U. S. REGIONAL SOYBEAN LABORATORY
URBANA, ILLINOIS

THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

1969

RSLM 241

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

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES

1969

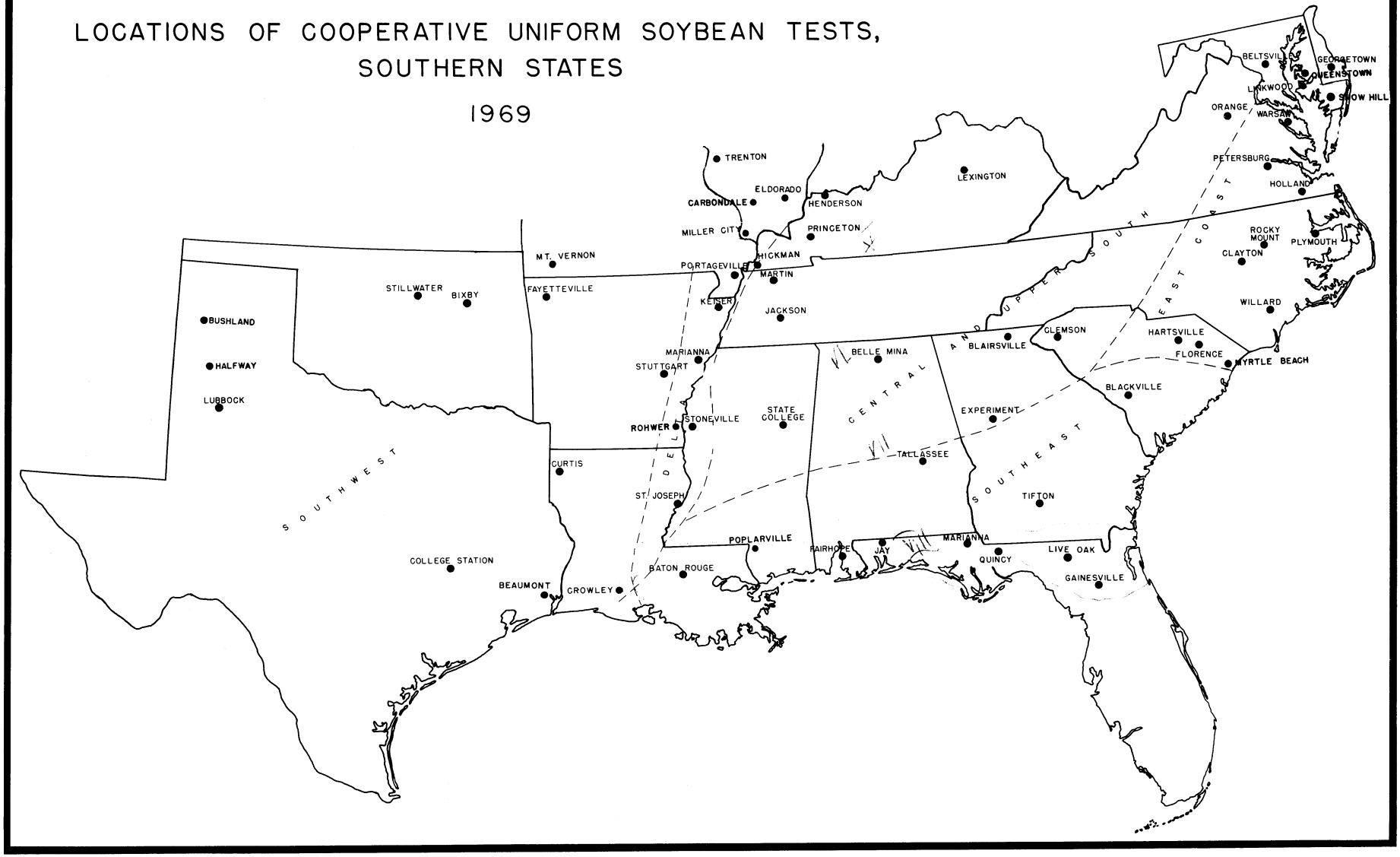

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TABLE OF CONTENTS

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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 thes 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

Location	IV	V	VI	VII	VIII	Soil type	P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted variety[2]
East Coast											
Queenstown, Md.	1	1	1			Mattapex silt loam	M	H	6.0	0-160-160	48.8 - A
Linkwood, Md.	1*	1*	1			Sassafras sandy loam	H	H	6.2	0-45-90	39.7 - D
Snow Hill, Md.	1	1					VH	M	6.5	0-80-80	42.0 - A
Georgetown, Del.	1*	1*				Norfolk sandy loam	VH	M	6.2	40-40-40	43.9 - A
Warsaw, Va.	1*	1*	1			Sassafras sandy loam	M+	M+	6.2	9-54-54	41.9 - E
Petersburg, Va.		1	1*			Marlboro f. sandy loam	H	M	6.6	0-0-0	49.9 - E
Holland, Va.		1	1			Dragston L.F.S.	VH	M-	5.3	0-0-0	43.6 - D
Plymouth, N.C.	1	1*	1*	1		Bladen f. sandy loam				0-40-80	45.8 - G
Rocky Mt., N.C.				1		Norfolk sandy loam				0-40-80	45.3 - I
Willard, N.C.			1	1*	1	Norfolk sandy loam				0-40-80	45.8 - G
Clayton, N.C.			1	1		Norfolk sandy loam	H	M	5.6	0-40-80	41.4 - I
Florence, S.C.			1	1	1	Dunbar f. sandy loam				0-0-0	48.9 - I
Hartsville, S.C.(A)			1	1	1	Norfolk sandy loam				18-54-108	36.5 - J
Hartsville, S.C.(B)					1	Dunbar sandy loam				15-45-90	40.4 - J
Myrtle Beach, S.C.				1	1					0-0-0	36.4 - I
Southeast											
Blackville, S.C.(A)				1*	1	Norfolk sandy loam	VH	M	6.0	0-40-80	40.8 - I
Blackville, S.C.(B)					1*	Norfolk sandy loam	VH	M	6.0	0-40-80	43.9 - J
Tallassee, Ala.				1*	1						
Tifton, Ga.				1	1	Tifton loamy sand	M	H	6.3	0-45-90	53.0 - I
Live Oak, Fla.				1*	1*	Scranton fine sand	H	M	6.3	0-50-100	27.7 - K
Gainesville, Fla.				1	1*	Arredonda fine sand	H	M	6.4	0-0-104	43.4 - K
Quincy, Fla.			1	1	1*	Norfolk L.F.S.	H	L	5.2	0-70-70	38.1 - J
Jay, Fla.			1*	1*	1*	Tifton sandy loam				0-112-112	48.2 - I
Fairhope, Ala.			1	1	1	Marlboro F.S.L.	H	H	5.2	16-48-48	41.6 - I
Baton Rouge, La.			1	1	1*	Olivier silt loam	M	M	5.6	0-60-60	41.3 - G
Poplarville, Miss.				1	1						24.0 - I
Upper & Central South											
Orange, Va.	1	1				Davidson sandy loam	M	M	6.6	0-84-84	50.5 - A
Blairsville, Ga.	1	1				State loam	M	L	6.2	0-70-140	47.9 - A
Trenton, Ill.	1					Harrison silt loam	VH	VH	6.7	0-0-0	54.0 - A
Eldorado, Ill.	1					Harco silt loam	H	VH	6.2	10-30-10	56.9 - A
Carbondale, Ill.	1					Stoy silt loam				0-110-180	48.6 - A
Lexington, Ky.	1					Burgin sandy loam	H	H	6.1	0-0-0	38.5 - A
Princeton, Ky.	1	1				Crider silt loam				0-0-0	46.3 - C
Martin, Tenn.	1	1				Grenada sandy loam	M	M	6.3	0-80-80	63.7 - E
Jackson, Tenn.	1	1	1			Grenada silt loam	M	H	7.3	0-60-60	44.0 - E
Belle Mina, Ala.		1	1			Humphrey sandy loam				0-40-40	28.0 - D
Clemson, S.C.				1		Cecil sandy clay loam	H	M	6.1	0-70-70	53.8 - I

Location	IV	V	VI	VII	VIII	Soil type	P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted variety[2]
Upper & Central South (cont'd.)											
Experiment, Ga.		1	1	1	1	Cecil sandy loam				25-50-75	60.7 - G
State College, Miss.		1	1	1					8.3	0-14-42	37.8 - G
Delta											
Miller City, Ill.	1	1				Riley f. sandy loam	VH	VH	5.8	57-56-28	41.3 - B
Henderson, Ky.	1	1				Sharkey silt loam	H	L	5.9	0-0-0	46.1 - A
Portageville, Mo.(A)	1*	1*	1*			Salix silt loam	VH	VH	5.1	0-50-50	38.5 - D
Portageville, Mo.(B)	1*	1*	1*			Sharkey clay	VH	VH	6.5	0-50-50	30.5 - D
Keiser, Ark.[3]	1	1*	1*			Sharkey clay	H	H	6.5	0-0-0	35.3 - C
Marianna, Ark.[3]	1	1	1			Loring silt loam	M	M	5.9	0-0-45	43.0 - G
Stoneville, Miss.(A)[3]		1	1*	1*		Bosket f. sandy loam	M	M	6.7	0-0-0	39.4 - G
Stoneville, Miss.(B)[3]	1*	1*	1*	1*		Sharkey clay	M	H	6.4	0-0-0	39.9 - G
Rohwer, Ark.[3]				1		Perry clay	H	H	7.2	0-0-0	34.3 - H
St. Joseph, La.		1	1	1	1	Commerce sandy loam				0-0-0	48.6 - I
West											
Columbus, Kan.	1						M	M	6.1	20-45-60	38.9 - A
Mt. Vernon, Mo.	1	1				Huntington silt loam				0-0-0	35.9 - A
Stuttgart, Ark.[3]		1	1	1		Crowley silt loam	VL	L	6.5	0-60-30	35.0 - G
Curtis, La.		1	1	1	1	Yahola very f. sandy loam				0-0-0	39.0 - G
Bixby, Okla.	1	1	1			Lonoke sandy loam				0-0-0	28.3 - D
Bushland, Texas[3]	1					Pullman silty clay				0-0-0	32.0 - B
Halfway, Texas[3]	1	1	1			Pullman clay loam	M	VH	8.2	18-61-0	57.9 - C
Lubbock, Texas[3]	1*	1	1			Amarillo loam	VL	VH	8.1	0-0-0	51.1 - C
Beaumont, Texas				1*	1*	Morrey silt loam	H	M	7.2	18-72-72	36.8 - I
Crowley, La.			1	1	1	Crowley silt loam	L	M	6.4	0-60-30	37.9 - H

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

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

3/ Received supplementary water from irrigation.

* Preliminary nursery also grown.

METHODS

The uniform nurseries were planted in 4-row plots with 3 replications. All seed was packeted at Stoneville, Mississippi, for planting 19-foot rows. In most cases a 16-foot section was harvested from each of the two center rows. Randomized block designs are used for groups. Row widths at the different locations vary from 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 at the rate of 190 seeds for planting a 19-foot row. This gives a planting 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.

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

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

Chemical composition: 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 for the different uniform tests

are as follows: Group IV, Kent; Group V, Hill; Group VI, Hood; Group VII, Bragg; and Group VIII, Hampton.

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.

Ground cover scores were given to strains of IV maturity approximately 6 weeks after emergence. The estimates are recorded on a scale of 1 to 5 as follows:

1 - row middles filled
2 - 3 to 6" gap between rows
3 - 6 to 10" gap between rows
4 - 10 to 18" gap between rows
5 - 18 to 24" gap between rows

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

A. Foliar:

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

B. Root and stem:

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

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

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

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

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

1969

	Variety or strain	Parentage	Generation composited
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.	Comp. of 23 F_3 lines
4.	D65-2262	D54-2437 x PI 261,467	F_5
5.	D66-4505	D53-354(2) x D54-2437	F_7
6.	D66-4582	D53-354 x D54-2437	F_7
7.	S65-15A	Subline of Custer	
8.	D66-4508	D53-354(2) x D54-2437	F_7
9.	D66-4608	D53-354 x D54-2437	F_7
10.	D66-5566	Subline of DA60-13-1 (D49-2491(4) x Hawkeye)	F_8
11.	D66-5634	DA60-13-1 x PI 171,450	F_5
12.	Md62-2313	Sel. from bulk population	

Background of strains used as parents:

C799 is a selection from C143 x Lincoln. C143 is a selection from Dunfield x Midwest.

FC33243 is a type which has proved to be highly resistant to rootknot 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.

Thirty IV-S nurseries were planted. Results from 29 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 oil and protein percentages.

Differences among strains for seed yield were significant at the 5% level of confidence at 22 of the 29 locations. A combined analysis of variance for seed yield for locations within a production region showed differences among strains to be significant at the 5% level of confidence only in the Delta region.

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 superior to Kent in having resistance to cyst nematodes and phytophthora rot. Custer is no better than Kent with regard to seed quality or seed holding. Custer ranked below Kent in seed yield at 18 of the 29 locations in 1969. The 2-year mean seed yield for S65-15A, a subline of Custer, was superior to Custer in all but the Western region. Both Custer and S65-15A appear to be unusually low in protein content of the seed.

D65-2262 is the only experimental strain to have been included 3 years. This strain has a determinate growth type along with late flowering. Maturity averaged 6 days later than Kent. It is superior to Kent in seed quality and shatter resistance and is resistant to bacterial pustule and phytophthora rot. It also appears to be resistant to development of purple stain. Three-year mean seed yield in relation to Kent by regions is East Coast, -1.0 bu.; Upper and Central South, -3.2 bu.; Delta, +4.0 bu.; and West, -0.9 bu. The yield reduction in the Upper and Central South is probably attributable to lodging differences.

D66-4505 has been included 2 years and appears very promising. D66-4505 is similar in average height and maturity to Kent. It is superior in seed quality and shatter resistance, and is resistant to bacterial pustule and phytophthora rot. It also had a lower percentage of its seed showing mottling or purple stain development than Kent. Its 2-year mean seed yield is superior to Kent in the East Coast and Delta regions. D66-4505 appears to be superior to the related lines D66-4582, D66-4508, and D66-4608.

D66-5566 is basically D49-2491 converted to earlier maturity. This strain flowers too early to permit it to make adequate growth at Stoneville, but does make more adequate growth at more northerly locations. In relation to Kent, seed yield was -1.7 bu in the East Coast, +3.5 bu in Upper and Central, +4.1 bu in the Delta, and +0.7 bu in the West. Maturity averaged 2 days earlier than Kent. Its yielding capacity is well illustrated by the performance at Eldorado and Carbondale, Illinois. At Eldorado, Kent produced at the rate of 56.9 bu and D66-5566 at the rate of 60.3 bu per acre, while at Carbondale Kent yielded at the rate of 48.6 bu and D66-5566 at the rate of 56.4 bu per acre. D66-5566 is also superor in seed quality and seed holding to Kent.

D66-5634 is another determinate growth type strain selected for later flowering. Seed yield was below that for D66-5566 in each region. Md62-2313 averaged lower in seed yield than Kent in each region. It proved extremely susceptible to phytophthora rot at Stoneville.

Table 1. - General summary of performance for the strains in Uniform Group IV, 1969

	Kent	Delmar	Custer	D65-2262	D66-4505	D66-4582
Seed Yield - 1969						
East Coast	39.7	38.5	37.8	37.2	40.6	36.0
Upper & Central South	47.9	46.0	44.3	46.3	46.5	44.4
Delta	34.5	31.8	31.7	38.2	36.3	35.5
West	36.6	34.1	34.7	34.7	33.9	33.3
- 1968-69						
East Coast	40.5	39.1	37.9	38.2	41.4	38.9
Upper & Central South	46.2	43.0	41.8	43.3	43.8	42.5
Delta	31.4	30.0	29.9	35.4	33.2	33.8
West	39.1	37.1	37.1	37.4	37.7	37.0
- 1967-69						
East Coast	39.2	38.0	37.0	38.2		
Upper and Central South	45.3	42.7	40.2	42.1		
Delta	32.9	30.8	31.5	36.9		
West	40.6	39.4	39.9	39.7		
Oil Content - 1969	22.4	23.0+	23.0+	21.1-	22.1	22.4
- 1968-69	22.3	22.9	22.6	20.8	22.0	22.2
- 1967-69	22.2	22.7	22.3	20.5		
Protein Content - 1969	40.9	40.0-	37.6-	40.6	40.6	40.6
- 1968-69	40.4	39.3	37.1	39.8	39.5	39.3
- 1967-69	40.3	39.1	37.0	40.1		
Seed size	16.4	15.2-	14.7-	13.3-	13.5-	14.2-
Maturity index	9-27	+4	+1	+6	0	+4
Seed quality	2.7	2.3	2.7	1.7	1.9	2.3
Height	38	40	44	31	37	42
Shattering	3.2	1.0	2.9	1.0	1.2	1.3
Bacterial pustule	3.0	4.0	1.0	1.0	1.0	1.0
Phytophthora rot	3.0	3.0	1.0	1.0	1.0	1.0
Seed coat mottling (%)	22	43	11	44	8	20
Purple stain	4.0	2.0	2.7	1.0	2.0	1.7
Flower color	P	W	P	W	P	P
Pubescence color	T	G	G	G	G	G
Pod wall color	B	B	B	T	T	T
Growth type	I	I	I	D	I	I

Table 1. - (continued)

	S65-15A	D66-4508	D66-4608	D66-5566	D66-5634	Md62-2313
Seed Yield - 1969						
East Coast	37.9	39.3	37.6	38.0	34.7	37.2
Upper & Central South	43.5	45.0	45.4	51.4	44.3	45.7
Delta	34.0	36.6	35.2	38.6	32.1	25.9-
West	33.8	34.4	33.7	37.3	32.5	32.7
- 1968-69						
East Coast	39.5					
Upper & Central South	42.5					
Delta	32.9					
West	37.0					
- 1967-69						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1969	23.2+	22.3	21.9	22.4	20.4-	22.7
- 1968-69	22.9					
- 1967-69						
Protein Content - 1969	37.5-	41.2	40.5	41.2	42.8+	41.1
- 1968-69	36.9					
- 1967-69						
Seed size	14.3-	13.6-	14.5-	14.8-	15.1-	15.5-
Maturity index	+2	+2	+5	-2	-3	-1
Seed quality	2.7	2.3	2.1	1.8	2.0	2.7
Height	43	39	40	25	30	37
Shattering	2.6	1.5	1.2	1.1	1.7	2.5
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	3.0
Phytophthora rot	1.0	1.0	1.0	1.0	1.0	5.0
Seed coat mottling (%)	14	12	15	20	68	11
Purple stain	2.7	2.7	1.7	2.0	1.3	2.3
Flower color	P	P	W	P	P	P
Pubescence color	G	G	G	T	T	G
Pod wall color	B	B	T	T	T	B
Growth type	I	I	I	D	D	I

Table 2. - Seed yield, in bushels per acre, for the strains in Uniform Group IV, 1969

Location	Kent	Delmar	Custer	D65-2262	D66-4505	D66-4582	S65-15A
East Coast							
Queenstown, Md.(A)	48.8	44.5	45.2	39.7-	49.0	48.2	48.2
Linkwood, Md.	33.5	36.7	32.6	35.1	34.7	36.0	34.7
Snow Hill, Md.(A)	42.0	38.6	38.4	26.2-	42.9	28.4-	35.6
Snow Hill, Md.(B)	35.4	30.9	33.7	40.6	33.1	24.6-	30.6
Georgetown, Del.(A)	40.1	35.9	36.4	34.5	36.8	37.4	34.6
Georgetown, Del.(B)	43.9	44.8	43.0	41.3	44.1	41.7	41.5
Warsaw, Va.	32.5	36.0+	31.2	36.4+	35.5	35.4	32.7
Plymouth, N. C.	41.8	40.8	41.7	44.1	48.6+	41.2	44.8
Mean	39.7	38.5	37.8	37.2	40.6	36.0	37.9
Upper and Central South							
Orange, Va.	50.5	43.5-	43.6-	45.0	44.7-	47.5	44.8-
Blairsville, Ga.	47.9	44.4	48.5	41.4	41.8	46.1	45.1
Trenton, Ill.	54.0	46.6-	41.9-	48.7-	51.2	46.5-	41.8-
Eldorado, Ill.	56.9	51.3-	49.4-	54.0	55.9	49.5-	49.7-
Carbondale, Ill.	48.6	46.9	42.4-	47.7	42.4-	41.1-	44.9
Princeton, Ky.	44.8	50.7+	48.6	51.1+	50.4+	49.0	43.1
Lexington, Ky.	32.6	38.5	35.7	36.5	38.8	31.0	35.0
Mean	47.9	46.0	44.3	46.3	46.5	44.4	43.5
Delta							
Miller City, Ill.	36.7	34.1	41.3	32.9	30.8	34.0	42.8
Henderson, Ky.	46.1	36.6-	32.7-	46.5	45.0	36.4-	32.8-
Portageville, Mo.(A)	34.3	35.1	37.6+	33.9	35.3	34.7	40.7+
Portageville, Mo.(B)	21.2	23.2	17.0	33.0+	28.6	28.1	8.7-
Martin, Tenn.	49.8	47.6	46.5	51.4	47.1	48.7	48.3
Keiser, Ark.	21.5	21.0	18.0	30.8	30.6	35.0+	25.2
Marianna, Ark.	36.8	34.1	25.6	32.3	25.0	23.6	31.4
Stoneville, Miss.(B)	29.9	22.7	34.8	44.9+	48.2+	43.5+	41.9+
Mean	34.5	31.8	31.7	38.2	36.3	35.5	34.0
West							
Columbus, Kan.	38.9	40.0	38.9	38.2	38.1	36.3	35.2
Mt. Vernon, Mo.*	35.9	29.9	23.9	26.2	27.8	28.7	30.4
Bixby, Okla.	21.0	17.1-	26.6+	23.0	22.0	20.7	23.1
Bushland, Texas	26.0	19.0	30.0	23.0	26.5	28.5	28.0
Halfway, Texas	52.0	47.1	44.8	47.4	44.2	46.0	46.3
Lubbock, Texas	53.9	53.5	43.3-	49.7	47.6-	44.3-	45.9-
Mean	36.6	34.1	34.7	34.7	33.9	33.3	33.8

(+) - 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	D66-4508	D66-4608	D66-5566	D66-5634	Md62-2313	L.S.D. (.05)	C.V.
			East Coast				
Queenstown, Md.(A)	44.7	40.5-	48.9	43.6	44.0	5.9	8%
Linkwood, Md.	36.3	40.6+	29.0	28.8	30.7	6.2	11%
Snow Hill, Md.(A)	36.9	30.3-	46.3	30.1-	38.0	10.7	17%
Snow Hill, Md.(B)	33.4	31.1	30.1	28.2-	31.2	6.8	13%
Georgetown, Del.(A)	36.0	35.6	35.5	38.0	40.3	N.S.	8%
Georgetown, Del.(B)	42.9	43.9	44.1	43.0	44.5	N.S.	5%
Warsaw, Va.	34.8	35.3	34.5	28.5	33.7	3.4	6%
Plymouth, N.C.	49.1+	43.5	35.5	37.3	35.2-	5.6	8%
Mean	39.3	37.6	38.0	34.7	37.2	N.S.	
			Upper and Central South				
Orange, Va.	40.4-	42.6-	48.3	39.9-	41.6-	5.6	7%
Blairsville, Ga.	43.4	45.4	51.1	41.0	46.1	N.S.	10%
Trenton, Ill.	46.6-	46.1-	52.2	52.1	47.8-	3.9	5%
Eldorado, Ill.	49.9-	52.6-	60.3+	50.3-	54.0	3.2	4%
Carbondale, Ill.	38.7-	44.8	56.4+	41.6-	39.6-	4.3	6%
Princeton, Ky.	52.3+	46.3	45.3	49.3	47.5	5.0	6%
Lexington, Ky.	44.7+	40.1	46.1+	36.0	43.0+	7.8	12%
Mean	45.0	45.4	51.4	44.3	45.7	N.S.	
			Delta				
Miller City, Ill.	37.3	29.7	34.8	26.6-	37.8	8.7	15%
Henderson, Ky.	39.7-	43.6	46.3	43.5	40.8-	4.7	7%
Portageville, Mo.(A)	35.8	37.4+	35.1	29.0-	33.6	3.1	5%
Portageville, Mo.(B)	31.3+	26.9	26.5	25.2	14.9	7.7	19%
Martin, Tenn.	48.3	49.0	59.1+	52.3	37.2-	7.3	9%
Keiser, Ark.	30.2	26.3	28.6	24.7	9.9-	9.9	23%
Marianna, Ark.	24.8	24.3	34.5	20.4-	22.4-	13.0	28%
Stoneville, Miss.(B)	45.4+	44.5+	43.6+	35.1	10.6-	10.7	17%
Mean	36.6	35.2	38.6	32.1	25.9-	5.8	
			West				
Columbus, Kan.	37.4	34.5	40.3	35.2	36.3	N.S.	11%
Mt. Vernon, Mo.*	26.7	31.9	30.4	30.9	26.0	N.S.	30%
Bixby, Okla.	20.2	19.9	26.9+	24.0	23.0	3.7	10%
Bushland, Texas	26.5	28.0	22.0	23.0	27.0	N.S.	13%
Halfway, Texas	51.7	45.0	52.2	41.6	41.8	N.S.	10%
Lubbock, Texas	45.3-	50.6	52.2	46.5-	44.3-	4.8	6%
Mean	34.4	33.7	37.3	32.5	32.7	N.S.	

