6	16.6	16.9	
Beaumont, Texas	15.8	13.0	13.0	13.9	14.9	12.2	
Mean	17.5+	13.5-	14.7-	15.1	16.9+	16.1	0.9

Table 60. - Relative maturity, days earlier (-) or later (+) than Hampton 266A, for the strains in Uniform Group VIII, 1970

Location	Date planted	Hampton 266A				
		matured	Hardee	F63-4000	F66-1109	F66-1166
Willard, N.C.	5-11	11-2	+8	0	+2	+6
Florence, S.C.(A)	5-15	11-3	+3	-2	+3	+1
Florence, S.C.(B)	6-15	11-6	+2	-4	0	+7
Hartsville, S.C.(A)	5-21	11-4	+7	-5	+4	+5
Blackville, S.C.(A)	5-22	10-24	+7	-1	+5	+7
Blackville, S.C.(B)	6-26	10-28	+5	0	+5	+7
Experiment, Ga.	6-10	10-30	+10	-1	-3	+9
Tifton, Ga.	5-5	10-22	+4	+3	+6	+6
Jay, Fla.	5-21	10-26	+3	-1	+2	+2
Fairhope, Ala.	6-9	10-26	+2	-2	0	0
Poplarville, Miss.	5-21	10-24	+3	-3	+3	+5
Baton Rouge, La.	5-14	11-1	+3	-2	+2	+10
Stoneville, Miss.	5-11	11-2	+2	0	+1	+3
St. Joseph, La.	5-13	11-10	0	-1	-2	-2
Curtis, La.	5-15	11-4	+6	-2	+5	+6
Beaumont, Texas	6-12	11-6	0	0	+1	+2
Mean		10-31	+4	-1	+2	+5

Table 60. - (continued)

Location	F66-1689	F66-270	F66-1016	F67-1749	F67-1806	F67-3970	Co6718
Willard, N.C.	+4	0	+8	+4	+6	0	0
Florence, S.C.(A)	-2	-2	+3	+3	+3	-3	+1
Florence, S.C.(B)	0	-6	+2	+7	+7	-6	-2
Hartsville, S.C.(A)	+1	-2	+9	+7	+9	-1	-2
Blackville, S.C.(A)	+3	-6	+7	+8	+12	-7	-1
Blackville, S.C.(B)	+4	0	+4	+8	+9	-3	+2
Experiment, Ga.	-3	-4	+5	+6	+5	-3	-1
Tifton, Ga.	+3	+2	+6	+6	+10	+1	+3
Jay, Fla.	-1	-2	+5	+5	+7	-4	-3
Fairhope, Ala.	-2	0	-2	+4	+4	0	-2
Poplarville, Miss.	+3	-1	+6	+17	+6	+1	-4
Baton Rouge, La.	-1	-2	+6	+10	+11	+1	0
Stoneville, Miss.	0	-2	+3	+1	+5	-1	-2
St. Joseph, La.	-1	-1	-2	+2	+2	-2	-2
Curtis, La.	+1	+1	+4	+3	+6	-2	+1
Beaumont, Texas	0	0	+2	+3	+5	0	0
Mean	0	-2	+4	+6	+7	-2	0

Table 61. - Plant height for the strains in Uniform Group VIII, 1970

Location	Hampton					
	266A	Hardee	F63-4000	F66-1109	F66-1166	F66-1689
Willard, N.C.	45	51	41	41	46	40
Florence, S.C.(A)	37	42	37	38	42	36
Florence, S.C.(B)	38	42	38	41	37	40
Hartsville, S.C.(A)	39	43	41	39	41	36
Hartsville, S.C.(B)	33	35	31	32	37	33
Blackville, S.C.(A)	37	44	36	36	40	37
Blackville, S.C.(B)	34	36	33	37	40	34
Experiment, Ga.	31	34	33	34	35	30
Tifton, Ga.	34	41	36	33	39	34
Live Oak, Fla.	33	34	31	36	40	32
Gainesville, Fla.	29	35	30	35	40	31
Marianna, Fla.	47	48	43	44	47	43
Quincy, Fla.	25	32	24	30	28	29
Jay, Fla.	35	42	32	35	37	33
Fairhope, Ala.	40	38	36	36	38	35
Poplarville, Miss.	42	43	38	42	48	42
Baton Rouge, La.	37	40	31	33	38	33
Stoneville, Miss.	37	40	38	38	42	37
St. Joseph, La.	48	58	46	41	51	46
Curtis, La.	42	43	39	41	43	39
Crowley, La.	36	40	32	37	38	34
Beaumont, Texas	31	40	34	30	36	31
Mean	37	41	35	37	40	36