Table 3. - Chemical composition and seed size for the strains in Uniform Group IV, 1969

Location	Kent	Delmar	Custer	D65-2262	D66-4505	D66-4582
			Oil Percentage			
Linkwood, Md.	22.5	22.8	22.4	20.0	21.5	21.9
Warsaw, Va.	23.3	24.3	24.1	21.5	22.8	22.8
Blairsville, Ga.	21.7	21.7	21.6	21.8	20.8	20.8
Miller City, Ill.	22.9	25.2	23.8	21.2	22.6	23.0
Henderson, Ky.	21.6	21.7	22.1	19.9	21.9	22.2
Portageville, Mo.(A)	21.9	21.5	22.9	22.3	22.5	23.1
Keiser, Ark.	23.9	25.7	23.9	23.4	23.4	23.7
Stoneville, Miss.(B)	23.3	24.1	25.2	21.8	23.2	24.2
Bixby, Okla.	21.4	20.7	21.8	19.4	21.3	21.3
Halfway, Texas	21.6	22.7	22.2	19.3	21.0	21.0
Mean	22.4	23.0+	23.0+	21.1-	22.1	22.4
			Protein Percentage			
Linkwood, Md.	40.8	40.5	37.1	40.6	41.0	40.6
Warsaw, Va.	40.7	41.4	36.7	41.8	40.8	41.1
Blairsville, Ga.	39.4	40.2	38.7	41.7	42.0	42.7
Miller City, Ill.	41.1	37.9	36.8	39.0	37.9	38.6
Henderson, Ky.	43.4	43.2	40.1	41.4	41.9	43.8
Portageville, Mo.(A)	40.9	39.0	37.1	40.0	39.2	39.9
Keiser, Ark.	37.6	36.8	35.7	39.6	40.6	39.0
Stoneville, Miss.(B)	39.4	36.4	35.2	39.2	38.5	37.4
Bixby, Okla.	43.4	43.8	39.9	41.1	41.9	42.0
Halfway, Texas	41.8	40.5	38.3	41.9	42.3	41.0
Mean	40.9	40.0-	37.6-	40.6	40.6	40.6
			Grams per 100 Seeds			
Linkwood, Md.	16.1	16.4	15.0	14.5	13.9	15.2
Warsaw, Va.	16.6	17.1	15.1	14.2	12.8	14.5
Blairsville, Ga.	17.0	18.0	18.0	15.0	16.0	18.0
Miller City, Ill.	14.0	13.7	13.1	10.9	10.9	12.8
Henderson, Ky.	18.7	16.0	14.2	15.2	14.2	14.4
Keiser, Ark.	14.3	13.0	13.0	12.3	12.0	12.3
Stoneville, Miss.(B)	13.5	9.6	12.1	12.2	12.8	12.1
Bixby, Okla.	17.0	12.8	13.7	10.8	12.1	10.9
Halfway, Texas	20.0	19.8	18.2	15.0	17.2	17.6
Mean	16.4	15.2-	14.7-	13.3-	13.5-	14.2-

Table 3. - (continued)

Location	S65-15A	D66-4508	D66-4608	D66-5566	D66-5634	Md62-2313	L.S.D. (.05)
			Oil Percentage				
Linkwood, Md.	23.0	22.1	21.3	21.7	19.6	22.1	
Warsaw, Va.	24.4	22.8	21.9	23.0	20.7	24.3	
Blairsville, Ga.	21.0	20.7	20.3	19.7	21.1	20.8	
Miller City, Ill.	23.9	22.8	23.0	23.1	21.1	23.8	
Henderson, Ky.	21.9	20.7	20.6	21.9	20.2	22.3	
Portageville, Mo.(A)	23.0	23.7	23.4	21.9	19.8	21.6	
Keiser, Ark.	24.2	23.1	23.0	24.6	21.2	25.0	
Stoneville, Miss.(B)	25.3	23.0	23.6	24.4	20.3	22.2	
Bixby, Okla.	22.4	22.2	21.1	21.9	20.5	22.9	
Halfway, Texas	22.5	21.4	21.1	22.0	19.2	21.7	
Mean	23.2+	22.3	21.9	22.4	20.4-	22.7	0.6
			Protein Percentage				
Linkwood, Md.	37.6	41.0	41.4	43.0	42.9	42.5	
Warsaw, Va.	37.0	41.6	41.7	41.4	42.4	40.4	
Blairsville, Ga.	36.9	42.0	41.3	39.4	43.6	41.4	
Miller City, Ill.	36.6	39.2	38.3	40.5	41.8	40.0	
Henderson, Ky.	39.8	44.5	43.3	42.5	43.8	41.9	
Portageville, Mo.(A)	37.8	40.5	39.5	40.9	41.7	40.3	
Keiser, Ark.	36.8	40.5	39.2	39.5	40.9	39.0	
Stoneville, Miss.(B)	34.1	38.3	37.3	39.1	42.9	41.8	
Bixby, Okla.	40.6	43.2	42.0	43.4	44.7	42.0	
Halfway, Texas	37.7	41.8	40.9	42.0	43.4	42.0	
Mean	37.5-	41.2	40.5	41.2	42.8+	41.1	0.8
			Grams per 100 Seeds				
Linkwood, Md.	14.8	14.2	15.7	15.1	15.4	15.2	
Warsaw, Va.	14.1	13.2	15.0	14.4	14.4	15.0	
Blairsville, Ga.	17.0	16.0	17.0	18.0	17.0	20.0	
Miller City, Ill.	13.0	11.9	11.5	13.1	13.3	13.2	
Henderson, Ky.	14.2	14.0	14.9	15.1	15.9	16.3	
Keiser, Ark.	13.0	12.3	13.3	13.3	13.7	13.7	
Stoneville, Miss.(B)	12.0	12.1	12.6	13.3	15.3	12.4	
Bixby, Okla.	12.7	12.1	11.9	13.6	13.7	16.5	
Halfway, Texas	17.6	16.6	18.6	17.4	16.8	17.2	
Mean	14.3-	13.6-	14.5-	14.8-	15.1-	15.5-	0.9

Table 4. - Relative maturity data, days earlier (-) or later (+) than Kent, for the strains in Uniform Group IV, 1969

Location	Date planted	Kent matured	Delmar	Custer	D65-2262	D66-4505	D66-4582
East Coast							
Queenstown, Md.(A)	5-27	9-28	+10	+5	+14	+4	+11
Linkwood, Md.	5-26	9-28	+7	0	+8	0	+7
Snow Hill, Md.(A)	5-28	9-30	+5	0	+10	+3	+5
Snow Hill, Md.(B)	6-20	10-12	+6	+6	+10	+2	+6
Georgetown, Del.(A)	6-19	10-5	+4	+1	+9	+1	+2
Georgetown, Del.(B)	6-19	10-9	+2	0	+7	0	+2
Warsaw, Va.	5-23	9-29	+3	+1	+7	-3	+3
Plymouth, N.C.	5-13	9-20	+8	+2	+6	+2	+10
Mean		10-1	+6	+2	+9	+1	+6
Upper and Central South							
Orange, Va.	5-23	10-1	0	0	+11	+3	+9
Blairsville, Ga.	5-28	10-3	-3	-2	0	0	0
Trenton, Ill.	5-17	9-29	+5	0	+11	-2	+3
Eldorado, Ill.	5-28	9-30	+3	-2	+8	-4	0
Carbondale, Ill.	6-4	10-5	+5	+3	+1	-2	+2
Princeton, Ky.	5-15	9-25	+5	+5	+5	+5	+5
Lexington, Ky.	5-16	9-28	+5	+5	+14	+12	+10
Mean		9-30	+3	+1	+7	+2	+4
Delta							
Miller City, Ill.	5-15	9-19	+8	+1	+10	-1	+4
Henderson, Ky.	5-13	9-21	-7	+6	+4	+4	+7
Portageville, Mo.(A)	5-12	9-20	+7	+3	+4	-1	+3
Portageville, Mo.(B)	5-14	9-22	+2	-4	+2	-3	+2
Martin, Tenn.	6-7	9-16	0	0	-6	0	0
Marianna, Ark.	5-27	9-22	+2	0	+4	-6	-6
Stoneville, Miss.(B)	5-6	9-5	+7	+6	+11	+7	+10
Mean		9-18	+3	+2	+4	0	+3
West							
Columbus, Kan.	6-6	10-1	-3	-3	-1	-2	-6
Bixby, Okla.	5-23	9-25	+2	+2	-1	+1	-1
Halfway, Texas	6-6	10-8	+5	0	0	0	0
Lubbock, Texas	5-27	9-28	+4	-2	+8	-2	+3
Mean		10-1	+2	0	+2	-1	-1

Table 4. - (continued)

Location	S65-15A	D66-4508	D66-4608	D66-5566	D66-5634	Md62-2313
			East Coast			
Queenstown, Md.(A)	+6	+5	+11	+2	+2	+3
Linkwood, Md.	+1	0	+9	-5	-10	-5
Snow Hill, Md.(A)	0	+5	+9	0	0	0
Snow Hill, Md.(B)	+5	+5	+7	+4	+5	-2
Georgetown, Del.(A)	+1	+2	+8	-1	-1	+3
Georgetown, Del.(B)	+1	+1	+5	-5	-3	0
Warsaw, Va.	+1	+1	+5	-11	-13	-9
Plymouth, N.C.	+4	+6	+11	-10	-10	0
Mean	+2	+3	+8	-3	-4	-1
			Upper and Central South			
Orange, Va.	0	+4	+11	0	0	+3
Blairsville, Ga.	-2	-2	0	-3	0	-1
Trenton, Ill.	0	0	+4	-5	-7	-2
Eldorado, Ill.	-1	-2	+2	-2	-6	-1
Carbondale,Ill.	0	+5	+2	-2	-2	-2
Princeton, Ky.	+7	+5	+5	-2	+9	+5
Lexington, Ky.	+3	+12	+14	-1	0	+2
Mean	+1	+3	+5	-2	0	0
			Delta			
Miller City, Ill.	+2	+1	+3	-4	-6	-3
Henderson, Ky.	+5	+5	+9	-5	-3	+3
Portageville, Mo.(A)	+3	+3	+3	-1	-7	-5
Portageville, Mo.(B)	-3	0	+2	-3	-8	-9
Martin, Tenn.	0	0	0	0	0	0
Marianna, Ark.	+2	-2	+1	-6	-9	-8
Stoneville, Miss.(B)	+7	+11	+10	+3	+2	-4
Mean	+2	+3	+4	-2	-4	-4
			West			
Columbus, Kan.	-4	-5	-4	-4	+3	+2
Bixby, Okla.	+1	0	-1	-2	0	+3
Halfway, Texas	0	0	0	0	0	+5
Lubbock, Texas	0	-2	+4	+2	-1	-3
Mean	-1	-2	0	-1	0	+2

Table 5. - Plant height for the strains in Uniform Group IV, 1969

Location	Kent	Delmar	Custer	D65-2262	D66-4505	D66-4582
			East Coast			
Queenstown, Md.(A)	43	46	49	42	40	44
Linkwood, Md.	41	43	46	30	39	47
Snow Hill, Md.(A)	37	42	49	39	45	48
Snow Hill, Md.(B)	40	40	43	33	37	33
Georgetown, Del.(A)	40	39	39	31	38	40
Georgetown, Del.(B)	38	38	39	32	38	41
Warsaw, Va.	38	42	43	26	40	43
Plyamouth, N.C.	39	47	42	29	43	51
Mean	40	42	44	33	40	43
			Upper and Central South			
Orange, Va.	47	48	48	41	38	52
Blairsville, Ga.	39	39	44	36	36	43
Trenton, Ill.	46	49	55	29	47	50
Eldorado, Ill.	53	52	54	35	51	53
Carbondale, Ill.	43	42	48	32	41	44
Princeton, Ky.	46	47	53	38	43	49
Lexington, Ky.	46	50	51	38	44	48
Mean	46	47	50	36	43	48
			Delta			
Miller City, Ill.	43	45	53	27	38	47
Henderson, Ky.	47	49	54	38	44	49
Portageville, Mo.(A)	35	37	37	24	36	42
Portageville, Mo.(B)	34	38	38	32	35	37
Martin, Tenn.	36	36	43	30	30	37
Keiser, Ark.	23	20	30	23	25	26
Marianna, Ark.	35	36	36	28	27	31
Stoneville, Miss.(B)	27	36	36	25	41	45
Mean	35	37	41	28	35	39
			West			
Columbus, Kan.	29	33	37	30	29	35
Mt. Vernon, Mo.	36	33	39	32	25	35
Bixby, Okla.	32	36	43	25	29	37
Halfway, Texas	28	31	36	26	28	31
Lubbock, Texas	34	34	40	23	34	36
Mean	32	33	39	27	29	35

Table 5. - (continued)

Location	S65-15A	D66-4508	D66-4608	D66-5566	D66-5634	Md62-2313
			East Coast			
Queenstown, Md.(A)	45	41	43	29	33	39
Linkwood, Md.	43	42	45	21	26	38
Snow Hill, Md.(A)	48	44	45	29	33	45
Snow Hill, Md.(B)	43	39	39	29	36	40
Georgetown, Del.(A)	42	36	40	30	38	37
Georgetown, Del.(B)	40	35	38	29	34	36
Warsaw, Va.	43	40	41	21	24	35
Plymouth, N.C.	45	45	45	19	27	38
Mean	44	40	42	26	31	39
			Upper and Central South			
Orange, Va.	50	40	47	32	39	43
Blairsville, Ga.	43	35	39	29	33	39
Trenton, Ill.	53	47	47	29	34	47
Eldorado, Ill.	56	50	52	31	35	51
Carbondale, Ill.	50	41	45	31	34	43
Princeton, Ky.	54	45	46	30	35	46
Lexington, Ky.	51	44	48	35	40	44
Mean	51	43	46	31	36	45
			Delta			
Miller City, Ill.	56	43	41	23	24	42
Henderson, Ky.	57	49	49	28	31	47
Portageville, Mo.(A)	37	36	41	22	25	30
Portageville, Mo.(B)	37	37	36	25	27	31
Martin, Tenn.	42	39	38	20	30	35
Keiser, Ark.	24	24	27	18	21	27
Marianna, Ark.	38	27	31	19	23	29
Stoneville, Miss.(B)	39	46	45	21	25	24
Mean	41	38	39	22	26	33
			West			
Columbus, Kan.	36	28	28	24	33	31
Mt. Vernon, Mo.	35	30	34	24	35	34
Bixby, Okla.	37	32	31	22	29	26
Halfway, Texas	33	38	32	18	21	26
Lubbock, Texas	39	32	36	21	21	27
Mean	36	32	32	22	28	29

Table 6. - Lodging scores for the strains in Uniform Group IV, 1969

Location	Kent	Delmar	Custer	D65-2262	D66-4505	D66-4582
			East Coast			
Queenstown, Md.(A)	2.0	2.2	3.3	5.0	1.7	3.0
Linkwood, Md.	1.2	1.5	2.0	2.0	1.5	1.7
Snow Hill, Md.(A)	1.7	1.7	2.3	4.0	1.7	2.0
Snow Hill, Md.(B)	1.7	1.7	2.3	3.0	2.7	3.0
Georgetown, Del.(A)	1.2	1.3	2.2	3.2	1.3	1.7
Georgetown, Del.(B)	1.7	1.5	2.0	3.5	1.7	1.8
Warsaw, Va.	1.6	1.3	3.1	3.3	1.6	2.1
Plymouth, N.C.	2.3	2.7	2.3	2.7	2.0	3.0
			Upper and Central South			
Orange, Va.	1.0	1.0	1.7	2.7	1.0	1.0
Blairsville, Ga.	1.0	1.0	2.3	3.3	1.3	2.7
Trenton, Ill.	1.5	2.2	3.7	3.7	1.4	2.2
Eldorado, Ill.	1.4	1.9	2.8	3.3	1.5	2.2
Carbondale, Ill.	2.0	2.0	4.0	2.0	2.0	2.0
Princeton, Ky.	1.7	1.0	2.3	3.3	1.0	1.7
Lexington, Ky.	2.0	1.8	3.5	3.5	2.8	3.5
			Delta			
Miller City, Ill.	1.5	1.2	3.3	2.8	1.2	1.3
Henderson, Ky.	1.7	1.7	2.7	2.3	1.0	1.7
Portageville, Mo.(A)	2.7	4.2	4.5	4.7	3.0	3.2
Portageville, Mo.(B)	1.8	1.8	2.0	3.7	1.7	1.7
Martin, Tenn.	1.0	2.0	2.0	1.0	1.0	2.0
Keiser, Ark.	1.0	1.7	1.0	1.0	1.0	1.0
Marianna, Ark.	2.3	1.3	2.3	2.7	1.3	2.0
Stoneville, Miss.(B)	2.0	2.3	2.7	2.0	2.3	2.7
			West			
Columbus, Kan.	1.4	1.3	1.7	2.3	1.3	1.6
Mt. Vernon, Mo.	1.8	1.3	1.3	3.0	1.0	1.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Bushland, Texas	2.0	1.0	2.0	2.0	2.0	2.0
Halfway, Texas	1.0	2.0	2.0	2.0	1.0	2.0
Lubbock, Texas	2.0	1.0	2.0	2.0	1.0	2.0

Table 6. - (continued)

Location	S65-15A	D66-4508	D66-4608	D66-5566	D66-5634	Md62-2313
			East Coast			
Queenstown, Md.(A)	3.0	2.5	2.2	2.0	3.3	3.5
Linkwood, Md.	1.8	1.5	1.5	1.5	1.8	1.5
Snow Hill, Md.(A)	2.7	2.0	3.0	2.3	3.7	3.0
Snow Hill, Md.(B)	2.0	2.0	1.7	2.3	3.3	1.3
Georgetown, Del.(A)	2.0	1.5	1.3	2.7	4.0	1.8
Georgetown, Del.(B)	2.2	1.7	1.5	3.2	4.2	2.2
Warsaw, Va.	3.1	1.7	1.7	1.0	1.5	2.2
Plymouth, N.C.	2.7	2.7	2.7	1.0	2.7	3.0
			Upper and Central South			
Orange, Va.	1.7	1.3	1.0	1.7	2.3	1.0
Blairsville, Ga.	1.7	1.0	1.7	2.0	2.3	1.7
Trenton, Ill.	3.2	1.7	1.4	2.0	2.5	3.3
Eldorado, Ill.	2.7	2.2	1.7	2.6	2.9	2.4
Carbondale, Ill.	2.0	3.0	3.0	3.0	3.0	3.0
Princeton, Ky.	2.0	1.0	1.3	1.7	2.0	3.7
Lexington, Ky.	3.5	2.5	2.0	1.7	3.0	3.5
			Delta			
Miller City, Ill.	3.5	1.4	1.3	1.5	1.9	1.7
Henderson, Ky.	2.3	1.7	1.3	1.0	1.3	3.7
Portageville, Mo.(A)	4.3	2.7	2.2	3.8	4.5	4.7
Portageville, Mo.(B)	1.7	1.5	1.8	2.7	4.3	2.2
Martin, Tenn.	1.0	1.0	1.0	2.0	1.0	2.0
Keiser, Ark.	1.3	1.0	1.0	1.0	1.0	1.3
Marianna, Ark.	2.3	1.3	1.0	1.3	1.7	1.7
Stoneville, Miss.(B)	2.3	3.0	2.3	1.7	2.7	2.0
			West			
Columbus, Kan.	1.6	1.3	1.3	1.7	2.3	1.7
Mt. Vernon, Mo.	1.3	1.0	1.0	1.5	2.0	1.3
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Bushland, Texas	1.5	1.0	2.0	2.5	2.5	1.0
Halfway, Texas	1.0	2.0	1.0	1.0	2.0	2.0
Lubbock, Texas	3.0	2.0	1.0	1.0	1.0	1.0

Table 7. - Seed quality scores for the strains in Uniform Group IV, 1969

Location	Kent	Delmar	Custer	D65-2262	D66-4505	D66-4582
			East Coast			
Queenstown, Md.(A)	3.0	2.0	3.0	2.0	2.0	2.0
Linkwood, Md.	3.0	3.0	3.0	2.0	3.0	3.0
Snow Hill, Md.(A)	3.0	2.0	3.0	2.0	1.0	2.0
Snow Hill, Md.(B)	2.0	2.0	3.0	1.0	2.0	2.0
Georgetown, Del.(A)	2.2	1.0	2.5	1.5	1.5	1.8
Georgetown, Del.(B)	1.8	1.0	2.2	1.2	1.7	1.7
Warsaw, Va.	2.5	2.2	2.8	1.7	1.9	2.5
Plymouth, N.C.	1.5	2.0	2.0	1.0	1.5	2.0
			Upper and Central South			
Orange, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Blairsville, Ga.	2.0	2.0	2.5	2.0	2.0	2.5
Trenton, Ill.	2.0	2.3	3.0	1.7	1.8	2.7
Eldorado, Ill.	3.2	2.3	3.3	2.2	2.0	2.5
Carbondale, Ill.	3.0	3.0	2.0	1.0	2.0	1.0
Princeton, Ky.	3.0	2.0	3.0	2.0	3.0	3.0
Lexington, Ky.	2.5	2.0	2.5	2.0	2.0	2.5
			Delta			
Miller City, Ill.	2.5	2.7	2.8	1.3	1.5	2.3
Henderson, Ky.	3.3	2.0	2.3	2.0	2.0	2.7
Portageville, Mo.(A)	2.2	3.2	1.8	2.7	1.5	3.2
Portageville, Mo.(B)	4.7	3.9	4.7	3.4	3.5	3.5
Martin, Tenn.	4.0	2.0	3.0	1.0	2.0	2.0
Keiser, Ark.	3.7	4.0	4.7	2.0	3.0	3.0
Marianna, Ark.	3.3	3.7	3.7	2.0	3.0	3.0
Stoneville, Miss.(B)	2.7	4.0	3.0	2.0	2.0	2.0
			West			
Columbus, Kan.	1.4	1.2	1.4	1.1	1.1	1.2
Mt. Vernon, Mo.	2.0	2.0	2.5	2.0	1.6	1.8
Bixby, Okla.	1.0	2.0	1.0	1.0	1.0	2.0
Lubbock, Texas	3.0	2.5	2.5	2.0	1.5	2.0

Table 7. - (continued)

Location	S65-15A	D66-4508	D66-4608	D66-5566	D66-5634	Md62-2313
			East Coast			
Queenstown, Md.(A)	2.0	2.0	2.0	2.0	2.0	3.0
Linkwood, Md.	3.0	3.0	2.0	2.0	2.0	3.0
Snow Hill, Md.(A)	3.0	2.0	2.0	3.0	2.0	2.0
Snow Hill, Md.(B)	2.0	2.0	2.0	2.0	1.0	1.0
Georgetown, Del.(A)	2.7	2.7	1.8	1.7	1.7	2.2
Georgetown, Del.(B)	2.0	1.7	1.5	1.5	1.5	2.0
Warsaw, Va.	2.7	2.3	2.0	2.0	2.3	2.5
Plymouth, N.C.	2.0	1.5	1.5	1.0	1.5	2.0
			Upper and Central South			
Orange, Va.	1.0	1.0	1.0	1.0	1.0	2.0
Blairsville, Ga.	2.5	2.5	2.5	2.0	2.0	2.5
Trenton, Ill.	3.5	2.3	1.5	1.5	1.3	2.7
Eldorado, Ill.	3.5	2.8	2.2	1.5	1.8	3.8
Carbondale, Ill.	3.0	2.0	2.0	1.0	2.0	2.0
Princeton, Ky.	3.0	3.0	2.0	2.0	3.0	3.0
Lexington, Ky.	2.7	2.8	2.5	2.0	2.2	2.8
			Delta			
Miller City, Ill.	2.7	2.0	2.7	1.8	1.8	2.7
Henderson, Ky.	2.3	2.7	2.3	2.3	2.0	2.7
Portageville, Mo.(A)	3.7	3.2	2.2	1.3	1.8	2.0
Portageville, Mo.(B)	4.7	3.5	3.7	4.1	4.3	3.8
Martin, Tenn.	3.0	2.0	2.0	1.0	3.0	3.0
Keiser, Ark.	4.3	2.7	3.0	2.0	2.0	3.7
Marianna, Ark.	3.7	3.0	3.0	2.7	2.7	4.0
Stoneville, Miss.(B)	3.0	2.0	2.0	2.0	2.3	5.0
			West			
Columbus, Kan.	1.3	1.5	1.2	1.2	1.3	1.3
Mt. Vernon, Mo.	2.6	1.6	2.0	1.8	2.0	2.5
Bixby, Okla.	1.0	2.0	2.0	1.0	1.0	1.0
Lubbock, Texas	3.0	2.0	2.0	1.0	2.0	4.0

PRELIMINARY GROUP IV-S

1969

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 the 5% level of confidence at five of the six locations. However, the location x strain interaction was rather large and the combined analysis of variance showed mean seed yield differences to be nonsignificant. Eleven strains ranked above Kent in mean seed yield and six strains ranked above Custer. Custer had a mean seed yield greater than that of Kent, largely because of the phytophthora rot injury to Kent at Stoneville.

Twenty strains had a determinate growth type. Most of these had also been selected for late flowering, so as to permit their making greater plant growth. The differences among strains in time of early bloom is appreciable. The planting at Stoneville emerged May 14. The difference in time of floral initiation and period from floral initiation to maturity for a few strains is illustrated:

Strain	Date first bloom	Days to first bloom	Date mature	Days first flower to mature	Total days to mature	Bushels per acre
Custer	6-12	29	9-11	99	128	39.5
D67-2896	7-6	53	9-14	70	131	43.8
D67-2908	6-25	42	9-1	67	117	35.0
D67-2984	6-30	47	9-1	62	117	38.4
D67-3297	7-2	49	9-11	79	128	38.8

D67-3297 and D67-2896 ranked first and second for seed yield for the six locations. All 20 of the determinate type strains were superior to Kent and Custer for seed quality and seed holding.

The five Maryland selections were highly susceptible to phytophthora rot as were also the Missouri and Delaware selections. Md62-3328 had appreciably better seed quality than the other four. The Missouri selections were somewhat superior to Custer in seed holding and seed quality. UD65-9128 ranked above Kent or Custer at Linkwood. This was the only location where any of the Delaware strains appeared superior to the check varieties.

Among the strains that appear to merit advancing to Uniform IV-S are: D67-2896, D67-3143, D67-3118, D67-3269, D67-3297, and S63-5328S.

Table 8. - Parentage of the strains in Preliminary Group IV-S, 1969

	Variety or strain	Parentage	Generation composited
1.	Kent		
2.	Custer		
3.	D66-5626	DA60-13-1 x PI 171,450	F_5
4.	D66-5636	DA60-13-1 x PI 171,450	F_5
5.	D67-2874	Hill(2) x PI 171,450	F_5
6.	D67-2896	Hill(2) x PI 171,450	F_5
7.	D67-2908	Hill(2) x PI 171,450	F_5
8.	D67-2940	Hill(2) x PI 171,450	F_5
9.	D67-2948	Hill(2) x PI 171,450	F_5
10.	D67-2953	Hill(2) x PI 171,450	F_5
11.	D67-2984	Hill(2) x PI 171,450	F_5
12.	D67-2993	Hill(2) x PI 171,450	F_5
13.	D67-3003	Hill(2) x PI 171,450	F_5
14.	D67-3028	Hill(2) x PI 171,450	F_5
15.	D67-3032	Hill(2) x PI 171,450	F_5
16.	D67-3040	Hill(2) x PI 171,450	F_5
17.	D67-3056	Hill(2) x PI 171,450	F_5
18.	D67-3079	Hill(2) x PI 171,450	F_5
19.	D67-3118	Hill(2) x PI 171,450	F_5
20.	D67-3143	Hill(2) x PI 171,450	F_5
21.	D67-3176	Hill(2) x PI 171,450	F_5
22.	D67-3180	Hill(2) x PI 171,450	F_5
23.	D67-3269	Hill(2) x PI 171,450	F_5
24.	D67-3297	Hill(2) x PI 171,450	F_5
25.	Md62-3008	sel. from bulk population	
26.	Md62-3328	sel. from bulk population	
27.	Md63-1847-1	(9 protein sources x Dunfield) x Clark	
28.	Md63-1847-4	(9 protein sources x Dunfield) x Clark	
29.	Md63-1752-1	(9 protein sources x Dunfield) x Clark	
30.	S63-5294S	Lee x Scott	F_6
31.	S63-5300S	Lee x Scott	F_6
32.	S63-5328S	Lee x Scott	F_6
33.	UD65-9128	Bethel x Kent	
34.	UD66-7498	Delmar x Kent	
35.	UD66-9326	Bethel x Kent	
36.	UD66-9373	Bethel x Kent	

Table 9. - General summary of performance for the strains grown in Preliminary Group IV-S, 1969

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	Seed quality	Seed holding	P.R.
Kent	34.4	9-25	35	22.6	40.5	3.2	3.7	3.0
Custer	35.3	+2	40	23.9+	36.2-	2.9	3.0	1.0
D66-5626	32.9	-4	30	20.1	40.9	2.5	1.7	1.5
D66-5636	31.5	-4	31	20.6	41.4	2.2	1.2	1.5
D67-2874	33.7	0	33	22.8	38.3-	1.8	1.3	1.5
D67-2896	38.1	+7	32	21.5	38.6-	2.1	1.2	1.0
D67-2908	33.1	-7	23	21.5	40.2	2.2	1.5	1.5
D67-2940	32.5	+3	32	21.1	40.1	2.2	1.3	3.0
D67-2948	34.4	+5	31	20.8	40.0	2.0	1.2	1.5
D67-2953	30.0	+4	31	19.7	41.3	2.1	1.2	1.5
D67-2984	34.2	-3	30	21.5	40.5	2.3	1.7	1.0
D67-2993	32.0	-7	26	22.2	40.2	2.0	2.0	1.0
D67-3003	34.5	-1	28	22.2	40.1	2.1	1.3	1.5
D67-3028	31.5	-6	33	22.3	39.2-	1.9	1.3	1.5
D67-3032	32.9	-5	26	22.2	40.8	2.3	1.0	1.0
D67-3040	31.6	-7	27	22.2	39.8	2.0	1.2	1.0
D67-3056	32.7	-4	33	22.1	39.6	2.0	1.5	1.0
D67-3079	33.0	+4	31	20.9	39.9	2.0	1.2	1.0
D67-3118	34.8	+2	31	20.9	39.7	1.6	1.0	1.0
D67-3143	36.9	-2	32	22.0	39.1-	2.1	1.2	1.0
D67-3176	33.3	+3	37	22.3	38.5-	2.2	1.5	1.0
D67-3180	34.0	+3	34	21.5	38.8-	2.1	1.2	1.0
D67-3269	36.4	+5	30	22.1	40.8	1.9	1.0	1.0
D67-3297	38.3	+4	30	22.4	38.7-	2.1	1.0	1.0
Md62-3008	34.7	0	37	23.6+	40.1	3.5	2.2	3.5
Md62-3328	34.5	+6	39	23.4	38.7-	2.2	1.7	3.0
Md63-1847-1	32.2	0	40	22.3	40.4	3.1	1.8	3.0
Md63-1847-4	31.7	+1	40	22.4	42.4	3.4	2.5	4.0
Md63-1752-1	29.0	-5	34	22.0	42.1+	3.3	2.5	4.5
S63-5294S	34.6	+5	40	22.9	39.1-	2.3	2.2	4.0
S63-5300S	36.0	+6	38	23.1	38.3-	2.4	1.8	3.0
S63-5328S	35.9	+5	39	23.2	38.5-	2.4	1.4	4.0
UD65-9128	33.5	+5	44	22.6	40.7	2.8	1.7	3.0
UD66-7498	27.2	+5	43	21.3	42.7+	2.9	1.9	4.5
UD66-9326	33.7	+2	41	22.3	40.4	2.9	2.1	3.0
UD66-9373	28.3	0	38	21.8	41.7+	3.3	4.3	4.0
L.S.D.(.05)	N.S.			1.0	1.2			
L.S.D.(.01)	N.S.			1.3	1.6			

Table 10 - Seed yield, in bushels per acre, for the strains in Preliminary Group IV-S, 1969

Strain	George-town, Del.	Link-wood, Md.	Warsaw, Va.	Portage-ville, Mo.	Stone-ville, Miss.(B)	Lubbock, Texas
Kent	41.7	32.0	35.6	31.1	16.3	49.7
Custer	36.6	31.4	39.1	23.8-	39.5+	41.4
D66-5626	40.8	24.1-	36.7	22.0-	30.9+	43.1
D66-5636	38.3	21.4-	32.8	25.8	31.7+	39.1-
D67-2874	40.3	27.2	36.1	22.7-	31.0+	45.1
D67-2896	41.4	30.8	40.9	28.7	43.8+	43.0-
D67-2908	37.9	22.4-	34.3	25.2	35.0+	43.8
D67-2940	40.1	30.0	39.4	22.9-	19.3	43.5
D67-2948	46.2	31.8	35.7	24.5	24.1	44.5
D67-2953	36.3-	21.0-	36.2	23.6-	23.7	39.8-
D67-2984	38.9	26.1	37.1	22.8-	38.4+	42.1-
D67-2993	36.3-	23.9-	36.4	21.7-	32.8+	40.6-
D67-3003	40.3	25.2	32.5	24.6	36.7+	47.9
D67-3028	39.1	26.2	32.3	23.8-	24.0	43.7
D67-3032	38.3	18.8-	33.6	26.1	36.6+	44.2
D67-3040	43.7	21.4-	30.6	24.9	25.5+	43.6
D67-3056	38.2	25.2	37.1	27.2	32.0+	36.5-
D67-3079	40.9	25.4	33.7	24.3	36.3+	37.6-
D67-3118	40.7	24.6	35.9	25.3	35.8+	46.3
D67-3143	42.5	28.8	39.0	28.2	36.3+	46.4
D67-3176	34.0-	30.2	30.4	23.9-	38.5+	42.7-
D67-3180	38.5	25.6	32.2	26.6	36.9+	44.0
D67-3269	43.7	29.8	37.9	24.5	37.4+	44.8
D67-3297	39.7	30.1	37.2	31.3	38.8+	52.8
Md62-3008	45.5	35.4	37.0	28.7	16.6	45.2
Md62-3328	45.0	41.6+	37.3	23.6-	13.8	45.7
Md63-1847-1	37.7	38.1	36.8	27.3	12.7	40.9-
Md63-1847-4	37.5	36.3	37.1	24.5	12.7	42.0-
MD63-1752-1	37.5	32.0	32.6	20.6-	7.2-	44.2
S63-5294S	40.7	40.9+	43.4	24.7	13.1	44.7
S63-5300S	42.3	41.4+	37.4	27.7	23.3	44.0
S63-5328S	42.3	34.7	42.3	28.5	17.8	49.5
UD65-9128	38.5	36.6	38.2	21.3-	19.1	47.3
UD66-7498	33.1-	31.0	31.9	19.6-	7.8-	40.1-
UD66-9326	37.6	32.5	35.5	21.8-	26.6+	48.2
UD66-9373	39.7	30.6	38.0	18.1-	3.6-	39.5-
L.S.D(.05)	5.4	7.8	N.S.	7.1	8.8	6.6
C.V.	7%	13%	10%	14%	16%	9%

Table 11. - Oil percentages for the strains in Preliminary Group IV-S, 1969

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss. (B)
Kent	22.3	23.4	21.5	23.0
Custer	22.4	24.7	23.3	25.0
D66-5626	19.1	19.1	21.4	20.9
D66-5636	18.8	20.3	21.6	21.5
D67-2874	21.8	23.3	23.4	22.8
D67-2896	20.2	22.0	22.5	21.4
D67-2908	20.9	21.6	21.2	22.4
D67-2940	19.7	20.9	21.1	22.7
D67-2948	20.1	20.3	21.4	21.5
D67-2953	18.5	18.5	21.8	20.1
D67-2984	19.9	21.9	21.2	22.9
D67-2993	20.8	23.5	21.7	22.7
D67-3003	20.8	21.9	23.5	22.4
D67-3028	21.5	23.1	21.1	23.4
D67-3032	21.2	22.9	20.6	24.0
D67-3040	20.8	22.5	22.7	22.9
D67-3056	21.2	22.5	21.4	23.4
D67-3079	18.8	23.3	21.5	19.8
D67-3118	19.8	21.3	21.1	21.2
D67-3143	21.2	22.6	20.8	23.5
D67-3176	20.2	21.6	23.9	23.5
D67-3180	20.6	21.3	22.1	21.8
D67-3269	20.6	22.4	22.6	22.7
D67-3297	21.2	22.0	22.3	23.9
Md62-3008	23.6	24.6	22.3	24.0
Md62-3328	23.1	24.0	22.0	24.4
Md63-1847-1	21.8	23.5	21.5	22.2
Md63-1847-4	21.7	23.5	21.8	22.5
Md63-1752-1	21.8	22.8	21.4	21.9
S63-5294S	21.2	23.8	22.7	23.9
S63-5300S	21.4	23.3	22.6	25.1
S63-5328S	21.5	23.5	22.9	25.0
UD65-9128	21.6	23.2	21.8	23.8
UD66-7498	20.7	22.4	20.5	21.5
UD66-9326	21.8	22.8	21.9	22.7
UD66-9373	21.1	22.8	21.9	21.3

Table 12. - Protein percentages for the strains in Preliminary Group IV-S, 1969

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss. (B)
Kent	40.8	39.8	40.9	40.6
Custer	37.9	35.0	37.3	34.7
D66-5626	42.0	41.7	40.2	39.5
D66-5636	42.4	41.0	42.5	39.5
D67-2874	38.8	37.8	38.2	38.5
D67-2896	40.0	37.5	39.1	37.8
D67-2908	41.3	40.8	40.2	38.4
D67-2940	41.0	40.6	41.0	37.6
D67-2948	40.7	40.3	41.7	37.1
D67-2953	42.0	42.1	42.6	38.6
D67-2984	41.6	41.3	40.1	38.8
D67-2993	41.7	39.6	39.8	39.6
D67-3003	40.5	40.6	40.2	39.2
D67-3028	40.4	39.5	38.4	38.3
D67-3032	41.0	41.2	41.6	39.4
D67-3040	41.0	39.2	39.8	39.1
D67-3056	40.9	38.8	40.0	38.7
D67-3079	41.2	37.7	41.5	39.3
D67-3118	41.5	38.6	40.9	37.6
D67-3143	41.1	39.0	40.2	36.0
D67-3176	40.1	37.8	38.2	37.8
D67-3180	39.5	38.5	39.9	37.1
D67-3269	41.8	41.9	40.6	38.8
D67-3297	40.2	39.2	39.2	36.3
Md62-3008	40.0	40.1	40.5	39.8
Md62-3328	39.2	38.3	40.6	36.7
Md63-1847-1	40.1	39.4	42.5	39.7
Md63-1847-4	42.0	41.6	44.0	42.1
Md63-1752-1	42.4	42.1	42.7	41.2
S63-5294S	39.9	39.0	39.4	38.0
S63-5300S	40.3	37.7	39.9	35.4
S63-5328S	39.5	39.0	39.5	36.0
UD65-9128	42.0	41.8	41.4	37.4
UD66-7498	43.9	42.6	43.4	40.9
UD66-9326	40.9	40.3	41.2	39.3
UD66-9373	42.6	41.1	42.0	41.1

Table 13. - Plant height for the strains in Preliminary Group IV-S, 1969

Strain	George-town, Del.	Link-wood, Md.	Warsaw, Va.	Portage-ville, Mo.	Stone-ville, Miss.(B)	Lubbock, Texas
Kent	41	38	40	36	25	32
Custer	42	42	43	33	38	39
D66-5626	42	24	41	28	24	20
D66-5636	46	27	32	30	25	23
D67-2874	39	30	37	29	35	28
D67-2896	38	32	36	28	32	27
D67-2908	32	18	24	26	22	18
D67-2940	35	34	38	34	26	26
D67-2948	36	33	32	32	25	26
D67-2953	44	30	32	31	26	25
D67-2984	36	27	31	33	31	20
D67-2993	33	21	29	25	23	22
D67-3003	34	22	32	28	28	24
D67-3028	42	32	34	33	33	23
D67-3032	32	22	28	28	26	22
D67-3040	37	26	26	29	24	22
D67-3056	40	30	36	33	37	24
D67-3079	35	32	32	29	30	26
D67-3118	36	28	31	31	32	28
D67-3143	41	26	34	35	33	25
D67-3176	41	42	39	32	39	27
D67-3180	39	34	36	31	38	27
D67-3269	37	30	32	29	30	24
D67-3297	38	30	30	31	26	27
Md62-3008	40	42	42	35	28	32
Md62-3328	41	40	46	39	30	38
Md63-1847-1	40	44	42	39	36	38
Md63-1847-4	42	42	48	37	33	40
Md63-1752-1	36	37	42	30	22	37
S63-5294S	44	45	47	39	27	38
S63-5300S	40	42	42	35	29	38
S63-5328S	41	42	44	39	28	38
UD65-9128	45	51	52	38	37	43
UD66-7498	49	50	54	35	28	44
UD66-9326	43	42	48	36	36	38
UD66-9373	39	45	50	33	25	37

Table 14. - Seed quality scores for the strains in Preliminary Group IV-S, 1969

Strain	George-town, Del.	Link-wood, Md.	Warsaw, Va.	Portage-ville, Mo.	Stone-ville, Miss.(B)	Lubbock, Texas
Kent	2.3	3.0	2.1	4.5	3.0	4.0
Custer	2.3	3.0	3.0	3.4	2.5	3.0
D66-5626	2.0	2.0	1.8	4.4	2.0	3.0
D66-5636	1.3	3.0	2.0	3.0	2.0	2.0
D67-2874	1.0	2.0	1.8	2.8	2.0	2.0
D67-2896	1.5	2.0	1.1	4.0	2.0	2.0
D67-2908	1.0	2.0	1.6	2.3	1.0	3.0
D67-2940	2.0	2.0	1.6	2.8	2.0	3.0
D67-2948	1.0	2.0	1.2	3.6	2.0	2.0
D67-2953	1.5	2.0	1.3	2.8	2.0	3.0
D67-2984	1.3	2.0	1.7	3.5	2.0	3.0
D67-2993	1.0	2.0	1.9	2.8	2.0	2.0
D67-3003	1.3	2.0	1.8	3.5	2.0	2.0
D67-3028	1.0	2.0	1.7	2.8	2.0	2.0
D67-3032	1.3	2.0	1.9	2.8	2.5	3.0
D67-3040	1.5	2.0	1.8	2.8	2.0	2.0
D67-3056	1.3	2.0	1.8	2.8	2.0	2.0
D67-3079	1.0	2.0	1.3	3.5	2.0	2.0
D67-3118	1.0	2.0	1.0	2.6	2.0	1.0
D67-3143	1.8	2.0	1.4	3.5	2.0	2.0
D67-3176	1.8	2.0	1.8	3.5	2.0	2.0
D67-3180	1.5	2.0	1.5	3.5	2.0	2.0
D67-3269	1.3	2.0	1.5	2.3	2.0	2.0
D67-3297	1.5	2.0	2.0	3.0	2.0	2.0
Md62-3008	2.5	3.0	3.5	3.9	5.0	3.0
Md62-3328	1.3	2.0	1.5	3.5	3.0	2.0
Md63-1847-1	2.3	3.0	2.5	3.5	3.0	4.0
Md63-1847-4	3.5	3.0	3.1	3.9	3.0	4.0
Md63-1752-1	3.3	3.0	1.9	4.3	3.5	4.0
S63-5294S	1.3	2.0	1.7	3.0	3.0	3.0
S63-5300S	1.8	3.0	2.0	2.8	2.0	3.0
S63-5328S	1.5	2.0	2.0	3.5	2.5	3.0
UD65-9128	2.0	3.0	1.8	4.0	3.0	3.0
UD66-7498	2.3	3.0	2.3	3.3	3.5	3.0
UD66-9326	2.0	3.0	1.8	3.8	3.5	3.0
UD66-9373	2.5	3.0	2.1	5.0	4.0	3.0

UNIFORM GROUP V

1969

	Variety or strain	Parentage	Generation composited
1.	Hill	D632-15 x D49-2525	F_5
2.	Dare	Hill x D52-810	F_5
3.	York	Dorman x Hood	F_7
4.	D64-4731	Lee(2) x [Clark(2) x T109]	F_5
5.	N63-2769	Hill x D52-810 - Subline N59-6958	F_6
6.	R64-14	(R54-168 x Hill) x (Lee x Dortchsoy 110)	F_6
7.	D64-3253	D49-2491(5) x Hawkeye	F_4
8.	D66-12,392	D63-6100 x Dyer	F_5
9.	D65-6555	D61-475 x D61-2624	F_5
10.	R65-12	(R64-168 x Hill) x (Lee x Dortchsoy 110)	F_7
11.	V66-12	D56-1192 x Dorman	F_8
12.	V66-840	Sampson x Hill	F_6

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 is a sister strain to 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.

T109 is a genetic type of Group II maturity with narrow leaves and a high number of seeds per pod.

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.

D63-6100 is a phytophthora-rot-resistant selection from Hill(4) x PI 171,442.

D61-475 is a phytophthora-rot-resistant selection from Hill(2) x PI 171,442.

D61-2624 is a high protein selection from D49-2491(4) x PI 174,862.

D56-1192 is a selection from Perry x Lee.

Thirty-five Uniform Group V nurseries were planted. Results of 33 nurseries are summarized in Tables 15 through 21, with Table 15 giving 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 by production regions and for oil and protein content.

Seed yield difference among strains was significant at the 5% level of confidence at 25 of the 33 locations. The combined analysis of variance for mean seed yield by production regions showed differences to be significant at the 5% level of confidence in the East Coast, Delta, and Western regions.

Both Dare and York, which are 8 to 10 days later maturing than Hill, have higher 3-year average yields in each production region. York has a slightly higher average yield than Dare in each region. York appears to have a very high level of resistance to soybean mosaic virus but is moderately susceptible to phytophthora rot.

D64-4731, N63-2769, and R64-14 have been grown 3 years. All three have yielded extremely well. D64-4731 is a medium short type with narrow leaves. It stands well where other types lodge. It is moderately susceptible to phytophthora rot. N63-2769 averages slightly later in maturity than Dare or York and shows no yield advantage over York. R64-14 is 5 days later than Hill. Its yield performance is quite similar to that of York.