Table 61. - (continued)

Location	F66-270	F66-1016	F67-1749	F67-1806	F67-3970	Co6718
Willard, N.C.	38	50	41	44	39	41
Florence, S.C.(A)	38	41	35	40	37	37
Florence, S.C.(B)	38	39	35	35	39	36
Hartsville, S.C.(A)	41	41	36	41	38	37
Hartsville, S.C.(B)	34	35	33	34	34	35
Blackville, S.C.(A)	33	43	38	42	37	38
Blackville, S.C.(B)	32	35	35	35	34	34
Experiment, Ga.	32	31	30	35	32	30
Tifton, Ga.	34	42	33	35	31	33
Live Oak, Fla.	31	38	35	37	29	29
Gainesville, Fla.	32	35	35	38	31	31
Marianna, Fla.	42	48	44	44	42	45
Quincy, Fla.	26	32	28	35	24	27
Jay, Fla.	30	42	36	41	31	31
Fairhope, Ala.	34	39	38	40	35	35
Poplarville, Miss.	41	45	44	47	39	40
Baton Rouge, La.	32	42	33	41	29	33
Stoneville, Miss.	37	39	36	38	35	37
St. Joseph, La.	44	51	44	56	45	49
Curtis, La.	43	48	45	42	39	40
Crowley, La.	32	40	37	39	31	35
Beaumont, Texas	34	35	32	36	34	32
Mean	35	41	37	40	35	36

Table 62. - Lodging scores for the strains in Uniform Group VIII, 1970

Location	Hampton					
	266A	Hardee	F63-4000	F66-1109	F66-1166	F66-1689
Willard, N.C.	3.0	4.0	3.0	3.3	3.0	3.0
Florence, S.C.(A)	2.0	2.0	2.0	3.0	2.0	2.0
Florence, S.C.(B)	3.0	2.0	2.0	3.0	2.0	2.0
Hartsville, S.C.(A)	2.5	3.2	2.5	2.2	2.5	2.2
Hartsville, S.C.(B)	2.2	2.7	2.2	3.0	3.5	2.5
Blackville, S.C.(A)	2.3	2.0	2.0	1.7	1.7	1.0
Blackville, S.C.(B)	3.0	3.0	2.3	2.0	2.0	2.0
Experiment, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.3	3.0	2.0	3.0	2.7	2.3
Live Oak, Fla.	1.0	1.0	1.0	2.0	2.0	1.5
Gainesville, Fla.	1.0	1.0	1.0	2.0	2.0	1.0
Marianna, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	2.0	2.0	1.0	3.0	4.0	1.0
Jay, Fla.	1.0	3.0	1.0	2.0	1.0	2.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Poplarville, Miss.	2.3	2.0	1.0	2.0	2.0	1.0
Baton Rouge, La.	1.8	1.5	1.0	1.3	1.3	1.0
Stoneville, Miss. Miss.	2.7	2.7	2.7	3.0	3.0	2.7
St. Joseph, La.	5.0	5.0	5.0	5.0	5.0	5.0
Curtis, La.	4.0	4.0	3.5	3.5	4.0	3.0
Beaumont, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 62. - (Continued)