D64-3253 and D66-12,392 have been grown 2 years. D64-3253 is basically D49-2491 converted to earlier maturity. Its 2-year mean was below York in the West, but equal in other areas. Maturity is 4 days later than Hill and 4 days earlier than Dare. D66-12,392 is similar to Hill in maturity, but is resistant to phytophthora rot, cyst nematoes, and root-knot nematodes. Seed yield is equal to that for Hill.

D65-6555, R65-12, V66-12, and V66-840 were included only one year. D65-6555 yielded significantly less than Hill in the East Coast and West. R65-12 yielded well in all regions, but no better than York. It is 3 days earlier than York. V66-12 is 6 days earlier than York, but yielded as well. V66-840 is similar in maturity to V66-12, but averaged lower in yield.

Table 15. - General summary of performance for the strains in Uniform Group V, 1969

	Hill	Dare	York	D64-4731	N63-2769	R64-14
Seed Yield - 1969						
East Coast	36.8	38.3	40.0+	40.4+	37.4	41.6+
Upper & Central South	39.8	41.7	41.9	43.3	41.1	42.8
Delta	35.2	36.1	39.2+	34.3	36.3	39.1+
West	40.5	41.3	46.6+	42.0	40.4	40.6
- 1968-69						
East Coast	35.7	38.1	40.3	41.2	37.5	40.7
Upper & Central South	40.3	42.3	44.0	43.3	42.9	43.6
Delta	35.1	37.1	38.7	35.6	38.0	39.7
West	39.0	39.2	43.4	39.6	40.0	40.0
- 1967-69						
East Coast	35.2	37.4	39.9	39.8	37.4	40.5
Upper & Central South	40.0	41.7	43.5	42.9	42.8	42.2
Delta	36.4	39.4	40.5	38.0	40.1	40.6
West	40.0	40.8	43.8	40.4	42.5	42.1
Oil Content - 1969	22.4	22.8+	22.0-	20.9-	22.0-	21.9-
- 1968-69	22.1	22.8	21.8	20.9	22.1	22.1
- 1967-69	21.7	22.5	21.4	20.6	21.7	21.7
Protein Content - 1969	39.3	39.4	39.4	41.0+	40.4+	41.3+
- 1968-69	38.5	38.3	38.6	39.9	39.4	40.1
- 1967-69	38.7	38.9	38.8	40.1	39.7	40.2
Seed size	12.7	12.9	17.3+	11.4	14.5+	12.5
Seed quality	2.4	2.2	1.7	1.7	2.2	2.7
Maturity index	10-2	+8	+8	+6	+9	+5
Height	34	35	33	27	34	38
Bacterial pustule	1.0	1.0	2.3	1.0	1.0	1.0
Phytophthora rot	1.0	1.0	2.3	3.3	1.0	3.0
Seed coat mottling (%)	12	29	0	59	55	34
Purple stain	1.0	1.0	2.0	1.0	1.0	1.0
Shattering	1.4	2.1	1.7	1.5	1.6	1.2
Flower color	W	W	P	P	W	W
Pubescence color	T	G	G	T	G	T
Pod wall color	T	B	T	T	B	T

Table 15. - (continued)

	D64-3253	D66-12,392	D65-6555	R65-12	V66-12	V66-840
Seed Yield - 1969						
East Coast	41.0+	38.7	33.8-	41.4+	39.9+	38.1
Upper & Central South	43.3	40.4	40.0	43.3	43.0	41.5
Delta	39.4+	37.1	34.7	37.7	39.2+	34.8
West	40.7	37.5	35.8-	42.9	44.3	38.8
- 1968-69						
East Coast	39.9	37.4				
Upper & Central South	43.6	40.4				
Delta	38.5	35.8				
West	38.9	36.7				
- 1967-69						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1969	22.0-	22.0-	19.5-	22.0-	20.9-	20.4-
- 1968-69	21.9	22.0				
- 1967-69						
Protein Content - 1969	41.8+	39.9	42.6+	41.2+	40.6+	41.2+
- 1968-69	40.8	38.7				
- 1967-69						
Seed size	13.3	13.1	13.5+	13.4+	14.5+	17.4+
Seed quality	2.3	2.8	2.5	2.7	1.4	1.8
Maturity Index	+4	+1	+2	+5	+2	+2
Height	33	31	33	38	33	33
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	3.7
Phytophthora rot	2.0	1.0	1.0	2.7	1.0	2.0
Seed coat mottling (%)	44	47	80	34	0	46
Purple stain	1.3	1.0	1.3	1.0	1.3	2.0
Shattering	1.3	2.1	1.2	1.6	1.3	1.2
Flower color	P	W	W	W	W	W
Pubescence color	T	T	T	G	T	T
Pod wall color	T	T	T	T	T	T

Table 16. - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1969

Location	Hill	Dare	York	D64-4731	N63-2769	R64-14	D64-3253
			East Coast				
Queenstown, Md.(A)	31.9	37.1	38.1+	42.1+	31.9	36.7+	40.6+
Linkwood, Md.	39.6	39.7	39.3	42.5	38.2	40.3	39.0
Snow Hill, Md.(A)	36.2	29.6	33.8	32.7	31.9	33.4	36.8
Snow Hill, Md.(B)	27.6	32.0	35.1+	34.1	29.6	39.3+	39.6+
Georgetown, Del.(A)	36.7	35.8	38.7	36.5	34.9	33.1	37.9
Georgetown, Del.(B)	39.3	41.3	36.5	31.9	40.2	40.6	43.2
Warsaw, Va.	36.8	37.4	41.9+	41.2+	38.9	43.3+	40.6
Petersburg, Va.	42.8	42.8	49.9+	45.6	43.1	49.1+	47.6+
Holland, Va.	38.0	43.6+	40.1	48.6+	42.1	54.3+	47.1+
Plymouth, N.C.	38.6	43.8	46.2+	48.6+	43.1	45.7+	37.2
Mean	36.8	38.3	40.0+	40.4+	37.4	41.6+	41.0+
			Upper and Central South				
Orange, Va.	38.2	42.4	42.7	46.7+	33.1	41.9	41.1
Blairsville, Ga.	36.3	39.2	43.0+	44.1+	32.5	36.8	48.3+
Belle Mina, Ala.	19.9	28.0+	26.0+	21.3	24.1	24.8+	23.9
Experiment, Ga.	43.8	48.2	35.8-	38.5	51.2+	50.1+	43.1
State College, Miss.	38.1	37.9	37.3	44.1	44.3	41.9	44.1
Princeton, Ky.	46.3	41.9	42.7	47.6	43.8	42.7	48.0
Martin, Tenn.	56.9	57.4	63.7	63.9	61.2	63.7	59.5
Jackson, Tenn.	39.8	38.8	44.0	40.0	38.2	40.3	38.1
Mean	39.8	41.7	41.9	43.3	41.1	42.8	43.3
			Delta				
Miller City, Ill.	36.5	41.3	43.5+	37.7	34.9	42.1	37.1
Henderson, Ky.	29.4	34.4+	37.7+	34.0+	32.4	38.1+	32.3
Portageville, Mo.(A)	37.5	38.5	44.1+	40.5	38.9	43.3+	48.4+
Portageville, Mo.(B)	27.4	30.5	35.4	25.0	35.3	40.2+	33.1
Keiser, Ark.	35.3	26.4-	31.0	21.0-	25.7-	35.1	27.9-
Marianna, Ark.	27.6	33.2	41.0+	37.9+	38.9+	32.3	37.4+
Stoneville, Miss.(A)	44.3	42.1	43.3	43.1	41.2	43.7	48.5+
Stoneville, Miss.(B)	33.4	29.5	29.1	15.2-	31.8	30.2	35.1
St. Joseph, La.	45.9	48.5	47.8	54.1	47.6	47.0	54.4
Mean	35.2	36.1	39.2+	34.3	36.3	39.1+	39.4+
			West				
Mt. Vernon, Mo.	39.0	41.1	51.4+	47.1	39.5	41.2	35.9
Stuttgart, Ark.	32.4	32.5	38.1+	29.7	36.0	32.2	33.8
Curtis, La.*	19.3	29.1	25.8	26.5	29.2	28.3	21.3
Bixby, Okla.	22.1	28.3	26.5	26.0	26.5	18.3	22.8
Halfway, Texas	57.9	55.2	60.6	53.5	53.6	57.7	60.5
Lubbock, Texas	51.1	49.4	56.5+	53.5	46.5-	53.8	50.5
Mean	40.5	41.3	46.6+	42.0	40.4	40.6	40.7

(+) - 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	D66-12,392	D65-6555	R65-12	V66-12	V66-840	L.S.D. (.05)	C.V.
		East Coast					
Queenstown, Md.(A)	34.5	30.0	36.6+	32.6	35.2	4.5	8%
Linkwood, Md.	35.5	32.2	41.4	40.9	40.9	6.9	13%
Snow Hill, Md.(A)	35.0	24.8-	37.9	39.5	33.3	9.6	17%
Snow Hill, Md.(B)	31.6	34.0	35.5+	27.5	27.1	6.9	12%
Georgetown, Del.(A)	36.8	34.2	32.6-	39.4	39.9	4.1	7%
Georgetown, Del.(B)	43.9	32.8	42.8	43.5	44.3	N.S.	13%
Warsaw, Va.	37.6	34.9	44.9+	37.1	37.0	4.2	6%
Petersburg, Va.	50.4+	38.0-	47.6+	47.6+	45.8	3.9	5%
Holland, Va.	43.7+	37.5	50.3+	49.1+	42.5	4.8	6%
Plymouth, N.C.	38.1	38.2	44.8+	41.8	35.2	5.8	8%
Mean	38.7	33.8-	41.4+	39.9+	38.1	2.9	
		Upper and Central South					
Orange, Va.	42.8	44.2+	45.2+	45.6+	45.4+	5.6	8%
Blairsville, Ga.	44.3+	38.3	41.4	52.2+	51.3+	6.3	8%
Belle Mina, Ala.	19.2	20.8	22.4	22.3	21.4	4.6	12%
Experiment, Ga.	41.5	43.0	50.5+	35.8-	37.8	6.3	10%
State College, Miss.	37.4	41.1	43.2	39.2	43.3	N.S.	8%
Princeton, Ky.	44.7	43.6	43.0	44.0	41.7	N.S.	11%
Martin, Tenn.	58.9	53.7	58.3	64.8	54.1	N.S.	11%
Jackson, Tenn.	34.6-	35.0-	42.5	39.7	36.8	4.9	7%
Mean	40.4	40.0	43.3	43.0	41.5	N.S.	
		Delta					
Miller City, Ill.	45.7+	33.7	43.5	40.9	35.7	6.8	16%
Henderson, Ky.	31.9	28.4	34.4+	38.1+	28.0	4.2	8%
Portageville, Mo.(A)	42.8	36.0	45.6+	46.6+	37.9	5.7	8%
Portageville, Mo.(B)	26.2	28.8	35.1	31.6	30.1	8.5	16%
Keiser, Ark.	29.4	29.4	31.1	34.9	32.4	7.1	15%
Marianna, Ark.	34.6	36.5+	29.0	28.4	37.5+	8.6	15%
Stoneville, Miss.(A)	36.7-	37.2-	43.2	46.4	36.5-	4.2	6%
Stoneville, Miss.(B)	34.0	36.4	28.3	41.0+	30.1	7.6	14%
St. Joseph, La.	52.2	45.9	49.1	44.5	44.7	N.S.	9%
Mean	37.1	34.7	37.7	39.2+	34.8	3.8	
		West					
Mt. Vernon, Mo.	29.5-	29.1-	42.8	40.3	39.1	9.3	16%
Stuttgart, Ark.	32.5	30.0	35.5	35.7	30.8	4.1	7%
Curtis, La.*	14.3	15.6	22.2	17.5	20.4	N.S.	30%
Bixby, Okla.	22.2	21.5	20.9	23.8	20.1	N.S.	16%
Halfway, Texas	57.7	53.0	61.3	64.4	52.4	N.S.	10%
Lubbock, Thxas	45.7-	45.4-	54.1	57.6+	51.6	3.7	4%
Mean	37.5	35.8-	42.9	44.3	38.8	4.1	

Table 17. - Chemical composition and seed size for the strains in Uniform Group V, 1969

Location	Hill	Dare	York	D64-4731	N63-2769	R64-14	D64-3253
			Oil Percentage				
Linkwood, Md.	21.9	21.2	20.7	20.5	20.9	20.5	21.3
Warsaw, Va.	22.2	22.7	21.7	21.6	22.4	22.2	21.9
Plymouth, N.C.	22.9	22.4	21.3	20.9	22.0	21.7	21.9
Miller City, Ill.	23.0	23.6	22.3	21.5	22.8	22.8	22.8
Henderson, Ky.	20.5	20.7	20.8	18.7	19.8	20.1	19.7
Portageville, Mo.(A)	22.7	22.5	22.5	20.8	21.7	21.5	22.1
Keiser, Ark.	23.0	24.2	23.6	21.9	23.0	23.1	23.6
Stoneville, Miss.(B)	23.8	25.3	23.4	22.7	24.5	24.5	24.5
Stuttgart, Ark.	22.1	23.4	22.6	19.8	21.5	20.7	20.9
Halfway, Texas	22.3	22.0	21.1	20.8	21.6	21.7	21.4
Mean	22.4	22.8+	22.0-	20.9-	22.0-	21.9-	22.0-
			Protein Percentage				
Linkwood, Md.	39.4	40.8	39.6	40.6	40.9	41.6	42.5
Warsaw, Va.	39.8	39.1	39.5	40.4	39.0	40.8	42.3
Plymouth, N.C.	40.6	40.5	40.7	42.3	42.1	44.3	44.3
Miller City, Ill.	38.0	37.8	38.4	39.3	38.2	39.2	40.5
Henderson, Ky.	42.7	43.9	42.7	46.2	46.2	46.3	45.6
Portageville, Mo.(A)	39.0	39.4	38.6	40.0	40.4	41.2	41.5
Keiser, Ark.	36.5	37.2	37.9	38.4	38.5	38.9	38.9
Stoneville, Miss.(B)	36.2	33.7	35.9	37.2	35.7	35.4	36.0
Stuttgart, Ark.	41.3	40.9	40.4	43.5	41.4	44.3	44.4
Halfway, Texas	39.1	40.6	39.8	41.8	41.4	40.5	41.8
Mean	39.3	39.4	39.4	41.0+	40.4+	41.3+	41.8+
			Grams per 100 Seeds				
Linkwood, Md.	12.9	13.0	16.6	12.6	14.5	13.4	13.9
Warsaw, Va.	12.4	12.6	17.9	10.9	14.2	12.2	13.8
Plymouth, N.C.	13.0	14.0	17.0	11.6	15.8	13.8	13.7
Miller City, Ill.	11.5	11.6	15.4	10.5	13.2	11.7	12.1
Henderson, Ky.	13.2	13.3	16.9	11.2	15.3	13.5	14.4
Keiser, Ark.	12.3	11.0	19.0	10.3	11.3	11.3	12.3
Stoneville, Miss.(B)	10.0	10.4	14.7	9.7	12.8	9.5	11.0
Stuttgart, Ark.	12.3	12.3	17.0	9.0	14.7	11.7	12.0
Halfway, Texas	16.8	17.5	21.0	16.5	19.0	15.7	16.6
Mean	12.7	12.9	17.3+	11.4	14.5+	12.5	13.3

Table 17. - (continued)

Location	D66-12,392	D65-6555	R65-12	V66-12	V66-840	L.S.D. (.05)
			Oil Percentage			
Linkwood, Md.	20.7	19.0	21.2	20.6	20.4	
Warsaw, Va.	22.8	20.6	22.5	21.6	20.7	
Plymouth, N.C.	22.1	19.2	21.8	20.7	20.8	
Miller City, Ill.	22.2	20.3	23.0	21.6	21.0	
Henderson, Ky.	20.1	17.7	19.9	18.6	17.5	
Portageville, Mo.(A)	22.1	18.7	21.8	20.9	21.2	
Keiser, Ark.	22.9	20.6	23.6	21.2	20.9	
Stoneville, Miss.(B)	23.5	20.7	23.6	22.9	21.2	
Stuttgart, Ark.	21.5	18.8	21.7	20.4	20.5	
Halfway, Texas	21.6	19.1	21.1	20.7	19.4	
Mean	22.0-	19.5-	22.0-	20.9-	20.4-	0.4
			Protein Percentage			
Linkwood, Md.	39.7	43.6	41.0	40.3	40.3	
Warsaw, Va.	38.8	41.9	40.3	39.7	41.3	
Plymouth, N.C.	42.3	42.5	44.0	43.0	42.0	
Miller City, Ill.	39.1	40.7	39.2	39.6	40.0	
Henderson, Ky.	43.6	46.2	46.2	44.5	44.5	
Portageville, Mo.(A)	39.5	40.8	40.3	40.9	42.1	
Keiser, Ark.	38.5	41.5	39.2	39.1	40.5	
Stoneville, Miss.(B)	35.5	40.1	36.5	37.4	37.5	
Stuttgart, Ark.	41.2	44.7	44.3	42.0	42.8	
Halfway, Texas	41.0	44.2	40.5	39.8	40.6	
Mean	39.9	42.6+	41.2+	40.6+	41.2+	0.7
			Grams per 100 Seeds			
Linkwood, Md.	13.6	13.7	13.8	13.6	18.4	
Warsaw, Va.	13.9	13.9	13.3	14.8	18.7	
Plymouth, N.C.	13.3	13.2	14.8	13.8	17.4	
Miller City, Ill.	11.8	12.1	12.6	13.1	16.0	
Henderson, Ky.	13.1	13.8	13.1	15.2	16.6	
Keiser, Ark.	12.7	13.3	12.7	13.7	16.7	
Stoneville, Miss.(B)	10.5	12.0	10.3	14.3	14.1	
Stuttgart, Ark.	12.3	12.7	12.7	13.7	15.7	
Halfway, Texas	16.9	16.9	16.9	18.3	23.4	
Mean	13.1	13.5+	13.4+	14.5+	17.4+	0.7

Table 18. - Relative maturity, days earlier (-) or later (+) than Hill, for the strains in Uniform Group V, 1969

Location	Date planted	Hill matured	Dare	York	D64-4731	N63-2769	R64-14
			East Coast				
Queenstown, Md.(A)	5-27	10-12	+8	+8	+6	+10	+6
Linkwood, Md.	5-26	10-18	+9	+12	+8	+10	+7
Snow Hill, Md.(A)	5-28	10-13	+2	+4	-2	+3	+2
Snow Hill, Md.(B)	6-20	10-21	+14	+12	+8	+12	+12
Georgetown, Del.(A)	6-19	10-23	+4	+4	0	+4	+4
Georgetown, Del.(B)	6-19	10-23	+3	+3	0	+3	+3
Warsaw, Va.	5-26	10-8	+12	+14	+9	+13	+8
Petersburg, Va.	5-26	10-6	+9	+11	+10	+9	+9
Holland, Va.	5-29	10-3	+16	+18	+16	+19	+14
Plymouth, N.C.	5-13	9-26	+17	+22	+16	+20	+16
Mean		10-12	+9	+11	+7	+10	+8
			Upper and Central South				
Orange, Va.	5-23	10-13	+7	+7	+7	+7	+7
Blairsville, Ga.	5-28	10-15	+4	0	+2	+4	0
Belle Mina, Ala.	5-2	9-26	+3	-3	+2	+9	+2
Experiment, Ga.	5-12	9-13	+13	+14	+11	+15	+9
State College, Miss.	5-14	10-9	0	0	+18	0	0
Princeton, Ky.	5-15	10-7	+5	-1	0	+5	0
Martin, Tenn.	6-7	9-25	+6	-5	0	+6	0
Jackson, Tenn.	5-7	9-22	+11	+13	+13	+13	+6
Mean		10-1	+6	+3	+6	+7	+3
			Delta				
Miller City, Ill.	5-15	10-1	+8	+7	+9	+9	+8
Henderson, Ky.	5-13	10-3	+12	0	+1	+14	+6
Portageville, Mo.(A)	5-12	9-29	+6	+6	+8	+7	+7
Portageville, Mo.(B)	5-14	9-27	+9	+8	+9	+10	+8
Marianna, Ark.	5-27	10-1	+4	+5	+5	+6	+1
Stoneville, Miss.(A)	5-14	9-20	+8	+8	+7	+9	+4
Stoneville, Miss.(B)	5-5	9-16	+14	+14	+7	+14	+6
St. Joseph, La.	5-15	9-10	+9	+10	+5	+11	0
Mean		9-25	+9	+7	+6	+10	+5
			West				
Stuttgart, Ark.	5-26	9-26	+8	+10	+1	+9	+3
Curtis, La.	5-21	9-23	+8	+16	+8	+8	+3
Bixby, Okla.	5-23	9-30	+9	+11	0	+12	0
Mean		9-26	+8	+12	+3	+10	+2

Table 18. - (continued)

Location	D64-3253	D66-12,392	D65-6555	R65-12	V66-12	V66-840
			East Coast			
Queenstown, Md.(A)	+7	+5	+6	+5	-1	+3
Linkwood, Md.	+7	+1	+4	+6	+1	+3
Snow Hill, Md.(A)	+1	-2	+1	+4	+1	-2
Snow Hill, Md.(B)	+8	+7	+7	+9	-6	+5
Georgetown, Del.(A)	+1	0	0	+4	-6	0
Georgetown, Del.(B)	+1	-1	-1	+2	-6	-1
Warsaw, Va.	+4	+2	+2	+6	0	0
Petersburg, Va.	+7	+3	+12	+9	+4	+1
Holland, Va.	+12	+7	+5	+10	+12	+5
Plymouth, N.C.	+16	+5	+5	+16	+14	+5
Mean	+6	+3	+4	+7	+1	+2
			Upper and Central South			
Orange, Va.	+7	0	0	+7	-4	0
Blairsville, Ga.	-1	-2	-3	0	-4	+2
Belle Mina, Ala.	+1	+2	+1	+2	+1	+2
Experiment, Ga.	+5	+1	+5	+5	+5	+3
State College, Miss.	0	0	0	+18	0	0
Princeton, Ky.	-1	-2	-2	0	0	-1
Martin, Tenn.	0	0	0	0	0	-5
Jackson, Tenn.	+12	+4	-1	+8	+10	+9
Mean	+3	0	0	+5	+1	+1
			Delta			
Miller City, Ill.	+5	-2	+1	+8	+3	+2
Henderson, Ky.	+2	+4	+1	+4	0	-1
Portageville, Mo.(A)	+5	-1	+1	+6	+4	+1
Portageville, Mo.(B)	+4	-1	-1	+7	+4	+4
Marianna, Ark.	+2	-1	+3	0	-1	+4
Stoneville, Miss.(A)	+7	-1	+4	+4	+7	+3
Stoneville, Miss.(B)	+10	0	+4	+4	+13	+7
St. Joseph, La.	+2	0	+2	+2	+2	+2
Mean	+5	0	+2	+4	+4	+3
			West			
Stuttgart, Ark.	+2	+6	+1	0	+4	+6
Curtis, La.	+2	-1	+2	+3	+3	+4
Bixby, Okla.	0	0	+1	0	+6	0
Mean	+1	+2	+1	+1	+4	+3

Table 19. - Plant height data for the strains in Uniform Group V, 1969

Location	Hill	Dare	York	D64-4731	N63-2769	R64-14
			East Coast			
Queenstown, Md.(A)	36	40	38	33	43	50
Linkwood, Md.	35	34	35	30	35	37
Snow Hill, Md.(A)	38	43	41	34	42	44
Snow Hill, Md.(B)	39	41	36	33	37	40
Georgetown, Del.(A)	38	37	34	34	35	36
Georgetown, Del.(B)	37	34	31	34	35	36
Warsaw, Va.	34	36	32	30	35	38
Petersburg, Va.	27	32	27	22	30	30
Holland, Va.	37	41	36	32	41	46
Plymouth, N.C.	37	37	36	27	39	39
Mean	36	38	35	31	37	40
			Upper and Central South			
Orange, Va.	39	40	40	33	40	41
Blairsville, Ga.	41	39	34	34	41	43
Belle Mina, Ala.	35	34	32	24	31	37
Experiment, Ga.	32	31	25	21	31	33
State College, Miss.	31	36	25	27	21	28
Princeton, Ky.	42	42	45	37	44	49
Martin, Tenn.	34	40	31	29	32	40
Jackson, Tenn.	38	39	38	33	36	41
Mean	37	38	34	30	35	39
			Delta			
Miller City, Ill.	36	34	35	26	37	42
Henderson, Ky.	40	45	43	35	43	48
Portageville, Mo.(A)	28	31	29	22	26	28
Portageville, Mo.(B)	36	36	35	23	36	39
Keiser, Ark.	20	25	21	14	24	30
Marianna, Ark.	31	35	34	26	37	35
Stoneville, Miss.(A)	31	35	33	24	36	39
Stoneville, Miss.(B)	30	27	21	17	29	33
St. Joseph, La.	36	36	35	21	42	42
Mean	32	34	32	23	34	37
			West			
Mr. Vernon, Mo.	36	39	36	31	38	39
Stuttgart, Ark.	25	30	27	19	30	31
Curtis, La.	22	26	19	16	25	25
Bixby, Okla.	32	36	31	25	33	35
Halfway, Texas	27	29	29	22	27	31
Lubbock, Texas	31	30	29	25	27	33
Mean	29	32	29	23	30	32

Table 19. - (continued)

Location	D64-3253	D66-12,392	D65-6555	R65-12	V66-12	V66-840
			East Coast			
Queenstown, Md.(A)	47	38	41	50	39	38
Linkwood, Md.	33	29	33	35	36	34
Snow Hill, Md.(A)	41	37	39	43	44	41
Snow Hill, Md.(B)	41	37	37	40	35	40
Georgetown, Del.(A)	36	36	34	38	34	36
Georgetown, Del.(B)	33	34	31	34	34	35
Warsaw, Va.	33	32	32	37	35	35
Petersburg, Va.	27	26	27	34	29	29
Holland, Va.	38	35	35	43	40	41
Plymouth, N.C.	33	31	33	39	34	37
Mean	36	34	34	39	36	37
			Upper and Central South			
Orange, Va.	41	38	44	46	39	39
Blairsville, Ga.	39	38	41	44	39	39
Belle Mina, Ala.	34	31	34	36	27	33
Experiment, Ga.	30	30	32	35	21	29
State College, Miss.	36	33	32	32	30	34
Princeton, Ky.	40	37	39	50	41	40
Martin, Tenn.	35	30	35	38	36	32
Jackson, Tenn.	39	36	36	41	37	37
Mean	37	34	37	40	34	35
			Delta			
Miller City, Ill.	34	30	35	40	34	33
Henderson, Ky.	40	38	36	47	46	38
Portageville, Mo.(A)	27	27	28	32	31	29
Portageville, Mo.(B)	34	30	35	42	35	34
Keiser, Ark.	24	22	27	27	19	20
Marianna, Ark.	32	29	33	37	31	36
Stoneville, Miss.(A)	31	29	32	39	31	32
Stoneville, Miss.(B)	25	23	29	31	27	30
St. Joseph, La.	28	34	35	48	26	34
Mean	31	29	32	38	31	32
			West			
Mt. Vernon, Mo.	36	33	39	40	39	36
Stuttgart, Ark.	25	25	24	31	27	26
Curtis, La.	19	18	18	21	22	20
Bixby, Okla.	32	28	34	37	33	30
Halfway, Texas	27	28	28	30	29	27
Lubbock, Texas	28	28	27	33	30	31
Mean	28	27	28	32	30	28

Table 20. - Lodging scores for the strains in Uniform Group V, 1969

Location	Hill	Dare	York	D64-4731	N63-2769	R64-14
			East Coast			
Queenstown, Md.(A)	4.0	3.7	3.0	2.5	3.7	4.0
Linkwood, Md.	2.7	2.0	1.8	1.5	2.5	3.5
Snow Hill, Md.(A)	3.0	2.0	2.0	1.0	2.0	4.0
Snow Hill, Md.(B)	4.0	3.0	1.0	2.0	3.0	2.0
Georgetown, Del.(A)	3.7	2.7	2.2	2.7	2.3	3.2
Georgetown, Del.(B)	3.0	2.3	2.2	1.5	2.2	3.0
Warsaw, Va.	2.2	1.7	1.4	1.3	2.1	2.6
Petersburg, Va.	2.0	1.0	1.0	1.0	1.0	1.3
Holland, Va.	3.0	4.0	1.0	1.0	2.7	3.7
Plymouth, N. C.	2.7	2.7	2.0	2.0	3.0	3.3
			Upper and Central South			
Orange, Va.	3.0	3.0	1.7	1.0	2.7	1.7
Blairsville, Ga.	2.8	2.2	1.3	1.2	2.2	2.8
Belle Mina, Ala.	2.0	2.7	1.3	1.3	1.3	4.0
Experiment, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
State College, Miss.	2.0	1.0	1.0	1.0	1.0	2.0
Princeton, Ky.	3.3	3.3	2.0	2.7	3.3	4.3
Martin, Tenn.	3.0	2.0	2.0	1.0	2.0	3.0
Jackson, Tenn.	1.0	1.0	1.0	2.0	1.0	2.0
			Delta			
Miller City, Ill.	1.5	2.0	1.6	1.2	1.5	2.7
Henderson, Ky.	2.3	3.0	2.3	1.3	2.3	2.7
Portageville, Mo.(A)	2.8	3.1	3.7	4.3	4.2	3.2
Portageville, Mo.(B)	2.3	2.5	2.2	1.5	2.2	3.5
Keiser, Ark.	1.7	1.3	1.0	1.0	1.0	2.0
Marianna, Ark.	1.3	2.3	2.0	1.3	2.0	1.3
Stoneville, Miss.(A)	2.0	3.0	2.0	2.0	2.7	3.0
Stoneville, Miss.(B)	2.0	2.0	2.0	1.7	2.0	2.3
St. Joseph, La.	4.0	2.7	3.0	1.0	4.3	4.7
			West			
Mt. Vernon, Mo.	3.3	2.5	2.3	3.0	2.3	3.0
Stuttgart, Ark.	2.3	2.3	2.0	2.0	2.0	3.0
Curtis, La.	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Halfway, Texas	2.0	2.0	1.0	1.0	2.0	2.0
Lubbock, Texas	1.3	1.3	1.0	1.0	1.3	1.0

Table 20. - (continued)

Location	D64-3253	D66-12,392	D65-6555	R65-12	V66-12	V66-840
			East Coast			
Queenstown, Md.(A)	3.5	3.8	4.2	4.2	2.2	3.3
Linkwood, Md.	2.8	2.8	2.7	3.2	1.7	1.5
Snow Hill, Md.(A)	2.0	3.0	4.0	4.0	1.0	1.0
Snow Hill, Md.(B)	3.0	3.0	3.0	3.0	1.0	3.0
Georgetown, Del.(A)	3.8	4.5	4.3	3.7	2.3	3.0
Georgetown, Del.(B)	2.8	3.8	4.0	3.2	1.8	2.3
Warsaw, Va.	1.9	2.9	1.9	3.0	1.1	1.4
Petersburg, Va.	3.0	1.7	1.3	2.0	1.0	1.0
Holland, Va.	2.0	3.0	2.0	3.7	1.0	1.0
Plymouth, N.C.	3.0	3.3	3.0	3.3	2.0	2.7
			Upper and Central South			
Orange, Va.	2.0	3.3	3.3	2.0	1.0	1.7
Blairsville, Ga.	1.8	2.8	2.3	2.5	1.3	1.5
Belle Mina, Ala.	1.7	5.0	4.0	3.0	1.0	2.0
Experiment, Ga.	1.0	1.0	1.0	1.3	1.0	1.0
State College, Miss.	2.0	3.0	2.0	2.0	1.0	2.0
Princeton, Ky.	2.3	3.0	2.0	4.3	1.0	2.0
Martin, Tenn.	2.0	3.0	2.0	2.0	1.0	1.0
Jackson, Tenn.	2.0	2.0	2.0	1.0	1.0	2.0
			Delta			
Miller City, Ill.	2.0	3.8	2.3	2.1	1.2	1.4
Henderson, Ky.	1.7	3.3	1.3	3.7	1.0	1.3
Portageville, Mo.(A)	4.3	4.3	3.8	3.2	2.8	2.5
Portageville, Mo.(B)	2.8	2.5	2.5	3.5	2.2	2.2
Keiser, Ark.	1.7	1.3	1.7	2.0	1.0	1.7
Marianna, Ark.	2.0	2.0	1.7	1.7	1.0	1.3
Stoneville, Miss.(A)	2.0	2.0	2.0	3.7	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	1.7	2.0
St. Joseph, La.	3.0	4.3	2.7	5.0	1.0	2.7
			West			
Mt. Vernon, Mo.	4.3	5.0	3.5	3.3	1.3	2.3
Stuttgart, Ark.	2.3	2.3	3.0	2.7	2.3	2.0
Curtis, La.	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Halfway, Texas	2.0	2.0	2.0	2.0	1.0	2.0
Lubbock, Texas	2.0	2.0	1.0	1.0	1.0	1.0

Table 21. - Seed quality scores for the strains in Uniform Group V, 1969

Location	Hill	Dare	York	D64-4731	N63-2769	R64-14
			East Coast			
Queenstown, Md.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Snow Hill, Md.(A)	2.0	2.0	2.0	3.0	3.0	1.0
Snow Hill, Md.(B)	2.0	2.0	2.0	2.0	3.0	3.0
Georgetown, Del.(A)	2.0	1.5	1.8	2.3	2.0	2.3
Georgetown, Del.(B)	1.7	1.7	1.2	2.0	1.8	1.8
Warsaw, Va.	1.6	1.3	1.2	1.9	1.5	1.7
Petersburg, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Holland, Va.	2.0	1.0	1.0	2.0	1.0	2.0
Plymouth, N. C.	2.0	1.5	1.5	1.5	2.0	2.0
			Upper and Central South			
Orange, Va.	1.0	1.0	1.0	1.0	1.3	1.0
Blairsville, Ga.	2.5	2.0	2.0	2.5	2.0	2.0
Experiment, Ga.	2.3	2.4	3.0	2.8	2.3	2.3
State College, Miss.	1.0	1.0	2.0	2.0	1.0	2.0
Princeton, Ky.	2.0	2.0	2.0	2.0	2.0	2.0
Martin, Tenn.	2.0	1.0	2.0	2.0	3.0	2.0
Jackson, Tenn.	3.0	2.0	3.0	2.0	3.0	2.0
			Delta			
Miller City, Ill.	1.5	1.7	1.3	1.7	1.7	1.2
Henderson, Ky.	2.0	2.0	1.3	2.0	2.3	2.3
Portageville, Mo.(A)	3.4	2.7	3.2	3.9	3.2	3.5
Portageville, Mo.(B)	2.0	1.3	2.6	3.3	2.0	3.1
Keiser, Ark.	2.3	2.7	3.3	3.0	3.0	2.7
Marianna, Ark.	3.0	2.3	2.3	1.7	2.3	2.7
Stoneville, Miss.(A)	1.3	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.7	2.0	2.0
St. Joseph, La.	1.0	1.0	1.0	1.7	1.0	2.0
			West			
Mt. Vernon, Mo.	1.8	2.0	2.0	2.0	2.0	2.5
Stuttgart, Ark.	2.0	2.3	2.7	2.0	3.0	2.3
Curtis, La.	1.7	1.7	1.7	2.0	2.0	1.0
Bixby, Okla.	2.0	2.0	1.0	2.0	2.0	2.0
Lubbock, Texas	2.0	1.0	2.0	2.0	2.0	2.0

Table 21. - (continued)

Location	D64-3253	D66-12,392	D65-6555	R65-12	V66-12	V66-840
			East Coast			
Queenstown, Md.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	3.0
Snow Hill, Md.(A)	1.0	1.0	3.0	2.0	1.0	3.0
Snow Hill, Md.(B)	1.0	1.0	2.0	1.0	3.0	3.0
Georgetown, Del.(A)	2.3	1.7	2.3	2.5	1.5	1.8
Georgetown, Del.(B)	1.5	1.2	2.2	1.8	1.3	2.0
Warsaw, Va.	1.5	1.7	1.6	1.5	1.4	2.2
Petersburg, Va.	1.0	1.0	1.0	1.0	1.0	2.0
Holland, Va.	1.5	1.5	1.5	2.0	1.5	2.0
Plymouth, N.C.	1.5	1.5	1.5	2.0	2.0	2.0
			Upper and Central South			
Orange, Va.	1.0	1.0	2.0	1.0	1.0	1.0
Blairsville, Ga.	2.0	2.5	2.0	2.0	2.0	1.5
Experiment, Ga.	2.1	2.8	2.1	2.8	2.0	2.9
State College, Miss.	1.0	1.0	2.0	1.0	1.0	2.0
Princeton, Ky.	2.0	2.0	2.0	3.0	1.0	3.0
Martin, Tenn.	2.0	2.0	2.0	2.0	2.0	2.0
Jackson, Tenn.	2.0	3.0	2.0	2.0	2.0	3.0
			Delta			
Miller City, Ill.	1.5	2.0	1.5	1.5	2.0	2.0
Henderson, Ky.	1.7	2.0	2.0	2.3	2.0	2.3
Portageville, Mo.(A)	3.5	3.6	3.8	3.2	3.2	3.4
Portageville, Mo.(B)	2.0	2.7	2.7	2.0	1.8	2.6
Keiser, Ark.	2.3	2.3	2.0	2.3	2.7	3.0
Marianna, Ark.	2.0	2.3	2.3	2.7	2.7	3.0
Stoneville, Miss.(A)	1.3	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.7
St. Joseph, La.	1.3	1.7	1.3	1.7	1.0	2.3
			West			
Mt. Vernon, Mo.	2.0	2.5	3.0	2.0	2.0	2.3
Stuttgart, Ark.	2.3	3.0	2.3	2.0	2.3	3.3
Curtis, La.	2.0	2.0	1.7	1.7	1.0	1.7
Bixby, Okla.	2.0	2.0	2.0	2.0	2.0	1.0
Lubbock, Texas	2.0	2.0	2.0	2.0	1.0	3.0

PRELIMINARY GROUP V

1969

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 six locations. Only one replication was harvested at Keiser. The combined analysis of variance for seed yield also showed differences among strains to be significant. R68-105 and N67-3719 produced seed yields significantly higher than Hill. N67-3719 matured 3 days later than Dare. Twenty-two strains ranked above Dare in mean seed yield. Four strains had mean seed yields significantly lower than Hill.

R68-105, the top ranking strain, has the major gene for resistance to phytophthora rot along with resistance to cyst nematodes. Maturity is similar to that of Dare. D66-12,394, D67-2645, and D67-2649 also have resistance to phytophthora rot and cyst nematodes along with resistance to root-knot nematodes. D68-33 is resistant to cyst and root-knot nematodes. D65-3438 appears to have a high level of resistance to soybean mosaic virus. D66-12,467 has an average seed size of approximately 28-30 grams per 100 seeds.

D69-B1, D69-B2, and D69-B3 are all basically Dorman types. B1 has narrow leaves, B2 has narrow leaves and resistance to bacterial pustule, while B3 has resistance to bacterial pustule. B2 had a mean yield 2.4 bushels higher than its bacterial pustule susceptible counterpart. Pustule susceptibility also caused B1 to be rated earlier in maturity. B3, the normal leaf type, averaged 0.5 bushel higher in seed yield than B2.

Strains which appear to merit being advanced to Uniform Group V are: R68-105, N67-3831, D68-33, Md64-429, V66-180, D67-3397, and D65-3438.

Table 22. - Parentage of the strains in Preliminary Group V, 1969

	Variety or strain	Parentage	Generation composited
1.	Hill		
2.	Dare		
3.	D65-3384	Hill x PI 96983	F_7
4.	D65-3426	D53-142 x PI 96983	F_7
5.	D65-3438	D53-142 x PI 96983	F_7
6.	D65-3556	Hill x PI 187,155	F_7
7.	D66-4147	Hill x PI 227,557	F_7
8.	D66-5762	Hill x D61-253	F_5
9.	D66-12,394	D63-6100 x Dyer	F_5
10.	D66-12,467	Hill x Hahto	F_5
11.	D67-2645	D63-6100 x Dyer	F_5
12.	D67-2649	D63-6100 x Dyer	F_5
13.	D67-3371	Hill x PI 172,902	F_5
14.	D67-3375	Hill x PI 172,902	F_5
15.	D67-3397	Hill x PI 172,902	F_5
16.	D67-3403	Hill x PI 172,902	F_5
17.	D67-3410	Hill x PI 172,902	F_5
18.	D68-33	Dyer x Bragg	F_5
19.	D69-B1	D61-5141, Dorman(5) x PI 181,537	F_4
20.	D69-B2	D61-5141 x D62-730	F_3
21.	D69-B3	D62-730, Dorman(5) x N48-1515	F_4
22.	Md64-338	sel. bulk population	
23.	Md64-404	sel. bulk population	
24.	Md64-429	sel. bulk population	
25.	N67-3519	Dare x N60-5234	F_4
26.	N67-3537	Dare x N60-5234	F_4
27.	N67-3831	Dare x N60-5234	F_4
28.	N67-3982	Dare x N60-5234	F_4
29.	N67-4005	Dare x N60-5234	F_4
30.	R65-149	(R54-168 x Hill) x (Lee x Dortchsoy 110)	F_7
31.	R65-211	Hill x R59-200	F_5
32.	R68-105	Multiple cross; resistant C.N. and P.R	
33.	UD66-7245	Delmar x Kent	
34.	UD66-9258	Bethel x Kent	
35.	V66-23	Dorman x D52-203	F_7
36.	V66-180	Lee x S5-7075	F_6

Table 23. - General summary of performance for the strains grown in Preliminary Group V, 1969

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	Seed holding	P.R.	B.P.	% mottled seed
Hill	36.3	10-5	36	22.5	38.5	1.0	1.0	1.0	0
Dare	36.6	+9	34	22.9	38.9	1.0	1.0	1.0	0
D65-3384	37.4	+8	32	19.3-	42.5+	1.0	1.0	1.0	10
D65-3426	36.7	+9	38	18.0-	43.7+	1.0	1.0	1.0	5
D65-3438	35.9	+8	35	20.9-	39.1	1.0	1.0	1.0	0
D65-3556	34.9	+9	33	20.4-	43.2+	1.3	1.0	1.0	0
D66-4147	35.3	+7	29	21.4-	40.4+	1.0	1.0	1.0	5
D66-5762	38.2	+1	33	22.2	40.4+	1.0	1.0	1.0	40
D66-12,394	36.9	+1	32	22.1	39.5	1.8	1.0	1.0	6
D66-12,467	37.5	+9	29	20.3-	43.4+	1.8	1.0	1.0	0
D67-2645	35.7	+6	38	22.0	40.3+	1.5	1.0	1.0	3
D67-2649	38.1	+2	34	22.4	39.4	1.0	1.0	1.0	5
D67-3371	38.1	+1	33	20.6-	41.2+	1.5	1.0	1.0	15
D67-3375	29.5-	+5	29	20.1-	41.2+	1.0	1.0	1.0	30
D67-3397	37.4	+5	30	21.1-	41.4+	1.8	1.0	1.0	7
D67-3403	28.3-	+6	29	20.2-	42.4+	1.0	1.0	1.0	4
D67-3410	34.0	+5	34	20.9-	41.9+	1.5	1.0	1.0	3
D68-33	39.1	+11	36	22.3	39.1	1.2	1.0	1.0	20
D69-B1	35.5	+3	36	22.4	38.3	1.3	1.0	3.0	5
D69-B2	37.9	+6	35	22.4	38.8	1.3	1.0	1.0	4
D69-B3	38.4	+7	37	22.0	38.7	1.0	1.0	1.0	0
Md64-338	38.2	0	36	21.9	39.4	1.3	1.0	3.0	3
Md64-404	38.5	+9	34	21.8-	40.0+	1.0	1.0	1.0	8
Md64-429	38.4	+7	34	21.9	39.5	1.3	1.5	1.0	6
N67-3519	41.2+	+12	34	22.1	40.1+	1.5	1.0	1.0	0
N67-3537	37.6	+12	32	22.3	40.3+	1.5	2.5	1.0	0
N67-3831	40.9	+11	35	21.7-	40.7+	1.0	1.0	1.0	3
N67-3982	39.5	+12	34	21.3-	40.7+	1.5	1.0	1.0	2
N67-4005	37.1	+10	34	22.0	40.5+	1.5	2.0	1.0	3
R65-149	40.5	+15	34	21.2-	40.6+	1.0	1.0	1.0	0
R65-211	36.5	+8	32	21.9	40.7+	1.0	1.5	1.0	5
R68-105	43.2+	+8	37	23.0	39.5	1.0	1.0	1.0	3
UD66-7245	29.7-	+3	45	22.4	40.1+	2.5	3.0	4.0	5
UD66-9258	25.6-	0	43	22.5	41.1+	3.0	4.0	1.0	5
V66-23	35.6	+6	35	21.5-	40.7+	1.0	1.0	3.0	0
V66-180	38.7	+3	30	22.2	40.4+	1.8	1.5	1.0	0
L.S.D.(.05)	4.8			0.6	1.0				
L.S.D.(.01)	6.3			0.8	1.4				

Table 24. - Seed yield, in bushels per acre, for the strains in Preliminary Group V, 1969

Strain	Georgetown, Del.	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.*	Stoneville, Miss.(B)
Hill	38.6	36.2	37.4	44.0	27.5	28.4	34.1
Dare	42.5	35.8	32.8	46.3	23.5	36.6	38.6
D65-3384	43.8+	40.6	34.5	36.5	28.3	35.9	40.6
D65-3426	38.9	41.2	39.8	36.9	21.9	17.5	41.5
D65-3438	43.8+	39.2	39.3	38.2	18.7	22.7	36.2
D65-3556	39.4	36.7	32.5	39.4	27.3	38.7	34.1
D66-4147	38.2	36.0	37.7	40.8	22.7	28.2	36.1
D66-5762	42.2	37.2	39.3	45.0	25.0	24.9	40.3
D66-12,394	40.0	38.0	36.5	42.0	29.2	20.6	35.6
D66-12,467	40.1	39.6	32.7	46.2	27.9	16.9	38.6
D67-2645	40.6	34.6	35.6	43.6	23.9	31.3	36.0
D67-2649	40.1	35.7	35.4	41.1	29.9	27.5	46.5+
D67-3371	37.8	39.0	33.1	49.4	25.9	24.1	43.7+
D67=3375	33.4-	31.0	24.8-	38.8	19.0	17.0	30.4
D67-3397	38.2	39.4	38.9	36.9	23.8	32.0	46.9+
D67-3403	32.2-	25.2-	23.3-	33.0-	21.7	30.0	34.2
D67-3410	36.6	32.7	31.2-	41.8	22.7	30.7	38.8
D68-33	39.4	40.8	40.6	44.5	31.6	35.6	37.8
D69-B1	34.7	38.0	33.2	46.5	21.5	13.1	39.2
D69-B2	39.7	43.4+	33.5	45.2	20.3	29.6	45.7+
D69-B3	40.0	40.8	36.2	43.8	25.1	28.8	44.3+
Md64-338	45.4+	38.0	33.8	41.0	33.6	26.5	37.3
Md64-404	41.0	35.9	34.8	46.5	32.0	22.1	40.8
Md64-429	41.3	37.9	35.7	54.2+	25.8	23.5	35.4
N67-3519	44.5+	44.6+	39.7	41.2	36.8	35.6	40.2
N67-3537	47.4+	40.8	41.1	45.3	21.5	28.7	29.7
N67-3831	41.6	39.7	40.1	48.4	35.9	34.6	39.4
N67-3982	46.2+	40.4	34.7	49.1	27.2	36.0	39.7
N67-4005	42.9	38.4	37.5	45.6	23.9	18.1	34.1
R65-149	35.6	42.2	31.9	55.0+	35.5	28.0	42.8+
D65-211	37.2	39.0	34.3	45.9	21.8	30.1	40.9
R68-105	44.5+	42.8+	39.7	51.4	34.4	31.4	46.6+
UD66-7245	35.1	35.2	31.5	35.2-	22.9	29.5	18.3-
UD66-9258	33.1-	34.2	30.7	29.6-	23.0	3.3	3.3-
V66-23	36.3	35.8	38.4	43.8	22.3	39.3	36.6
V66-180	40.2	42.5+	40.0	46.6	24.7	27.8	38.2
L.S.D.(.05)	5.1	6.1	5.2	7.5	9.5	--	7.8
C.V.	6%	8%	7%	9%	18%	--	10%

* - Not included in mean, only one replication harvested.