Location	F66-270	F66-1016	F67-1749	F67-1806	F67-3970	Co6718
Willard, N.C.	2.3	3.0	4.0	3.7	2.3	3.0
Florence, S.C.(A)	2.0	2.0	3.0	3.0	1.0	2.0
Florence, S.C.(B)	3.0	2.0	2.0	1.0	2.0	2.0
Hartsville, S.C.(A)	2.5	2.5	2.5	2.8	2.2	2.0
Hartsville, S.C.(B)	2.3	2.3	3.0	2.7	2.8	2.2
Blackville, S.C.(A)	1.7	1.3	2.3	2.7	1.0	1.0
Blackville, S.C.(B)	2.3	1.7	1.3	2.0	2.3	2.0
Experiment, Ga.	1.0	1.0	1.0	1.3	1.0	1.0
Tifton, Ga.	2.0	1.7	3.0	4.0	1.0	1.3
Live Oak, Fla.	1.0	1.7	1.7	1.7	1.3	1.0
Gainesville, Fla.	1.0	1.0	2.0	2.0	1.0	1.0
Marianna, Fla.	1.0	1.0	2.0	2.0	1.0	1.0
Quincy, Fla.	1.0	2.0	4.0	3.0	1.0	1.0
Jay, Fla.	1.0	2.0	3.0	3.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Poplarville, Miss.	1.0	2.0	2.0	2.7	1.0	1.0
Baton, Rouge, La.	1.0	1.1	1.5	2.0	3.1	1.0
Stoneville, Miss.	2.3	2.7	2.7	3.0	2.0	2.0
St. Joseph, La.	5.0	5.0	5.0	5.0	5.0	5.0
Curtis, La.	3.0	4.0	4.5	4.0	3.0	3.0
Beaumont, Texas	1.0	1.0	2.0	1.0	1.0	1.0

Table 63. - Seed quality scores for the strains in Uniform Group VIII, 1970

Location	Hampton						
	266A	Hardee	F63-4000	F66-1109	F66-1166	F66-1689	
Willard, N.C.	2.0	2.0	2.0	2.5	2.0	2.0	V
Hartsville, S.C.(A)	1.5	1.5	2.5	1.5	1.5	1.5	H
Blackville, S.C.(A)	2.0	2.0	1.7	1.3	1.7	1.7	E
Blackville, S.C.(B)	2.0	2.0	1.8	3.0	1.8	2.2	E
Experiment, Ga.	3.0	2.7	3.0	2.0	3.0	2.7	E
Tifton, Ga.	2.0	2.5	2.5	2.0	2.5	1.0	T
Live Oak, Fla.	2.0	1.3	2.0	2.0	2.0	2.3	I
Gainesville, Fla.	1.7	1.0	1.0	1.0	1.0	1.0	G
Quincy, Fla.	2.0	2.0	2.0	1.0	3.0	2.0	Q
Jay, Fla.	1.0	1.0	2.0	1.0	1.0	1.0	J
Fairhope, Ala.	2.3	1.0	2.0	1.3	1.3	1.3	F
Baton Rouge, La.	1.7	1.1	1.3	1.0	1.5	1.1	B
Stoneville, Miss.	2.7	2.7	2.3	2.3	2.3	2.0	S
St. Joseph, La.	2.5	2.3	2.5	2.0	2.7	2.4	S
Curtis, La.	1.7	1.3	1.7	2.0	1.7	1.0	C
Beaumont, Texas	2.0	2.0	2.0	2.0	2.0	2.0	B

Table 63. - (continued)

Location	F66-270	F66-1016	F67-1749	F67-1806	F67-3970	Co6718
Willard, N.C.	2.0	2.0	2.0	2.0	2.5	2.5
Hartsville, S.C.(A)	1.0	1.5	1.0	1.5	3.0	1.5
Blackville, S.C.(A)	1.7	2.0	1.3	1.7	2.0	1.7
Blackville, S.C.(B)	1.8	2.0	3.6	3.3	1.8	1.7
Experiment, Ga.	2.3	3.7	2.3	2.3	3.3	2.7
Tifton, Ga.	2.0	2.5	2.0	3.0	2.5	2.5
Live Oak, Fla.	1.3	2.0	2.7	2.0	3.3	2.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.3	1.0
Quincy, Fla.	3.0	2.0	2.0	3.0	3.0	2.0
Jay, Fla.	1.0	1.0	1.0	2.0	2.0	1.0
Fairhope, Ala.	2.0	1.7	2.0	1.0	2.0	1.3
Baton Rouge, La.	1.1	1.5	1.3	1.1	1.5	1.4
Stoneville, Miss.	2.3	2.3	3.0	2.7	2.7	2.3
St. Joseph, La.	2.3	2.4	2.4	2.0	2.6	2.5
Curtis, La.	1.7	2.0	1.3	2.0	2.3	1.3
Beaumont, Texas	2.0	2.0	2.0	2.0	1.0	1.0