Table 25. - Oil percentages for the strains in Preliminary Group V, 1969

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss. (B)
Hill	21.1	21.4	22.8	21.9	23.7	23.9
Dare	21.1	22.0	23.3	22.8	23.9	24.5
D65-3384	18.1	18.9	18.9	19.8	20.2	20.1
D65-3426	17.4	19.1	17.5	17.4	18.1	18.3
D65-3438	19.5	20.7	20.6	20.9	21.6	21.9
D65-3556	19.6	19.5	20.6	21.0	21.6	20.1
D66-4147	20.0	21.2	21.4	21.6	21.8	22.1
D66-5762	21.5	22.0	21.6	22.4	23.2	22.4
D66-12,394	20.5	21.0	21.9	22.2	23.4	23.3
D66-12,467	19.0	20.3	20.2	20.0	20.9	21.1
D67-2645	19.8	21.4	22.7	22.2	22.9	22.7
D67-2649	20.8	21.6	22.8	22.7	23.6	23.0
D67-3371	19.5	20.3	20.7	20.5	21.1	21.3
D67-3375	18.8	19.3	20.1	19.4	21.1	21.6
D67-3397	19.9	20.6	21.0	21.4	22.0	21.7
D67-3403	18.6	19.5	19.9	19.8	21.8	21.7
D67-3410	19.5	20.1	20.3	21.4	23.5	20.8
D68-33	20.9	21.7	22.6	23.0	23.0	22.8
D69-B1	20.8	21.6	22.1	22.5	23.6	23.6
D69-B2	20.8	21.9	21.7	22.7	23.4	23.6
D69-B3	20.5	21.4	21.5	21.8	23.8	23.0
Md64-338	20.2	21.3	22.0	21.0	23.5	23.3
Md64-404	20.2	21.0	21.7	21.7	22.9	23.2
Md64-429	20.5	21.6	21.8	21.4	22.9	23.2
N67-3519	20.5	21.6	21.5	22.5	23.3	23.3
N67-3537	20.6	21.8	21.7	22.6	23.3	23.7
N67-3831	20.3	21.4	22.0	21.7	22.5	22.5
N67-3982	20.3	20.3	21.1	20.9	22.9	22.5
N67-4005	20.3	21.1	21.8	21.8	23.2	23.7
R65-149	20.1	20.3	22.0	22.2	21.7	21.0
R65-211	20.7	20.3	22.6	21.4	22.9	23.3
R68-105	21.4	22.5	23.4	23.4	23.8	23.6
UD66-7245	21.1	21.7	22.5	22.2	24.1	22.5
UD66-9258	21.2	21.7	22.3	21.3	23.7	24.6
V66-23	20.8	21.6	21.1	21.0	23.1	21.4
V66-180	21.2	21.8	21.7	21.4	23.5	23.6

Table 26. - Protein percentages for the strains in Preliminary Group V, 1969

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss. (B)
Hill	39.6	39.1	40.9	39.9	36.9	34.7
Dare	40.7	40.6	40.7	39.7	36.3	35.5
D65-3384	43.0	41.4	46.0	41.8	41.4	41.3
D65-3426	44.4	44.6	43.1	44.2	44.6	41.5
D65-3438	39.8	39.6	41.5	38.8	38.9	36.2
D65-3556	43.5	43.7	44.7	44.3	40.3	42.5
D66-4147	41.3	41.9	42.2	38.0	40.0	39.0
D66-5762	40.1	41.8	45.1	40.0	38.2	37.4
D66-12,494	41.0	41.4	42.2	38.9	37.8	35.9
D66-12,467	44.7	44.3	46.1	44.1	40.4	40.8
D67-2645	42.1	41.4	42.0	39.1	38.6	38.4
D67-2649	41.1	40.6	40.9	38.3	37.9	37.5
D67-3371	41.8	42.0	42.5	41.4	40.4	39.3
D67-3375	42.2	42.3	42.9	42.0	39.2	38.3
D67-3397	41.9	42.0	44.0	40.9	40.5	39.0
D67-3403	43.5	43.2	43.6	44.1	40.2	39.6
D67-3410	43.4	43.2	42.6	40.8	40.7	40.8
D68-33	40.1	39.8	41.4	37.7	38.5	36.9
D69-B1	39.4	40.1	40.4	38.5	36.3	35.1
D69-B2	38.9	40.1	41.7	38.5	37.3	36.2
D69-B3	39.9	39.9	40.9	38.0	36.6	36.8
Md64-338	39.6	41.3	41.5	40.7	37.0	36.3
Md64-404	41.9	40.2	42.5	39.6	38.4	37.2
Md64-429	40.9	40.7	41.8	39.7	37.9	36.1
N67-3519	42.0	41.4	42.8	39.0	38.3	37.1
N67-3537	41.6	41.4	43.2	40.6	37.9	37.1
N67-3831	41.4	41.8	43.8	40.1	38.5	38.4
N67-3982	41.8	42.4	43.8	41.0	37.7	37.6
N67-4005	41.7	41.8	43.2	41.5	38.4	36.1
R65-149	42.3	42.3	42.9	39.1	39.4	37.6
R65-211	41.6	42.3	41.4	42.1	38.6	38.2
R68-105	40.1	41.0	41.2	38.1	38.5	38.1
UD66-7245	42.0	43.0	40.5	40.0	37.8	37.5
UD66-9258	42.3	43.6	43.0	41.5	39.7	36.4
V66-23	41.2	41.6	42.5	41.1	39.7	38.1
V66-180	41.1	42.7	42.8	40.6	38.9	36.2

Table 27. - Plant height for the strains in Preliminary Group V, 1969

Strain	George-town, Del.	Link-wood, Md.	Warsaw, Va.	Plymouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.(B)
Hill	39	36	36	39	31	19	32
Dare	35	32	36	39	29	28	32
D65-3384	37	32	30	36	28	22	30
D65-3426	40	42	40	37	31	23	36
D65-3438	41	40	35	38	27	22	31
D65-3556	37	29	34	35	31	33	32
D66-4147	37	28	28	30	22	21	26
D66-5762	39	33	32	36	28	21	27
D66-12,394	36	32	34	34	29	20	26
D66-12,467	32	28	30	31	26	16	25
D67-2645	52	35	34	39	31	19	34
D67-2649	43	33	35	33	29	21	29
D67-3371	38	34	30	33	30	21	31
D67-3375	34	32	30	32	24	20	24
D67-3397	34	31	30	33	25	24	29
D67-3403	33	27	29	30	28	25	27
D67-3410	40	33	34	36	27	26	31
D68-33	40	36	36	39	31	28	34
D69-B1	43	33	36	40	28	27	34
D69-B2	38	32	36	38	32	20	35
D69-B3	35	38	41	42	31	30	36
Md64-338	42	32	35	37	33	28	36
Md64-404	36	34	32	35	33	32	35
Md64-429	37	32	36	37	30	28	32
N67-3519	37	38	35	36	29	26	29
N67-3537	38	33	32	37	26	21	24
N67-3831	35	34	33	40	35	35	33
N67-3982	39	32	32	37	30	29	31
N67-4005	37	36	36	37	28	22	28
R65-149	36	32	34	37	30	27	32
R65-211	36	32	32	35	27	21	32
R68-105	40	36	36	41	33	32	34
UD66-7245	41	48	48	51	43	42	40
UD66-9258	45	46	49	51	42	32	26
V66-23	40	32	37	37	32	25	33
V66-180	33	31	29	33	29	25	26

Table 28. - Seed quality scores for the strains in Preliminary Group V, 1969

Strain	George-town, Del.	Link-wood, Md.	Warsaw, Va.	Plymouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.(B)
Hill	1.5	2.0	1.5	2.0	2.8	2.0	2.0
Dare	2.0	2.0	1.5	1.5	1.8	2.0	2.0
D65-3384	2.3	3.0	1.7	1.5	3.3	2.0	2.0
D65-3426	1.8	2.0	2.0	1.5	2.8	2.0	2.0
D65-3438	1.8	3.0	2.2	2.0	2.5	3.0	2.0
D65-3556	2.5	2.0	1.5	1.5	1.8	2.0	2.0
D66-4147	2.5	2.0	2.0	1.5	2.3	3.0	2.0
D66-5762	2.0	3.0	1.7	2.0	3.0	2.0	2.0
D66-12,394	2.3	3.0	1.6	1.5	3.0	2.0	2.0
D66-12,467	2.5	3.0	1.7	1.5	4.4	3.0	2.0
D67-2645	2.8	3.0	1.7	1.5	3.0	3.0	2.0
D67-2649	3.0	3.0	1.5	1.5	2.5	2.0	2.0
D67-3371	2.0	3.0	1.5	1.5	3.5	3.0	2.0
D67-3375	2.3	3.0	1.9	1.5	3.5	3.0	2.5
D67-3397	1.3	3.0	1.7	1.5	3.3	2.0	2.0
D67-3403	2.3	3.0	1.9	1.5	2.9	3.0	2.0
D67-3410	2.0	3.0	1.7	1.5	1.8	2.0	2.0
D68-33	5.0	2.0	1.8	1.5	4.0	2.0	2.0
D69-B1	1.8	2.0	1.3	2.0	3.0	3.0	2.0
D69-B2	1.8	2.0	1.3	1.5	2.8	2.0	2.0
D69-B3	2.0	2.0	1.4	2.0	4.0	3.0	2.0
Md64-338	1.8	2.0	2.0	2.0	2.0	2.0	2.0
Md64-404	2.5	2.0	1.8	2.0	3.4	2.0	2.0
Md64-429	1.8	2.0	1.6	2.0	1.5	1.0	2.0
N67-3519	2.0	2.0	1.4	2.0	2.5	2.0	2.0
N67-3537	2.3	2.0	1.6	2.0	2.0	2.0	2.0
N67-3831	2.5	2.0	1.5	1.5	1.3	2.0	2.0
N67-3982	2.3	2.0	1.4	2.0	1.5	2.0	2.0
N67-4005	2.5	2.0	1.7	2.0	2.5	2.0	2.0
R65-149	2.8	2.0	1.7	1.5	1.8	1.0	2.0
R65-211	3.5	2.0	1.8	1.5	3.5	2.0	2.0
R68-105	1.8	2.0	1.7	1.5	3.5	2.0	2.0
UD66-7245	1.5	3.0	2.1	2.0	2.8	3.0	3.0
UD66-9258	1.5	3.0	2.3	3.0	2.3	5.0	3.0
V66-23	1.5	2.0	1.3	1.5	1.5	1.0	2.0
V66-180	1.8	2.0	1.3	2.0	2.6	2.0	2.0

UNIFORM GROUP VI

1969

	Variety or strain	Parentage	Generation composited
1.	Hood	Roanoke x N45-745	F_6
2.	Lee	S100 x CNS	F_6
3.	Lee 68	Lee(6) x Arksoy	Sel. F_3 lines
4.	Davis	D49-2573 x N45-1497	F_6
5.	D64-4636	Hill x D58-3311	F_5
6.	R65-37	Hood(6) x Arksoy	F_4
7.	D68-B4	Pickett x P.R. resistant Lee	Comp. F_4 lines
8.	N66-1221	N56-4202 x N57-6801	F_4
9.	N66-1231	N56-4202 x N57-6801	F_4
10.	N66-1783	N56-4202 x N57-6801	F_4
11.	N66-5236	N56-4202 x D61-3505	F_4
12.	N68-3000B	Composite	

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 Ralsoy 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.

D61-3505 is a high protein selection from D49-2491(6) x PI 174,862.

Thirty-four Uniform Group VI nurseries were planted. Results of 30 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 among strains to be significant at the 5% level in the East Coast, Upper and Central, and Delta regions.

D64-4636 yielded significantly higher than Hood or Lee in the East Coast and Delta regions. Its 3-year mean was above Hood and Lee in these same areas. D64-4636 has a very high level of resistance to root-knot nematodes and good field resistance to phytophthora rot. Maturity is similar to Hood.

The similarity in performance of Lee and Lee 68 in the absence of phytophthora rot appears to be sufficiently established so that there should be no further need for continuing Lee as a check. D68-B4, a Pickett type with resistance to both cyst nematodes and phytophthora rot, produced seed yields very similar to Lee and Lee 68 in all areas except the West. Pickett had a 3-year mean 11% below Lee in the East and 12% below Lee in the Delta.

R65-37, a Hood type with resistance to phytophthora rot, averages 4 days later in maturity and 4 inches taller than Hood. Seed yield averages 2 bushels higher than Hood in the Delta where phytophthora rot is a problem.

The four first-year strains, N66-1221, N66-1231, N66-1783, and N66-5236, all showed a chlorotic condition in the High Plains plantings. This is assumed to be a nutritional unbalance. At both locations, the soil pH level was over 8. N66-1231 and N66-1783 yielded well in other areas. N66-1783 appeared to be resistant to root-knot nematodes in the planting in west Florida.

N68-3000B, a blend of Lee and Davis, averaged more than 1 bushel above the higher yielding component at 7 of the 30 locations.

Table 29. - General summary of the performance for the strains in Uniform Group VI, 1969

	Hood	Lee	Lee 68	Davis	D64-4636	R65-37
Seed Yield - 1969						
East Coast	37.4	37.7	39.0	40.0	42.8+	37.5
Southeast	35.0	36.6	35.6	38.8	36.7	36.3
Upper & Central South	41.1	39.2	40.2	39.7	42.3	41.3
Delta	35.8	34.6	36.8	38.5+	41.4+	37.5
West	36.8	33.0	34.0	35.2	30.1	32.4
- 1968-69						
East Coast	37.2	35.5	36.4	36.8	39.8	35.6
Southeast	33.2	34.5	32.9	37.5	32.6	34.6
Upper & Central South	45.9	45.7	44.6	47.2	45.5	46.5
Delta	37.0	35.5	37.7	40.1	41.1	39.1
West	40.6	37.3	37.6	38.4	33.8	38.2
- 1967-69						
East Coast	37.6	35.5	36.5	36.4	39.0	
Southeast	34.9	36.6	34.9	39.4	34.6	
Upper & Central South	47.0	45.3	44.9	46.8	45.7	
Delta	37.4	37.0	38.0	40.1	41.7	
West	41.5	37.8	37.9	39.7	36.3	
Oil Content - 1969	22.7	21.8-	21.8-	22.2-	21.6-	21.5-
- 1968-69	22.7	21.7	21.6	22.0	21.4	21.4
- 1967-69	22.3	21.5	21.4	21.9	21.3	
Protein Content - 1969	39.6	41.5+	41.8+	40.2	40.9+	40.9+
- 1968-69	39.1	40.7	40.6	39.3	40.4	40.0
- 1967-69	39.3	40.7	40.7	39.2	40.1	
Seed size	14.5	12.8-	13.3-	13.9	13.8	14.9
Maturity index	10-10	+9	+9	+7	+1	+4
Height	33	33	34	39	32	37
Frogeye	1.0	1.0	2.0	1.0	5.0	1.0
Phytophthora rot	2.5	1.0	1.0	1.0	1.0	1.0
Root-knot nematodes	5.0	5.0	5.0	5.0	1.0	5.0
Seed coat mottling (%)	0	39	47	0	70	0
Seed holding	1.7	1.0	1.0	2.0	1.3	2.2
Flower color	P	P	P	W	W	P
Pubescence color	G	T	T	G	G	G
Pod wall color	T	T	T	T	T	M

Table 29. - (continued)

	D68-B4	N66-1221	N66-1231	N66-1783	N66-5236	N68-3000B
Seed Yield - 1969						
East Coast	37.3	38.6	42.8+	41.0+	38.8	39.3
Southeast	38.7	35.2	35.5	33.3	35.5	38.5
Upper & Central South	39.5	40.0	39.3	38.1-	37.0-	42.4
Delta	34.8	33.7	38.8+	38.6+	36.0	40.0+
West	30.7	29.0	26.3	23.8	30.0	34.5
- 1968-69						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
- 1967-69						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
Oil Content - 1969	21.8-	21.5-	22.6	22.0-	20.2-	22.1-
- 1968-69						
- 1967-69						
Protein Content - 1969	40.8+	42.0+	41.0+	41.2+	41.9+	40.4+
- 1968-69						
- 1967-69						
Seed size	12.9-	14.2	14.3	15.8+	12.5-	13.5-
Maturity index	+10	+9	+3	+5	+4	+9
Height	32	40	34	40	31	37
Frogeye	2.0	5.0	5.0	5.0	5.0	--
Phytophthora rot	1.0	3.0	2.0	2.0	2.0	1.0
Root-knot nematodes	5.0	5.0	5.0	1.0	5.0	5.0
Seed coat mottling (%)	24	68	37	11	24	18
Seed holding	1.0	1.7	2.2	1.7	1.6	2.0
Flower color	P	W	W	W	W	M
Pubescence color	G	T	T	G	T	M
Pod wall color	T	B	B	M	T	T

Table 30. - Seed yield, in bushels per acre, for the strains in Unifrom Group VI, 1969

Location	Hood	Lee	Lee 68	Davis	D64-4636	R65-37	D68-B4
			East Coast				
Queenstown, Md.	38.9	34.6	31.6-	23.6-	38.1	33.5	30.6-
Linkwood, Md.	31.8	36.5	34.7	37.5+	40.8+	31.0	31.6
Warsaw, Va.	26.7	30.8+	29.9	32.3+	32.1+	26.2	31.8+
Petersburg, Va.	43.1	37.0-	44.8	38.0-	45.9	42.0	37.3-
Holland, Va.	47.3	41.3-	41.0-	45.7	49.3	44.4	42.1-
Plymouth, N.C.	41.1	39.9	45.8	46.2	46.8+	39.1	41.1
Willard, N.C.	40.4	37.9	39.0	46.1	46.0	42.6	37.3
Florence, S.C.	42.6	46.1	48.4+	52.5+	44.5	41.5	46.6
Hartsville, S.C.(A)	24.8	35.3+	35.7+	37.6+	41.8+	37.5+	37.7+
Mean	37.4	37.7	39.0	40.0	42.8+	37.5	37.3
			Southeast				
Quincy, Fla.	20.7	31.1+	30.8+	35.0+	24.3	25.5	31.0+
Jay, Fla.	43.6	40.6	35.8	43.4	43.6	42.4	40.9
Fairhope, Ala.	30.1	33.2	34.7	32.0	31.5	35.6	38.7
Baton Rouge, La.	45.6	41.3	41.3	44.9	47.2	41.8	44.4
Mean	35.0	36.6	35.6	38.8	36.7	36.3	38.7
			Upper and Central South				
Belle Mina, Ala.	24.2	22.0	22.4	21.8	23.3	21.7	23.5
Experiment, Ga.	57.0	59.2	60.7	58.6	59.7	62.9	57.1
State College, Miss.	39.2	37.3	37.8	43.1	42.2	38.6	38.4
Jackson, Tenn.	44.2	38.2-	39.8	35.4-	44.0	41.7	39.0
Mean	41.1	39.2	40.2	39.7	42.3	41.3	39.5
			Delta				
Portageville, Mo.(A)	38.5	35.8	35.1	40.3	40.8	37.8	35.7
Portageville, Mo.(B)	29.3	24.5	26.4	30.0	34.4	29.0	27.5
Keiser, Ark.	24.5	23.7	24.7	30.9	33.1	28.8	26.2
Marianna, Ark.	41.0	39.3	43.1	39.0	45.3	35.5	33.7
Stoneville, Miss.(A)	39.0	36.8	39.4	37.4	38.1	40.0	39.4
Stoneville, Miss.(B)	27.1	32.2	39.9+	37.6+	46.9+	43.5+	37.4+
St. Joseph, La.	50.8	49.7	49.3	54.3	50.8	47.8	43.8-
Mean	35.8	34.6	36.8	38.5+	41.4+	37.5	34.8
			West				
Stuttgart, Ark.	32.2	35.0	33.8	34.6	31.7	31.5	34.5
Curtis, La.	25.2	34.3+	39.0+	22.4	22.7	24.7	28.3
Crowley, La.	31.3	32.9	30.6	34.8	23.4-	23.1-	29.1
Bixby, Okla.	36.5	21.1-	19.8-	25.6-	23.5-	28.9-	24.6-
Halfway, Texas	58.7	41.8-	46.9-	58.3	49.4-	53.7	37.1-
Lubbock, Texas*	53.7	39.1-	40.7-	43.5	48.0	48.3	35.5-
Mean	36.8	33.0	34.0	35.2	30.1	32.4	30.7

(+) - 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	N66-1221	N66-1231	N66-1783	N66-5236	N68-3000B	L.S.D. (.05)	C.V.
			East Coast				
Queenstown, Md.	29.5-	42.2	39.8	36.5	24.4-	6.7	12%
Linkwood, Md.	35.6	38.9+	32.4	37.5+	35.7	5.6	9%
Warsaw, Va.	29.6	34.9+	33.6+	30.0	33.3+	3.4	7%
Petersburg, Va.	37.1-	48.6+	47.4+	46.1	38.3-	3.3	5%
Holland, Va.	43.8	47.7	49.4	42.9	46.2	5.0	7%
Plymouth, N.C.	39.1	42.5	37.4	39.5	43.2	5.4	8%
Willard, N.C.	48.7	43.6	40.7	40.7	47.1	N.S.	11%
Florence, S.C.	45.4	42.0	45.6	40.6	49.3+	5.5	7%
Hartsville, S.C.(A)	38.9+	44.6+	42.9+	35.7+	36.3+	8.0	13%
Mean	38.6	42.8+	41.0+	38.8	39.3	3.4	
			Southeast				
Quincy, Fla.	25.1	23.2	27.0+	25.3	36.7+	6.3	13%
Jay, Fla.	38.1	41.3	37.9	39.8	42.6	N.S.	12%
Fairhope, Ala.	35.8	35.9	38.0	31.1	34.4	N.S.	10%
Baton Rouge, La.	41.7	41.5	30.0-	46.0	40.4	7.1	10%
Mean	35.2	35.5	33.3	35.5	38.5	N.S.	
			Upper and Central South				
Belle Mina, Ala.	23.2	19.0-	17.3-	18.7-	23.5	3.4	9%
Experiment, Ga.	60.7	58.0	57.1	51.6	63.1	N.S.	7%
State College, Miss.	42.2	40.9	42.1	40.3	40.6	N.S.	10%
Jackson, Tenn.	33.9-	39.3	35.9-	37.5-	41.8	5.8	9%
Mean	40.0	39.3	38.1-	37.0-	42.4	2.9	
			Delta				
Portageville, Mo.(A)	39.1	38.5	37.2	40.0	41.1	7.4	11%
Portageville, Mo.(B)	26.3	25.9	29.6	28.9	29.2	6.3	13%
Keiser, Ark.	21.7	29.0	29.7	24.7	28.3	N.S.	20%
Marianna, Ark.	35.3	43.3	40.2	38.1	41.3	N.S.	12%
Stoneville, Miss.(A)	32.3	37.5	38.3	33.6	43.8	N.S.	14%
Stoneville, Miss.(B)	27.9	39.0+	36.7+	34.3+	42.3+	5.9	9%
St. Joseph, La.	53.5	58.7+	58.3+	52.6	54.1	6.5	7%
Mean	33.7	38.8+	38.6+	36.0	40.0+	2.7	
			West				
Stuttgart, Ark.	33.8	29.6	36.1+	30.8	33.0	3.6	6%
Curtis, La.	26.3	20.6	16.5-	27.2	29.5	8.7	19%
Crowley, La.	31.5	26.9	25.2	29.3	32.6	6.4	13%
Bixby, Okla.	25.1-	22.9-	19.0-	25.3-	29.2	7.3	17%
Halfway, Texas	28.1-	31.3-	22.3-	37.5-	48.0-	9.0	12%
Lubbock, Texas*	34.0-	33.5-	12.0-	25.8-	43.0	11.0	32%
Mean	29.0	26.3	23.8	30.0	34.5	N.S.	