PRELIMINARY GROUP VIII

1970

Preliminary Group VIII nurseries, including 32 experimental strains and the check varieties Hampton 266A and Hardee, were grown at seven locations. A single plot of each strain was grown on clay at Stoneville for observation of general characteristics and field reaction to phytophthora rot. Also included were the two varieties named in Brazil -- Mineira and Vicoja. Both strains had previously been evaluated in Uniform Group VIII.

Performance data are summarized in Tables 65 through 70. Differences in seed yield were significant at the 5% level of confidence at all locations. The combined analysis of variance for seed yield showed differences in mean seed yields among strains to be significant. Nine strains ranked above Hampton 266A in seed yield. However, there were no strains with a mean seed yield significantly greater than Hampton 266A. One strain had a significantly lower seed yield. Seed yields for Quincy were not included in the over-all mean, as this planting suffered from severe worm feeding -- probably the soybean looper. Percentage leaf area destroyed is reported.

Strains which appear to merit being advanced to Uniform Group VIII are Co6838, F66-973, F66-1062, F68-1004, F68-1018, and F68-1426.

Table 64. - Parentage of strains in Preliminary Group VIII, 1970

Variety or strain	Parentage	Generation composited
1. Hampton 266A		
2. Hardee		
3. Mineira	D49-772 x Improved Pelican	
4. Vicoja	D49-2491(2) x Improved Pelican	
5. Co6833	Hampton 266 x Bragg	F4
6. Co6838	Hampton 266 x Bragg	F4
7. Co6841	Hampton 266 x Bragg	F4
8. Co6873	Coker 102 x Hampton 266	F4
9. Co6875	Stuart x F56-3492	F5
10. Co6878	Stuart x F56-3492	F5
11. Co6883	D59-706 x Hampton 266	F4
12. F66-973	Hardee x D58-3358	F7
13. F66-1062	F57-735 x D58-3358	F6
14. F66-1108	F57-735 x D58-3358	F6
15. F66-1303	Hardee x D53-1301	F7
16. F67-1461	Hardee x (Bragg x F59-2496)	F4
17. F67-1686	F57-1471 x F58-3726	F8
18. F67-3673	Bragg x D60-8107	F6
19. F68-1004	Bragg(3) x D60-7965	F4
20. F68-1018	Bragg(3) x D60-7965	F4
21. F68-1054	Bragg(3) x D60-7965	F4
22. F68-1128	Bragg(3) x D60-7965	F4
23. F68-1204	Bragg(3) x D60-7965	F4
24. F68-1230	Bragg(3) x D60-7965	F4
25. F68-1412	Bragg(3) x D60-7965	F4
26. F68-1422	Bragg(3) x D60-7965	F4
27. F68-1424	Bragg(3) x D60-7965	F4
28. F68-1426	Bragg(3) x D60-7965	F4
29. F68-1876	Bragg(3) x D60-7965	F4
30. F68-3037	Bragg(2) x F59-2496	F4
31. F68-3086	Bragg(2) x D60-7965	F5
32. F68-3089	Bragg(2) x D60-7965	F5
33. F68-3128	Bragg(2) x D60-7965	F5
34. F68-3583	Bragg x F59-1505	F4
35. F68-3721	Hardee x Lee	F5
36. F68-3748	Hardee x Lee	F5

Table 65. - General summary of performance for the strains in Preliminary Group VIII, 1970

Strain	Seed yield	Maturity index	Ht.	Percent		P.R.	Seed holding	% leaf area ^{1/} destroyed
				Oil	Protein			
Hampton 266A	35.7	10-30	33	23.0	40.9	2.0	1.0	83
Hardee	35.9	+2	40	21.8-	42.3+	1.0	2.0	73
Mineira	32.3	+6	41	21.1-	43.1+	1.0	1.5	90
Vicoja	32.7	0	43	21.2-	42.6+	1.0	1.5	85
Co6833	35.9	-1	36	24.1+	40.4	1.0	1.5	85
Co6838	37.3	-2	32	23.2	42.6+	2.0	1.0	80
Co6841	37.5	-2	35	22.9	40.0	3.0	2.5	70
Co6873	35.6	+1	36	21.9-	42.3+	1.0	2.0	83
Co6875	33.5	0	33	22.4	40.8	1.0	2.0	68
Co6878	32.7	+2	36	22.7	40.6	2.0	1.0	68
Co6883	36.4	-3	31	23.7	39.9	2.0	1.0	80
F66-973	36.9	+1	33	23.6	40.9	1.0	2.5	70
F66-1062	37.3	+3	39	22.8	39.6-	1.0	1.0	98
F66-1108	33.5	+3	35	23.7	40.7	1.0	1.5	93
F66-1303	36.3	+4	36	21.9-	42.1+	1.0	1.0	75
F67-1461	34.3	+2	40	21.2-	43.5+	1.0	1.5	90
F67-1686	30.8-	+6	45	20.8-	39.8	1.0	1.0	78
F67-3673	34.7	-2	34	19.5-	46.8+	1.0	1.5	90
F68-1004	37.2	+1	36	22.6	41.7	1.0	1.0	95
F68-1018	39.7	+1	36	22.1-	42.4+	1.0	1.0	73
F68-1054	35.2	+3	34	22.3	42.0	1.0	1.0	83
F68-1128	35.3	-2	28	21.1-	42.5+	2.0	1.5	83
F68-1204	33.7	-1	30	22.0-	43.0+	1.0	1.5	73
F68-1230	33.8	-3	30	22.1-	42.8+	3.0	1.0	88
F68-1412	35.0	-3	30	22.2	41.4	2.0	1.0	65
F68-1422	32.6	-2	27	21.1-	43.8+	1.0	1.5	85
F68-1424	33.2	-4	30	20.8-	45.5+	2.0	1.5	68
F68-1426	35.7	-1	31	21.8-	42.9+	1.0	1.0	90
F68-1876	32.7	-2	35	21.9-	44.0+	1.0	1.0	93
F68-3037	26.8-	-4	36	21.3-	44.3+	3.0	3.0	68
F68-3086	33.5	0	32	21.6-	43.6+	1.0	1.0	63
F68-3089	35.4	0	35	21.7-	44.3+	1.0	1.0	80
F68-3128	28.1-	-1	34	19.7-	46.3+	1.0	---	98
F68-3583	36.2	-3	35	22.8	42.3+	2.0	2.0	93
F68-3721	33.7	+3	44	21.6-	42.7+	1.0	1.0	90
F68-3748	33.2	-1	33	22.5	43.2+	1.0	1.0	80
L.S.D.(.05)	4.7			0.9	1.2			
L.S.D.(.01)	6.1			1.2	1.6			