Table 31. - Chemical composition and seed size for the strains in Uniform Group VI, 1969

Location	Hood	Lee	Lee 68	Davis	D64-4636	R65-37	D68-B4
			Oil Percentage				
Warsaw, Va.	20.0	20.8	21.1	20.7	20.3	19.7	21.0
Plymouth, N.C.	21.9	22.5	22.5	21.6	22.0	20.8	21.7
Willard, N.C.	23.4	22.2	21.9	21.9	21.9	21.3	22.2
Jay, Fla.	22.6	23.0	22.2	22.9	22.0	22.8	23.2
Portageville, Mo.(A)	21.6	20.7	21.4	21.8	21.7	21.0	20.3
Keiser, Ark.	24.8	21.4	21.1	22.0	21.9	21.9	21.6
Stoneville, Miss.(A)	24.1	22.8	22.7	22.7	22.7	22.6	22.9
Stoneville, Miss.(B)	25.4	22.4	23.0	23.6	21.2	21.7	22.9
Stuttgart, Ark.	21.6	21.6	20.7	22.3	21.1	22.0	20.8
Halfway, Texas	21.9	21.0	21.0	22.2	20.9	20.9	21.0
Mean	22.7	21.8-	21.8-	22.2-	21.6-	21.5-	21.8-
			Protein Percentage				
Warsaw, Va.	42.0	42.2	42.1	42.4	41.7	42.4	41.0
Plymouth, N. C.	42.2	41.7	41.9	41.1	41.6	42.5	41.8
Willard, N. C.	40.2	42.5	44.0	41.6	42.5	42.1	42.3
Jay, Fla.	41.4	42.8	43.5	42.0	44.0	41.8	41.2
Portageville, Mo.(A)	40.3	42.6	42.6	39.7	39.6	40.9	41.6
Keiser, Ark.	37.5	39.3	40.9	38.4	39.2	39.5	39.7
Stoneville, Miss.(A)	37.6	40.2	40.8	38.2	39.8	39.5	38.6
Stoneville, Miss.(B)	34.9	38.2	38.1	36.3	38.5	38.6	38.0
Stuttgart, Ark.	40.6	44.3	44.0	42.7	41.6	41.2	43.4
Halfway, Texas	39.6	41.4	39.7	39.5	40.0	40.8	40.5
Mean	39.6	41.5+	41.8+	40.2	40.9+	40.9+	40.8+
			Grams per 100 Seeds				
Warsaw, Va.	11.6	12.3	12.5	14.4	12.2	13.2	12.8
Plymouth, N.C.	12.9	12.8	13.0	14.0	13.7	14.8	12.6
Willard, N. C.	16.4	14.8	14.8	16.0	14.6	17.6	14.7
Jay, Fla.	16.7	15.1	17.0	14.9	16.6	13.9	14.2
Keiser, Ark.	13.3	11.0	11.0	10.7	11.3	12.7	10.7
Stoneville, Miss.(A)	16.5	11.0	12.1	14.6	14.8	16.7	12.1
Stoneville, Miss.(B)	12.1	10.6	11.3	11.4	11.7	12.5	10.5
Stuttgart, Ark.	14.3	13.3	13.3	13.7	13.3	15.0	14.0
Halfway, Texas	16.7	14.4	15.0	15.7	16.0	18.1	14.5
Mean	14.5	12.8-	13.3-	13.9	13.8	14.9	12.9-

Table 31. - (continued)

Location	N66-1221	N66-1231	N66-1783	N66-5236	N68-3000B	L.S.D. (.05)
			Oil Percentage			
Warsaw, Va.	20.7	21.7	21.7	19.3	20.3	
Plymouth, N.C.	20.7	22.6	21.3	19.9	22.1	
Willard, N.C.	22.2	22.8	22.5	20.3	22.1	
Jay, Fla.	22.8	22.7	22.8	21.8	22.7	
Portageville, Mo.(A)	21.3	22.3	21.8	18.9	21.3	
Keiser, Ark.	22.2	23.7	22.7	20.6	21.9	
Stoneville, Miss.(A)	21.6	23.8	22.8	20.9	23.5	
Stoneville, Miss.(B)	21.4	23.6	22.5	20.7	23.0	
Stuttgart, Ark.	22.0	21.6	21.9	19.4	22.3	
Halfway, Texas	20.5	20.9	20.4	19.8	21.7	
Mean	21.5-	22.6	22.0-	20.2-	22.1-	0.5
			Protein Percentage			
Warsaw, Va.	43.0	42.2	41.1	42.3	41.6	
Plymouth, N.C.	43.8	42.1	43.4	43.2	41.3	
Willard, N.C.	43.9	43.2	43.9	44.3	42.1	
Jay, Fla.	43.0	42.4	43.2	42.4	41.6	
Portageville, Mo.(A)	41.9	40.2	40.5	41.6	41.5	
Keiser, Ark.	40.3	39.0	40.3	40.0	38.8	
Stoneville, Miss.(A)	40.3	39.6	38.5	40.7	38.1	
Stoneville, Miss.(B)	39.4	38.2	38.9	39.4	36.9	
Stuttgart, Ark.	42.8	42.9	41.9	42.3	42.4	
Halfway, Texas	41.5	40.3	40.5	42.3	39.9	
Mean	42.0+	41.0+	41.2+	41.9+	40.4+	0.7
			Grams per 100 Seeds			
Warsaw, Va.	14.4	14.5	15.9	12.2	13.4	
Plymouth, N.C.	13.0	14.9	16.6	12.2	14.1	
Willard, N.C.	17.1	16.6	17.5	13.7	15.1	
Jay, Fla.	17.0	16.7	17.6	14.7	14.9	
Keiser, Ark.	11.7	12.0	14.0	10.0	10.3	
Stoneville, Miss.(A)	13.1	13.5	15.6	12.2	13.3	
Stoneville, Miss.(B)	11.6	12.0	14.1	10.5	11.3	
Stuttgart, Ark.	14.0	13.0	14.3	12.3	14.0	
Halfway, Texas	15.6	15.7	17.0	14.6	14.9	
Mean	14.2	14.3	15.8+	12.5-	13.5-	0.8

Table 32. - Relative maturity data, days earlier(-) or later (+) than Hood, for the strains in Uniform Group VI, 1969

Location	Date planted	Hood matured	Lee	Lee 68	Davis	D64-4636	R65-37
			East Coast				
Queenstown, Md.	5-27	10-25	+4	+3	+9	+2	+5
Linkwood, Md.	5-26	10-18	+7	+5	+10	+1	+3
Warsaw, Va.	5-23	10-21	+3	+1	+6	0	+1
Petersburg, Va.	5-26	10-21	+7	+5	+10	-1	+5
Holland, Va.	5-29	10-24	+6	+10	+11	0	+5
Plymouth, N.C.	5-13	10-14	+8	+12	+12	+2	+6
Willard, N.C.	6-12	10-16	+12	+10	+10	+6	+6
Florence, S.C.	5-29	10-10	+12	+12	+5	0	+2
Hartsville, S.C.(A)	5-26	10-5	+17	+16	+15	+6	+7
Mean		10-17	+8	+7	+10	+2	+4
			Southeast				
Quincy, Fla.	6-13	9-29	+12	+11	+14	+8	+9
Jay, Fla.	5-13	9-23	+10	+10	+7	+6	+4
Fairhope, Ala.	6-1	10-1	+5	+5	+3	-6	0
Baton Rouge, La.	5-12	10-1	+13	+13	+2	+2	0
Mean		9-29	+10	+10	+7	+3	+3
			Upper and Central South				
Belle Mina, Ala.	5-2	10-22	-1	+2	-1	+5	+3
Experiment, Ga.	5-13	10-2	+9	+8	+8	0	+2
Jackson, Tenn.	5-7	10-6	+13	+13	+3	-3	+2
Mean		10-10	+7	+8	+3	+1	+2
			Delta				
Portageville, Mo.(A)	5-12	10-10	+10	+9	+7	-3	+1
Portageville, Mo.(B)	5-14	10-10	+10	+8	+2	-3	+1
Keiser, Ark.	5-15	10-14	+8	+8	+1	+1	+1
Marianna, Ark.	5-27	10-10	+13	+13	+2	0	+2
Stoneville, Miss.(A)	5-14	10-6	+11	+11	+5	+1	+5
Stoneville, Miss.(B)	5-5	10-3	+11	+11	+8	+3	+6
St. Joseph, La.	5-15	9-24	+5	+5	+4	+2	+3
Mean		10-7	+10	+9	+4	0	+2
			West				
Stuttgart, Ark.	5-26	10-5	+15	+15	+11	+7	+5
Curtia, La.	5-21	10-10	+10	+11	+8	+1	+9
Crowley, La.	5-21	10-1	--	--	--	--	--
Bixby, Okla.	5-23	10-20	+13	+13	+2	0	+1
Mean		10-9	+13	+13	+7	+3	+5

Table 32. - (continued)

Location	D68-B4	N66-1221	N66-1231	N66-1783	N66-5236	N68-3000B
			East Coast			
Queenstown, Md.	+8	+4	0	+8	+3	+9
Linkwood, Md.	+2	+7	+3	+4	0	+8
Warsaw, Va.	+3	+4	+2	+2	0	+4
Petersburg, Va.	+8	+9	+2	+5	+3	+12
Holland, Va.	+10	+11	+5	+8	+2	+11
Plymouth, N.C.	+8	+12	+4	+8	+2	+10
Willard, N.C.	+4	+8	+8	+8	+4	+8
Florence, S.C.	+12	+11	+5	+8	+1	+12
Hartsville, S.C.(A)	+17	+14	+8	+10	+10	+14
Mean	+8	+9	+4	+7	+3	+10
			Southeast			
Quincy, Fla.	+10	+8	+8	+9	+6	+11
Jay, Fla.	+12	+9	+5	+6	+4	+7
Fairhope, Ala.	+9	+5	+3	+3	0	+5
Baton Rouge, La.	+13	+11	+2	+12	+5	+12
Mean	+11	+8	+5	+8	+4	+9
			Upper and Central South			
Belle Mina, Ala.	-1	0	+7	+4	+1	0
Experiment, Ga.	+15	+9	+2	+1	+3	+10
Jackson, Tenn.	+18	+16	-2	-1	+4	+7
Mean	+11	+8	+2	+1	+3	+6
			Delta			
Portageville, Mo.(A)	+11	+8	-2	-2	+2	+12
Portageville, Mo.(B)	+9	+10	0	-1	+2	+5
Keiser, Ark.	+8	+8	+1	+6	+1	+8
Marianna, Ark.	+8	+6	+3	+2	+3	+8
Stoneville, Miss.(A)	+11	+6	+2	+5	+4	+12
Stoneville, Miss.(B)	+11	+11	0	+5	+10	+11
St. Joseph, La.	+4	+5	+5	+5	+4	+5
Mean	+9	+8	+1	+3	+4	+9
			West			
Stuttgart, Ark.	+19	+3	+6	+5	+7	+13
Curtis, La.	+10	+12	+4	+9	+8	+6
Crowley, La.	--	--	--	--	--	--
Bixby, Okla.	+14	+15	-3	-3	+2	+13
Mean	+14	+10	+2	+4	+6	+11

Table 33. - Plant height for the strains in Unifrom Group VI, 1969

Location	Hood	Lee	Lee 68	Davis	D64-4636	R65-37
			East Coast			
Queenstown, Md.	41	54	54	58	44	45
Linkwood, Md.	34	39	37	43	33	41
Warsaw, Va.	36	36	36	38	34	38
Petersburg, Va.	34	34	36	40	33	39
Holland, Va.	41	40	37	46	39	45
Plymouth, N. C.	36	39	41	46	35	41
Willard, N. C.	31	37	41	43	36	41
Florence, S.C.	31	34	35	36	32	34
Hartsville, S.C.(A)	28	30	32	39	32	37
Mean	35	38	39	43	35	40
			Southeast			
Quincy, Fla.	20	22	20	27	18	21
Jay, Fla.	32	24	25	42	30	41
Fairhope, Ala.	35	36	36	37	34	36
Baton Rouge, La.	30	31	30	37	30	33
Mean	29	28	28	36	28	33
			Upper and Central South			
Belle Mina, Ala.	31	33	34	38	34	38
Experiment, Ga.	31	34	34	39	32	36
State College, Miss.	31	38	35	34	38	34
Jackson, Tenn.	38	39	42	39	36	37
Mean	33	36	36	38	35	36
			Delta			
Portageville, Mo.(A)	32	27	30	38	26	36
Portageville, Mo.(B)	36	37	36	41	36	43
Kesier, Ark.	28	26	27	35	29	35
Marianna, Ark.	39	36	37	41	35	43
Stoneville, Miss.(A)	35	30	34	41	27	40
Stoneville,Miss.(B)	31	29	33	42	35	39
St. Joseph, La.	40	30	35	45	43	42
Mean	34	31	33	40	33	40
			West			
Stuttgart, Ark.	30	27	29	35	27	33
Curtis, La.	25	26	23	34	23	30
Crowley, La.	21	20	22	27	19	20
Bixby, Okla.	36	35	36	39	32	41
Halfway, Texas	33	33	31	38	30	36
Lubbock, Texas	30	35	34	36	25	32
Mean	29	29	29	35	26	32

Table 33. - (continued)

Location	D68-B4	N66-1221	N66-1231	N66-1783	N66-5236	N68-3000B
			East Coast			
Queenstown, Md.	49	60	49	70	56	56
Linkwood, Md.	36	43	38	41	36	41
Warsaw, Va.	35	41	35	40	35	39
Petersburg, Va.	33	48	32	40	35	42
Holland, Va.	37	47	41	49	40	42
Plymouth, N.C.	39	44	38	42	37	43
Willard, N.C.	37	42	35	43	34	40
Florence, S.C.	34	39	32	38	35	32
Hartsville, S.C.(A)	31	41	32	39	28	40
Mean	37	45	37	45	37	42
			Southeast			
Quincy, Fla.	19	25	19	24	17	26
Jay, Fla.	26	39	32	43	21	41
Fairhope, Ala.	30	38	37	40	32	36
Baton Rouge, La.	28	41	30	35	27	34
Mean	26	36	30	36	24	34
			Upper and Central South			
Belle Mina, Ala.	34	39	33	39	28	37
Experiment, Ga.	36	40	36	42	28	31
State College, Miss.	35	36	38	32	32	33
Jackson, Tenn.	43	43	38	43	36	39
Mean	37	40	36	39	31	35
			Delta			
Portageville, Mo.(A)	29	37	32	32	29	31
Portageville, Mo.(B)	35	41	36	45	34	41
Keiser, Ark.	25	36	28	36	24	33
Marianna, Ark.	35	42	41	49	34	42
Stoneville, Miss.(A)	32	41	36	46	26	40
Stoneville, Miss.(B)	29	38	33	41	27	41
St. Joseph, La.	33	46	41	49	30	47
Mean	31	40	35	43	29	39
			West			
Stuttgart, Ark.	29	39	32	34	30	32
Curtis, La.	24	29	21	31	19	32
Crowley, La.	20	30	20	25	18	21
Bixby, Okla.	32	39	34	39	34	36
Halfway, Texas	33	36	31	34	30	37
Lubbock, Texas	31	37	31	33	29	35
Mean	28	35	28	33	27	32

Table 34. - Lodging scores for the strains in Uniform Group VI, 1969

Location	Hood	Lee	Lee 68	Davis	D64-4636	R65-37
			East Coast			
Queenstown, Md.	3.3	4.5	4.3	4.3	4.0	3.5
Linkwood, Md.	3.7	3.3	4.0	3.2	2.0	2.7
Warsaw, Va.	2.4	3.0	3.6	2.4	2.1	2.4
Petersburg, Va.	2.0	1.0	2.0	2.0	2.0	1.0
Holland, Va.	2.2	2.2	1.8	3.3	3.2	1.8
Plymouth, N.C.	3.0	3.0	3.3	3.0	3.0	2.7
Willard, N.C.	2.0	4.0	3.3	2.3	2.7	2.0
Florence, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	1.3	1.3	2.0	2.7	1.5	2.0
			Southeast			
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	1.3	1.7	1.0	1.7	1.3
			Upper and Central South			
Belle Mina, Ala.	3.3	4.0	2.7	2.7	2.0	2.3
Experiment, Ga.	1.0	1.3	2.0	1.0	1.3	1.0
State College, Miss.	2.0	2.0	1.0	2.0	2.0	2.0
Jackson, Tenn.	2.0	2.0	2.0	2.0	2.0	2.0
			Delta			
Portageville, Mo.(A)	3.0	4.5	4.0	3.0	3.3	3.3
Portageville, Mo.(B)	2.8	3.3	3.2	2.3	2.2	2.2
Keiser, Ark.	1.7	1.3	1.7	1.0	1.3	1.7
Marianna, Ark.	3.3	3.7	3.3	3.3	3.7	3.0
Stoneville, Miss.(A)	2.3	2.0	2.0	2.3	2.0	2.7
Stoneville, Miss.(B)	2.0	2.0	2.7	3.0	2.3	2.7
St. Joseph, La.	3.7	2.3	2.7	4.3	2.7	3.3
			West			
Stuttgart, Ark.	1.7	2.7	2.3	2.0	2.0	2.7
Curtis, La.	1.0	2.0	2.7	1.7	1.7	1.3
Crowley, La.	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, Okla.	1.0	2.0	2.0	1.0	1.0	1.0
Halfway, Texas	1.3	2.3	2.6	3.0	1.6	2.3
Lubbock, Texas	2.0	2.0	2.0	1.7	2.0	2.0

Table 34. - (continued

Location	D68-B4	N66-1221	N66-1231	N66-1783	N66-5236	N68-3000B
			East Coast			
Queenstown, Md.	4.7	4.2	3.2	3.7	3.7	4.3
Linkwood, Md.	3.3	2.2	1.7	2.7	2.3	3.7
Warsaw, Va.	3.7	1.6	1.4	2.8	1.5	3.2
Petersburg, Va.	2.0	1.0	1.0	1.0	1.0	2.0
Holland, Va.	2.5	1.5	1.0	2.3	1.2	2.5
Plymouth, N.C.	3.7	3.0	2.3	3.3	2.7	3.0
Willard, N.C.	4.0	2.7	2.0	3.0	2.0	3.0
Florence, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	1.5	2.8	1.2	2.2	1.3	2.5
			Southeast			
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.	2.0	1.3	1.0	1.3	1.0	1.7
			Upper and Central South			
Belle Mina, Ala.	5.0	1.3	2.0	2.0	1.7	3.7
Experiment, Ga.	2.7	1.3	1.0	1.0	1.0	1.0
State College, Miss.	1.0	2.0	1.0	1.0	2.0	1.0
Jackson, Tenn.	2.0	1.0	1.0	2.0	1.0	2.0
			Delta			
Portageville, Mo.(A)	4.8	4.2	2.7	3.5	3.7	4.0
Portageville, Mo.(B)	3.5	2.3	1.7	2.8	2.5	2.3
Keiser, Ark.	1.7	2.0	1.0	2.3	1.0	1.0
Marianna, Ark.	3.0	2.3	3.0	3.3	2.3	3.3
Stoneville, Miss.(A)	2.0	2.3	2.3	2.7	2.0	2.7
Stoneville, Miss.(B)	2.7	3.0	2.0	3.0	2.0	3.0
St. Joseph, La.	3.7	4.0	2.7	4.7	2.0	4.7
			West			
Stuttgart, Ark.	3.0	1.7	2.0	3.0	2.0	2.0
Curtis, La.	2.0	1.0	2.0	1.3	1.0	1.7
Crowley, La.	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, Okla.	2.0	2.0	1.0	1.0	1.0	1.0
Halfway, Texas	3.0	1.6	1.0	2.3	1.3	2.3
Lubbock, Texas	3.0	2.0	1.0	2.0	2.0	2.0

Table 35. - Seed quality scores for the strains in Uniform Group VI, 1969

Location	Hood	Lee	Lee 68	Davis	D64-4636	R65-37
			East Coast			
Queenstown, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Linkwood, Md.	2.0	2.0	2.0	3.0	2.0	2.0
Warsaw, Va.	2.0	1.7	1.5	1.1	1.4	1.3
Petersburg, Va.	1.0	1.0	2.0	2.0	1.0	1.0
Holland, Va.	1.5	2.0	2.0	1.5	2.0	1.5
Plymouth, N.C.	1.5	1.5	1.5	1.5	1.5	2.0
Willard, N.C.	1.0	1.0	1.0	1.0	1.0	1.5
Hartsville, S.C.(A)	1.0	2.0	2.0	1.0	1.5	1.5
			Southeast			
Quincy, Fla.	2.0	3.0	2.0	1.0	3.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.7	1.0	1.3	1.0	1.0
Baton Rouge, La.	1.7	2.7	2.3	2.0	3.0	1.7
			Upper and Central South			
Experiment, Ga.	2.3	1.5	1.5	2.1	2.8	1.8
State College, Miss.	2.0	1.0	2.0	2.0	1.0	2.0
Jackson, Tenn.	2.0	2.0	2.0	2.0	2.0	3.0
			Delta			
Portageville, Mo.(A)	1.2	1.5	1.5	1.2	1.2	1.0
Portageville, Mo.(B)	1.0	1.7	1.8	1.5	1.3	1.2
Keiser, Ark.	2.7	2.3	2.3	2.0	2.0	2.0
Marianna, Ark.	2.0	2.0	2.0	2.0	1.7	2.3
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, La.	1.0	1.0	1.0	1.0	1.0	1.0
			West			
Stuttgart, Ark.	2.7	1.7	2.0	2.0	2.0	3.0
Curtis, La.	1.0	1.7	1.3	1.0	2.0	1.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Lubbock, Texas	1.0	1.0	2.0	1.0	2.0	2.0

Table 35. - (continued)

Location	D68-B4	N66-1221	N66-1231	N66-1783	N66-5236	N68-3000B
			East Coast			
Queenstown, Md.	2.0	3.0	2.0	2.0	2.0	2.0
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	3.0
Warsaw, Va.	1.4	1.3	1.5	1.4	1.6	1.7
Petersburg, Va.	1.0	2.0	1.0	1.0	1.0	2.0
Holland, Va.	1.5	1.5	2.0	2.0	2.0	2.0
Plymouth, N.C.	1.5	1.5	1.5	1.5	1.5	1.5
Willard, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	2.0	1.5	2.0	1.0	2.5	1.0
			Southeast			
Quincy, Fla.	2.0	3.0	3.0	2.0	2.0	2.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	2.0	1.7	2.7	2.0	2.3
Baton Rouge, La.	2.0	2.7	3.3	4.0	2.0	2.7
			Upper and Central South			
Experiment, Ga.	1.6	1.5	2.4	1.9	2.1	2.3
State College, Miss.	2.0	2.0	1.0	1.0	2.0	2.0
Jackson, Tenn.	3.0	2.0	3.0	3.0	3.0	2.0
			Delta			
Portageville, Mo.(A)	1.3	1.2	1.2	1.0	1.2	1.5
Portageville, Mo.(B)	1.5	1.7	1.5	1.5	1.3	1.5
Keiser, Ark.	2.3	2.7	2.3	3.0	2.7	2.0
Marianna, Ark.	2.3	2.3	2.0	2.0	2.0	1.7
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, La.	1.0	2.0	1.0	1.3	1.0	1.0
			West			
Stuttgart, Ark.	2.3	1.7	3.0	2.7	1.3	2.7
Curtis, La.	1.7	2.0	2.3	2.0	1.3	1.7
Bixby, Okla.	1.0	1.0	2.0	2.0	1.0	1.0
Lubbock, Texas	1.0	1.0	3.0	2.0	2.0	1.0

PRELIMINARY GROUP VI

1969

Preliminary Group VI nurseries, including 34 experimental strains and the two check varieties Hood and Lee, 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 in six of the seven plantings. The combined analysis of variance for seed yield showed differences among strains to be significant. Two strains yielded significantly higher than Hood. D67-4601, the highest ranking strain for seed yield, had a protein content of 43.9%. Only two strains ranked above Lee 68 in seed yield. In addition to D67-4601, D69-B4 ranked slightly higher than Lee 68. This is of interest, as D69-B4 is a Lee type with resistance to cyst nematodes and phytophthora rot. Resistance to cyst nematodes apparently does not suppress seed yields.