^{1/} Worm feeding, Quincy

Table 66. - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1970

Strain	Blackville, S.C.	Live Oak, Fla.	Gainesville, Fla.	Quincy, Fla.*	Jay, Fla.	Baton Rouge, La.	Beaumont, Texas
Hampton 266A	22.2	36.2	39.2	20.8	57.0	36.6	23.3
Hardee	22.4	37.7	39.9	23.7	47.7	43.5	24.3
Mineira	19.2	35.4	38.1	18.7	47.7	33.1	20.1
Vicoja	18.5	33.3	35.1	24.0	49.9	39.0	20.2
Co6833	21.8	42.6+	43.3	20.0	54.5	29.2	24.1
Co6838	25.6	32.4	45.7+	21.8	50.9	32.2	37.0+
Co6841	21.5	40.1	46.4+	27.8	52.7	32.4	31.6+
Co6873	23.4	39.6	34.7	21.6	49.8	36.8	29.6+
Co6875	21.6	34.7	39.1	31.6	49.5	32.0	23.9
Co6878	20.8	38.7	35.4	31.7	47.4	33.6	20.3
Co6883	22.8	39.6	40.1	23.8	53.1	35.5	27.5
F66-973	24.2	40.9	39.7	27.0	50.9	36.0	29.5+
F66-1062	21.1	44.7+	45.3+	12.4	49.1	35.0	29.0
F66-1108	23.6	40.3	38.2	15.1	42.0-	32.8	23.9
F66-1303	23.8	40.8	44.9+	24.0	45.9-	37.0	25.2
F67-1461	28.2	38.8	40.4	10.9	44.2-	31.0	23.4
F67-1686	17.9	32.3	30.2-	20.8	45.9-	37.7	21.1
F67-3673	25.0	38.4	43.7	21.9	47.3	24.4-	29.5+
F68-1004	18.4	43.6+	41.8	18.8	55.9	36.8	27.1
F68-1018	24.3	40.9	49.1+	28.2	59.8	32.6	31.5+
F68-1054	23.3	41.6	40.5	22.8	53.4	30.6	22.1
F68-1128	21.8	40.2	44.7+	22.7	52.0	25.3-	28.4
F68-1204	26.1	36.4	42.6	25.0	43.4-	29.4	24.2
F68-1230	22.8	34.2	43.2	17.5	48.4	26.0-	28.1
F68-1412	27.1	36.7	44.0	27.9	53.8	20.8-	27.9
F68-1422	20.3	38.2	41.7	22.1	50.9	23.9-	20.8
F68-1424	23.2	40.3	37.7	24.8	45.6	24.2-	28.1
F68-1426	26.1	37.0	41.4	15.6	57.3	26.9-	25.5
F68-1876	22.7	36.9	39.1	13.2	48.4	28.6	20.8
F68-3037	--	34.4	34.5	18.9	28.1-	16.1-	26.8
F68-3086	--	32.3	39.6	24.3	49.5	25.3-	25.3
F68-3089	26.7	35.0	42.3	29.7	46.3-	31.4	30.8+
F68-3128	--	25.6-	33.8	7.7	36.3-	25.4-	24.7
F68-3583	23.6	38.3	45.3+	13.2	52.0	29.5	28.8
F68-3721	20.9	39.0	33.4-	25.1	53.4	34.6	21.1
F68-3748	--	39.8	40.2	17.2	52.4	24.4-	24.7
L.S.D. (.05)	8.3	5.7	5.5	N.S.	9.9	8.3	5.8
C.V.	13%	7%	7%	34%	10%	13%	11%

*Not included in mean.

Table 67. - Oil percentages for the strains in Preliminary Group VIII, 1970

Strain	Live Oak, Fla.	Gainesville, Fla.	Jay, Fla.	Baton Rouge, La.
Hampton 266A	23.4	23.6	23.3	21.7
Hardee	22.6	22.1	21.1	21.5
Mineira	22.1	21.4	20.6	20.4
Vicoja	22.1	20.7	20.6	21.3
Co6833	24.2	24.7	24.3	23.0
Co6838	22.9	24.7	21.6	23.5
Co6841	23.1	23.4	22.9	22.2
Co6873	22.1	22.3	21.3	21.9
Co6875	23.8	21.1	22.6	22.0
Co6878	23.6	23.4	20.9	23.0
Co6883	23.5	23.8	24.0	23.5
F66-973	24.6	25.1	22.8	21.9
F66-1062	23.6	22.3	23.3	21.9
F66-1108	24.2	23.4	23.8	23.2
F66-1303	22.1	22.9	21.6	21.1
F67-1461	21.9	21.2	21.8	20.0
F67-1686	21.1	20.0	21.4	20.5
F67-3673	20.2	20.5	19.4	18.0
F68-1004	23.3	22.8	22.4	21.9
F68-1018	22.4	22.3	22.2	21.5
F68-1054	22.9	22.4	22.4	21.3
F68-1128	21.9	21.2	21.0	20.2
F68-1204	23.3	22.3	21.8	20.5
F68-1230	22.7	21.8	22.6	21.3
F68-1412	22.8	22.6	22.9	20.5
F68-1422	21.7	20.5	22.1	19.9
F68-1424	21.3	20.5	21.3	19.9
F68-1426	22.0	21.4	22.1	21.5
F68-1876	22.8	22.3	21.6	20.7
F68-3037	22.7	21.4	21.0	20.0
F68-3086	21.8	21.4	22.8	20.2
F68-3089	22.8	22.1	21.9	20.0
F68-3128	19.5	19.3	20.4	19.4
F68-3583	23.3	22.8	22.8	22.1
F68-3721	21.7	21.1	21.9	21.7
F68-3748	23.3	22.1	22.4	22.0

Table 68. - Protein percentages for the strains in Preliminary Group VIII, 1970

Strain	Live Oak, Fla.	Gainesville, Fla.	Jay, Fla.	Baton Rouge, La.
Hampton 266A	40.7	40.1	41.1	41.8
Hardee	41.3	42.9	43.1	41.7
Mineira	42.5	43.1	43.8	43.1
Vicoja	43.0	42.9	42.3	42.0
Co6833	40.1	41.0	40.2	40.4
Co6838	42.3	43.1	42.2	42.6
Co6841	39.7	39.3	40.4	40.5
Co6873	41.8	42.1	42.3	43.0
Co6875	39.9	42.2	40.3	40.8
Co6878	40.7	40.1	41.3	40.1
Co6883	40.4	39.7	40.1	39.2
F66-973	40.4	39.7	41.3	42.2
F66-1062	37.6	40.0	39.9	41.0
F66-1108	40.0	41.5	39.9	41.2
F66-1303	41.0	42.2	42.2	43.0
F67-1461	43.4	43.5	42.2	44.9
F67-1686	40.5	40.9	39.1	38.8
F67-3673	46.9	45.9	46.3	48.2
F68-1004	41.1	41.2	41.9	42.5
F68-1018	42.4	41.9	41.5	43.6
F68-1054	42.0	41.6	41.2	43.3
F68-1128	42.0	42.1	41.6	44.4
F68-1204	42.0	42.5	43.1	44.5
F68-1230	42.6	41.8	42.8	43.8
F68-1412	42.1	39.4	41.1	43.0
F68-1422	43.5	45.0	42.6	44.2
F68-1424	44.4	45.9	44.2	47.4
F68-1426	43.6	42.3	41.6	43.9
F68-1876	44.1	43.4	43.8	44.7
F68-3037	43.3	43.5	44.0	46.3
F68-3086	44.3	42.6	41.9	45.4
F68-3089	43.4	44.2	43.0	46.4
F68-3128	47.7	46.2	44.7	46.6
F68-3583	42.0	40.6	42.5	43.9
F68-3721	42.1	43.5	42.6	42.5
F68-3748	42.8	42.6	44.6	42.9

Table 69. - Plant height for the strains in Preliminary Group VIII, 1970

Strain	Blackville, S.C.	Live Oak, Fla.	Quincy, Fla.	Jay, Fla.	Baton Rouge, La.	Beaumont, Texas
Hampton 266A	29	37	27	36	34	33
Hardee	36	36	31	42	41	43
Mineira	36	42	34	48	44	42
Vicoja	38	44	37	45	48	46
Co6833	32	40	31	37	35	38
Co6838	33	33	24	32	32	40
Co6841	33	38	28	36	37	40
Co6873	30	40	28	37	38	40
Co6875	33	36	24	31	37	38
Co6878	36	39	29	40	38	36
Co6883	31	30	23	30	32	41
F66-973	29	32	26	37	38	36
F66-1062	41	41	34	38	38	40
F66-1108	36	42	30	36	30	38
F66-1303	35	38	31	37	38	37
F67-1461	41	44	33	40	40	40
F67-1686	43	43	37	48	52	46
F67-3673	36	32	27	36	34	36
F68-1004	35	38	28	33	42	41
F68-1018	38	42	27	33	39	38
F68-1054	35	38	29	34	32	38
F68-1128	27	28	23	27	28	36
F68-1204	30	31	23	30	32	35
F68-1230	35	33	21	30	30	32
F68-1412	34	31	24	30	28	35
F68-1422	28	28	21	29	26	32
F68-1424	34	29	24	29	30	32
F68-1426	30	33	28	32	28	35
F68-1876	38	36	27	34	35	38
F68-3037	39	36	23	37	39	43
F68-3086	33	34	24	32	33	36
F68-3089	35	38	26	33	40	40
F68-3128	--	36	26	33	37	40
F68-3583	38	38	26	35	38	37
F68-3721	36	45	36	50	52	45
F68-3748	33	34	23	36	32	39

Table 70. - Seed quality scores for the strains in Preliminary Group VIII, 1970

Strain	Blackville, S.C.	Live Oak, Fla.	Gainesville, Fla.	Quincy, Fla.	Jay, Fla.	Baton Rouge, La.	Beaumont, Texas
Hampton 266A	2.0	1.5	1.0	3.0	1.0	2.2	2.0
Hardee	2.0	1.0	1.0	3.0	1.0	1.2	3.0
Mineira	2.5	1.5	1.0	4.0	1.0	1.5	3.0
Vicoja	1.0	1.0	1.0	4.0	1.0	1.0	2.0
Co6833	1.5	1.5	2.0	3.0	2.0	2.0	1.0
Co6838	3.0	2.5	2.0	4.0	1.0	2.6	2.0
Co6841	3.5	2.5	2.0	2.0	2.0	1.8	2.0
Co6873	2.0	1.5	1.5	2.0	1.0	2.0	2.0
Co6875	1.5	1.0	1.0	2.0	1.0	2.3	2.0
Co6878	2.0	1.0	1.5	3.0	1.0	1.7	1.0
Co6883	2.0	2.0	1.5	2.0	1.0	2.0	2.0
F66-973	3.0	2.0	1.5	2.0	1.0	2.5	2.0
F66-1062	1.5	1.5	1.0	3.0	1.0	1.3	2.0
F66-1108	1.5	1.0	1.0	2.0	1.0	1.0	3.0
F66-1303	2.0	1.0	1.0	2.0	1.0	1.5	3.0
F67-1461	1.0	1.0	1.0	3.0	1.0	1.0	2.0
F67-1686	1.0	1.5	1.0	4.0	1.0	1.0	2.0
F67-3673	2.0	2.5	1.5	3.0	1.0	2.0	3.0
F68-1004	2.0	1.0	1.0	2.0	1.0	1.2	2.0
F68-1018	2.0	2.0	1.0	2.0	1.0	2.0	2.0
F68-1054	2.0	1.0	1.0	3.0	1.0	2.1	2.0
F68-1128	2.0	2.5	1.0	3.0	1.0	2.2	2.0
F68-1204	2.0	2.5	1.0	2.0	1.0	1.8	2.0
F68-1230	2.0	3.0	1.0	4.0	1.0	2.3	2.0
F68-1412	2.0	2.0	1.5	2.0	2.0	2.2	3.0
F68-1422	2.0	2.0	1.0	2.0	1.0	2.1	2.0
F68-1424	2.0	2.0	1.0	3.0	2.0	1.8	2.0
F68-1426	2.0	2.0	2.0	2.0	1.0	2.6	2.0
F68-1876	2.5	2.0	1.0	5.0	1.0	2.1	2.0
F58-3037	2.0	2.5	1.5	2.0	2.0	3.4	2.0
F68-3086	2.0	2.5	1.0	2.0	1.0	2.2	2.0
F68-3089	2.0	2.0	1.0	3.0	2.0	3.0	2.0
F68-3128	---	3.0	1.0	3.0	1.0	2.0	2.0
F68-3583	2.5	1.5	1.0	3.0	1.0	2.2	2.0
F68-3721	1.5	1.5	1.0	3.0	1.0	1.5	3.0
F68-3748	2.0	1.0	1.0	4.0	1.0	2.1	3.0