Fourteen strains were significantly higher in protein content than Lee. D67-4823 gave a protein turnout of 20% higher than Lee 68 with 20% less oil. D67-4823 was reduced in yield by injury from phytophthora rot. D67-4793, from similar parentage as D67-4823, averaged 2.5 bushels below Lee 68 in seed yield, but was 15% higher in protein content. D67-4601 had the highest average seed yield, 1.5 bushel above Lee, and averaged 8% percent higher in protein content. Based upon the seven location average, D67-4601 produced 12% more protein per acre than Lee 68 and 7% less oil.

Two strains, N67-3823 and N67-4063, appeared highly resistant to root-knot nematodes in a planting in west Florida.

Height response to planting location was of interest. Lee 68 showed a range in height from 42 inches at Plymouth to 26 inches at Jay. D67-4601 was 1 inch shorter than Lee 68 at Plymouth with a height of 41 inches, but was 37 inches tall at Jay, or 11 inches taller than Lee 68. Lee 68 was only 27 inches tall at Keiser, while D67-4601 was 35 inches tall. The growth response of D67-4601 illustrates that a difference exists between types of similar maturity and that adequate growth can be obtained at a more southerly location without having excessive height at the northern range of adaptation. The short height for Lee 68 was probably the result of slow early growth.

Strains that appear to merit advancing to Uniform Group VI are: D67-4601, D67-3971, N66-1777, D65-3622, D67-4793, and D67-4106.

Table 36. - Parentage of the strains in Preliminary VI, 1969

	Variety or strain	Parentage	Generation composited
1.	Hood		
2.	Lee 68		
3.	D69-B4	Pickett x Lee P.R.	
4.	D65-3622	Hill x PI 187,155	F_7
5.	D65-4206	Hill x PI 227,557	F_7
6.	D65-6481	D61-475 x D61-2624	F_5
7.	D66-5965	D63-6107 x D60-9647	F_5
8.	D66-7517	Hill x D53-10,054	F_5
9.	D66-7337	D61-3505 x (PI 96035 x D61-2624)	F_5
10.	D67-3951	D63-6107 x D60-9647	F_5
11.	D67-3990	D63-6107 x D60-9647	F_5
12.	D67-4106	D61-6107 x D60-9647	F_5
13.	D67-4601	D61-618 x D60-9647	F_5
14.	D67-4632	D61-618 x D60-9647	F_5
15.	D67-4793	D62-3286 x D60-9647	F_5
16.	D67-4818	D62-3286 x D60-9647	F_5
17.	D67-4823	D62-3286 x D60-9647	F_5
18.	D67-5133	D60-8498 x D62-7816	F_5
19.	D67-5211	D60-8498 x D62-7816	F_5
20.	D67-5213	D60-8498 x D62-7816	F_5
21.	N62-2366	(N52-3908 x N51-1675) x (Ogden x Lee)	
22.	N65-74	(N55-3643 x PI 96983) x D56-1185	F_4
23.	N66-1777	(N55-3643 x N55-2908) x D56-1192	F_4
24.	N66-5479	N56-4202 x D61-3505	F_4
25.	N67-3239	Dare x N60-5234	F_4
26.	N67-3283	Dare x N60-5234	F_4
27.	N67-4063	Dare x N60-5234	F_4
28.	N67-4082	Dare x N60-5234	F_4
29.	R66-135	(R54-168 x Hill) x (Lee x Dortchsoy 110)	F_6
30.	R67-152	R56-49 x R54-171-1	F_5
31.	R67-242	R56-49 x R54-171-1	F_5
32.	R68-106	Multiple cross resistant to C.N. and P.R.	
33.	S61-81	Hood x Jackson	F_6
34.	S61-1243	Hood x Scott	F_6
35.	S63-303P	Hood x Jackson	F_6
36.	S63-4912D	Lee x Scott	F_6

Table 37. - General summary of performance for the strains in Preliminary Group VI, 1969

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	Seed holding	B.P.	P.R.	R.K.	Percent mottled seed
Hood	33.5	10-9	33	22.8	38.9	2.0	1.0	3.5	5.0	0
Lee 68	38.2	+9	33	21.9-	40.8+	1.0	1.0	1.0	5.0	5
D69-B4	38.9+	+9	31	22.1-	40.3+	1.0	1.0	1.0	5.0	7
D65-3622	37.7	+2	30	20.6-	41.2+	1.8	1.0	1.0	3.0	25
D65-4206	37.5	0	31	21.8-	40.0	1.0	1.0	1.0	3.0	20
D65-6481	36.3	+6	31	19.3-	42.3+	1.0	1.0	1.0	3.0	9
D66-5965	36.0	+6	30	20.8-	42.1+	1.0	1.0	1.0	4.0	30
D66-7517	34.4	0	32	22.1-	39.3	1.0	1.0	1.0	4.0	22
D66-7337	35.4	+5	30	19.3-	44.8+	1.0	1.0	1.0	4.0	30
D67-3951	37.8	+5	30	19.4-	43.3+	1.3	1.0	1.0	5.0	5
D67-3990	34.5	+5	37	20.7-	41.6+	2.0	1.0	1.0	5.0	45
D67-4106	36.5	+1	37	19.9-	43.0+	1.7	1.0	1.0	4.0	20
D67-4601	39.7+	+8	38	19.6-	43.9+	1.0	1.0	1.0	3.0	5
D67-4632	36.4	+6	38	20.3-	41.6+	1.0	1.0	1.0	3.0	27
D67-4793	35.7	+8	31	17.1-	47.1+	1.0	1.0	1.0	5.0	0
D67-4818	36.5	+7	26	19.4-	44.8+	1.0	1.0	1.0	5.0	5
D67-4823	32.3	+8	29	17.7-	49.0+	1.0	1.0	3.0	5.0	6
D67-5133	37.4	+12	39	20.1-	45.1+	1.0	1.0	1.0	3.5	11
D67-5211	30.2	+6	36	19.7-	44.9+	1.0	1.0	1.0	4.0	35
D67-5213	32.2	+7	41	20.1-	45.4+	1.0	1.0	1.0	2.0	33
N62-2366	30.6	0	32	22.2	40.6+	2.0	1.0	4.0	3.0	4
N65-74	36.9	+6	37	20.8-	41.3+	1.5	1.0	1.0	4.0	0
N66-1777	37.7	+10	40	21.4-	41.0+	1.0	1.0	1.0	5.0	4
N66-5479	33.6	+7	30	18.5-	44.9+	1.3	1.0	1.0	5.0	6
N67-3239	36.0	+10	34	21.8-	41.8+	1.3	1.0	2.0	5.0	0
N67-3283	33.3	+11	38	22.1-	40.7+	1.5	1.0	1.0	1.0	0
N67-4063	36.1	+10	36	22.3	40.8+	1.0	1.0	3.5	1.0	4
N67-4082	34.0	+9	31	21.8-	42.2+	1.5	1.0	1.0	3.0	6
R66-135	34.4	+5	34	21.2-	40.7+	1.0	1.0	1.0	3.0	0
R67-152	37.4	+8	37	22.1-	40.0	2.0	1.0	1.0	3.0	0
R67-242	34.8	+8	42	22.2	40.0	2.0	1.0	1.0	3.0	4
R68-106	35.7	+6	31	22.6	39.8	1.0	1.0	1.0	5.0	2
S61-81	31.2	+6	40	22.9	39.0	2.8	2.5	3.0	4.0	2
S61-1243	30.4	+4	46	23.2	38.6	2.8	1.0	3.5	5.0	15
S63-303P	31.6	+2	36	23.2	38.3	3.5	2.5	4.0	3.5	3
S65-4912D	30.8	+4	44	22.5	38.4	2.5	1.0	3.0	4.5	5
L.S.D.(.05)	5.0			0.7	1.3					
L.S.D.(.01)	6.7			0.9	1.7					

Table 38. - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1969

Strain	Petersburg, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)	Jay, Fla.
Hood	40.0	41.0	30.7	18.5	48.1	13.0	43.1
Lee 68	44.6+	40.2	27.6	27.2+	41.3	39.9+	46.9
D69-B4	38.6	50.3+	32.4	34.6+	38.8	36.7+	40.9
D65-3622	43.8	43.1	28.0	37.3+	42.0	30.5+	39.3
D65-4206	38.6	43.2	30.3	36.2+	40.3	32.3+	41.6
D65-6481	41.2	41.3	28.5	31.9+	40.9	35.3+	35.2-
D66-5965	41.2	45.4	25.2	27.7+	44.7	26.2+	42.0
D66-7517	38.2	42.7	23.8	25.7	42.5	29.4+	38.6
D66-7337	40.8	44.0	26.7	31.2+	33.3	30.5+	40.9
D67-3951	42.7	39.0	32.7	35.3+	42.7	36.6+	35.6-
D67-3990	37.4	42.1	20.9	33.1+	42.6	30.6+	34.8-
D67-4106	38.6	41.4	31.7	30.2+	42.5	34.1+	37.1
D67-4601	39.3	50.6+	28.9	37.1+	42.8	34.2+	45.4
D67-4632	42.3	45.4	25.3	37.2+	37.4	27.3+	39.7
D67-4793	42.0	41.8	26.8	29.2+	40.8	32.9+	36.7
D67-4818	42.7	41.3	24.2	28.0+	45.7	33.9+	39.7
D67-4823	34.4	36.2	29.1	29.9+	42.1	17.2	37.5
D67-5133	40.4	44.1	27.3	31.2+	38.5	31.6+	48.4
D67-5211	33.6-	32.1-	22.7	28.2+	34.0	25.3+	35.6-
D67-5213	37.4	34.2	23.6	26.2+	39.6	26.1+	38.2
N62-2366	37.4	38.1	27.2	11.4	43.4	16.1	40.9
N65-74	40.1	44.6	34.1	28.9	44.1	30.3+	35.9-
N66-1777	43.8	46.6	28.6	21.8	42.6	31.6+	48.8
N66-5479	38.6	43.5	21.9	23.0	39.4	28.5+	40.5
N67-3239	47.6+	47.6	30.9	15.1	41.3	25.6+	43.9
N67-3283	36.3	40.3	28.9	21.1	36.5	29.8+	40.1
N67-4063	46.8+	46.5	25.5	18.8	43.1	23.9+	48.0
N67-4082	35.9-	39.1	26.5	27.2+	42.1	26.5+	40.8
R66-135	43.1	41.2	26.3	21.4	45.8	24.8+	38.6
R67-152	37.8	46.6	21.7	31.3+	45.6	33.0+	46.2
R67-242	39.0	42.1	25.7	23.6	40.7	30.3+	42.8
R68-106	39.3	40.2	30.7	31.2+	40.7	31.9+	36.3
S61-81	40.4	36.4	27.6	14.0	41.7	19.6	46.9
S61-1243	35.6-	40.3	24.9	17.3	38.6	13.6	42.8
S63-303P	42.7	45.2	20.3-	11.8	43.7	10.0	47.3
S63-4912D	37.4	38.4	27.9	7.6-	42.1	21.6	40.9
L.S.D.(.05)	4.1	6.9	10.4	7.7	N.S.	9.6	6.9
C.V.	5%	8%	19%	15%	10%	17%	8%

Table 39. - Oil percentages for the strains in Preliminary Group VI, 1969

Strain	Petersburg, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Hood	21.0	22.3	21.8	23.8	23.8	24.2
Lee 68	20.7	21.9	20.9	21.7	22.9	23.0
D69-B4	21.2	22.3	21.8	22.1	22.6	22.7
D65-3622	19.7	19.3	20.3	20.8	22.0	21.7
D65-4206	20.1	22.3	21.7	21.5	22.9	22.4
D65-6481	18.8	18.8	18.9	19.8	19.9	19.5
D66-5965	18.8	20.2	20.8	20.3	21.6	22.8
D66-7517	21.2	22.3	22.5	21.3	23.3	21.8
D66-7337	18.3	18.7	19.4	19.7	19.8	20.1
D67-3951	18.3	19.5	19.4	18.8	20.8	19.6
D67-3990	19.6	20.8	21.0	20.3	21.9	20.7
D67-4106	18.4	20.2	19.5	19.9	21.0	20.1
D67-4601	18.2	19.5	19.1	20.0	20.9	19.8
D67-4632	18.7	20.4	20.3	19.8	21.9	20.4
D67-4793	16.5	16.7	17.1	16.7	17.6	17.7
D67-4818	18.3	18.9	19.4	19.2	20.4	20.4
D67-4823	16.2	17.0	18.8	17.7	18.6	18.0
D67-5133	18.9	18.9	20.6	20.4	21.3	20.6
D67-5211	18.7	19.3	19.4	19.7	20.8	20.4
D67-5213	18.5	19.3	20.0	21.1	21.3	20.5
N62-2366	20.1	21.5	21.7	22.4	23.6	24.0
N65-74	19.3	20.6	20.3	21.4	21.9	21.0
N66-1777	19.5	20.5	21.2	23.0	22.2	21.7
N66-5479	17.4	17.8	19.1	19.2	18.9	18.8
N67-3239	20.0	20.7	21.5	23.4	22.8	22.2
N67-3283	20.4	21.1	22.2	23.3	23.1	22.6
N67-4063	20.5	21.2	22.6	23.5	23.1	22.6
N67-4082	19.2	20.6	22.2	23.5	22.8	22.3
R66-135	20.0	20.7	20.6	22.1	22.8	21.2
R67-152	20.8	20.9	22.2	22.7	23.2	22.8
R67-242	20.5	21.4	22.2	22.7	24.1	22.2
R68-106	20.8	22.5	21.5	23.1	23.5	24.2
S61-81	21.0	21.3	22.7	23.9	23.6	24.6
S61-1243	20.8	21.7	23.1	24.3	24.1	24.9
S63-303P	21.8	23.1	22.5	24.3	24.2	23.1
S63-4912D	20.9	21.4	22.1	23.5	22.9	24.1

Table 40. - Protein percentages for the strains in Preliminary Group VI, 1969

Strain	Petersburg, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Hood	41.5	40.0	39.6	37.8	38.5	36.1
Lee 68	42.5	42.6	41.2	40.7	39.2	38.6
D69-B4	42.4	41.9	40.0	40.1	39.5	37.8
D65-3622	42.4	43.0	41.4	41.5	39.5	39.2
D65-4206	42.6	41.8	38.9	39.4	38.8	38.2
D65-6481	47.4	44.0	41.4	40.2	40.9	39.9
D66-5965	44.7	43.8	41.3	42.8	40.4	39.7
D66-7517	40.3	40.2	38.7	40.7	38.0	38.1
D66-7337	48.2	47.2	44.9	42.7	43.9	41.9
D67-3951	43.8	44.6	43.2	43.4	43.1	41.8
D67-3990	43.2	42.3	40.1	41.5	41.0	41.4
D67-4106	44.2	44.3	43.5	43.6	40.9	41.3
D67-4601	45.9	45.9	43.4	42.8	43.8	41.8
D67-4632	43.1	43.1	41.0	41.9	40.1	40.5
D67-4793	50.3	49.2	46.2	45.6	46.7	44.4
D67-4818	47.2	47.3	44.9	44.3	43.6	41.2
D67-4823	52.5	51.3	46.9	48.5	47.9	47.1
D67-5133	48.2	48.1	44.7	42.6	43.7	43.0
D67-5211	48.3	48.0	46.1	44.3	42.3	40.6
D67-5213	48.9	48.0	45.3	44.3	43.3	42.3
N62-2366	44.0	43.7	41.0	39.1	38.2	37.3
N65-74	43.9	43.8	41.7	40.6	39.1	38.9
N66-1777	46.2	44.5	39.7	37.9	39.2	38.6
N66-5479	47.6	48.3	43.3	42.6	44.4	43.0
N67-3239	43.8	46.5	41.8	39.4	39.9	39.4
N67-3283	44.3	44.2	41.0	38.0	39.8	37.0
N67-4063	43.4	43.6	40.0	38.9	39.5	39.1
N67-4082	46.7	45.9	41.3	39.2	41.2	39.0
R66-135	43.0	41.9	41.4	39.0	38.8	40.0
R67-152	42.2	42.5	39.3	37.9	38.8	39.1
R67-242	43.2	41.7	39.8	38.5	38.1	38.9
R68-106	42.9	41.1	40.2	38.6	38.6	37.5
S61-81	42.3	42.4	38.3	36.0	38.2	36.5
S61-1243	41.7	42.3	37.6	36.7	37.3	36.0
S63-303P	40.7	40.4	39.6	36.5	36.7	35.6
S63-4912D	39.6	41.9	38.7	36.1	37.6	36.7

Table 41. - Plant height for the strains in Preliminary Group VI, 1969

Strain	Petersburg, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)	Jay, Fla.
Hood	33	37	29	31	38	30	33
Lee 68	36	42	31	27	36	31	26
D69-B4	32	39	32	27	33	29	23
D66-3622	30	34	30	29	34	28	25
D65-4206	30	38	28	25	33	29	31
D65-6481	33	39	31	31	32	31	23
D66-5965	34	36	29	31	28	27	26
D66-7517	34	39	31	34	32	28	27
D66-7337	36	37	29	28	28	25	25
D67-3951	29	35	31	28	31	30	23
D67-3990	37	41	35	38	41	35	35
D67-4106	33	41	33	36	41	36	37
D67-4601	41	41	35	35	41	39	37
D67-4632	39	37	38	39	39	38	34
D67-4793	33	36	32	29	34	28	24
D67-4818	29	33	28	23	26	24	18
D67-4823	29	35	30	30	33	26	24
D67-5133	41	41	36	32	42	37	41
D67-5211	39	40	35	35	37	32	31
D67-5213	44	44	41	40	44	39	38
N62-2366	32	39	29	29	33	28	33
N65-74	39	43	36	31	37	34	38
N66-1777	45	48	35	31	43	40	41
N66-5479	33	39	31	24	32	27	23
N67-3239	38	41	34	30	31	29	34
N67-3283	42	40	34	33	41	39	36
N67-4063	39	38	35	33	38	31	36
N67-4082	35	37	33	26	31	28	24
R66-135	32	43	31	29	38	31	34
R67-152	41	41	33	31	40	36	38
R67-242	40	47	39	34	42	43	46
R68-106	32	42	34	26	32	26	25
S61-81	46	46	36	30	45	35	43
S61-1243	52	57	42	33	54	34	52
S63-303P	37	42	31	34	40	28	38
S63-4912D	49	54	38	30	50	35	49

Table 42. - Seed quality scores for the strains in Preliminary Group VI, 1969

Strain	Peters-burg, Va.	Plymouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.(A)	Stone-ville, Miss.(B)	Jay, Fla.
Hood	2.0	1.5	1.5	2.5	2.0	2.5	1.0
Lee 68	4.0	1.5	2.0	2.0	2.0	2.0	1.0
D69-B4	3.0	1.5	2.3	2.0	2.0	2.0	1.0
D65-3622	1.0	2.0	1.8	3.0	2.0	2.0	2.0
D65-4206	1.5	2.0	3.0	2.5	2.0	2.0	2.0
D65-6481	2.0	1.5	2.5	2.0	2.0	2.0	1.0
D66-5965	1.0	1.5	4.0	2.5	2.0	2.0	1.0
D66-7517	3.0	1.5	2.8	1.5	2.0	2.0	1.0
D66-7337	4.0	2.0	2.0	2.0	2.0	2.0	1.0
D67-3951	3.0	2.0	2.8	2.5	2.0	2.0	1.0
D67-3990	4.0	1.5	3.5	2.5	2.0	2.0	1.0
D67-4106	3.0	1.5	2.3	3.0	2.0	2.0	2.0
D67-4601	3.0	1.5	2.3	2.0	2.0	2.0	1.0
D67-4632	3.0	2.0	3.5	3.0	2.0	2.0	1.0
D67-4793	2.5	1.0	1.8	1.0	2.0	2.0	1.0
D67-4818	1.5	1.0	1.5	1.5	2.0	2.0	1.0
D67-4823	2.5	1.0	2.3	2.0	2.0	2.0	1.0
D67-5133	3.0	2.0	3.3	2.5	2.0	2.0	1.0
D67-5211	1.5	1.5	3.5	2.0	2.0	2.0	2.0
D67-5213	3.0	1.5	3.8	3.0	2.0	2.0	1.0
N62-2366	2.0	1.5	2.3	3.5	2.0	2.0	1.0
N65-74	5.0	2.0	1.8	2.5	2.0	2.0	1.0
N66-1777	1.0	1.5	1.8	2.0	2.0	2.0	1.0
N66-5479	1.0	1.5	2.0	2.0	2.0	2.0	1.0
N67-3239	2.0	1.5	2.0	3.0	2.0	2.0	1.0
N67-3283	3.0	1.5	1.5	2.0	2.0	2.0	1.0
N67-4063	3.0	1.5	2.0	2.5	2.0	2.0	1.0
N67-4082	1.5	1.5	2.0	2.5	2.0	2.0	1.0
R66-135	1.0	1.5	1.8	2.0	2.0	2.0	1.0
R67-152	4.0	1.5	2.0	2.0	2.0	2.0	1.0
R67-242	4.0	1.5	2.0	2.5	2.0	2.0	1.0
R68-106	4.0	1.0	2.0	1.5	2.0	2.0	1.0
S61-81	2.0	2.0	2.0	3.0	2.0	2.0	1.0
S61-1243	2.0	2.0	2.0	3.0	2.0	2.0	1.0
S63-303P	2.0	1.5	1.8	3.5	2.0	2.0	1.0
S63-4912D	2.0	2.0	2.3	3.5	2.0	2.0	1.0

UNIFORM GROUP VII

1969

	Variety or strain	Parentage	Generation composited
1.	Bragg	Jackson x D49-2491	F_6
2.	Semmes	D51-5427 x D49-2491	F_6
3.	F64-1683	Hardee x D53-1301	F_5
4.	N64-2430	(N55-3843 x N55-2908) x D56-1185	F_5
5.	D65-6765	D58-3358 x D59-9289	F_5
6.	F65-1376	(F55-224 x D55-4073) x (F58-5788 x D56-4065)	F_5
7.	F65-1753	Bragg x D60-8107	F_4
8.	D66-8221	Bragg x D61-3505	F_5
9.	D66-8666	Bragg x Semmes	F_5
10.	F66-242	F55-822 x (Roanoke x CNS)	F_9
11.	F66-550	Ogden x D53-1301	F_6
12.	N64-2423	(N55-5931 x N58-3818) x D56-1185	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 Ralsoy x Ogden which has the Arksoy type resistance to phytophthora rot.

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

N55-3843 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.

N55-2908 is a selection from Jackson x D49-2491 which was grown in Uniform Group VII for the years 1958 and 1959.

D56-1185 is a selection from Perry x Lee.

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

D59-9289 is a selection from D51-4877 x D55-4168. It is the parent line of D60-8107 which was tested in Uniform Group VII for the years 1963-65.

F55-224 is a selection from D49-772 x Improved Pelican. D49-772 is a selection from Roanoke x N45-745.

D55-4073 is a high protein selection from Volstate x Biloxi.

F58-5788 is a selection from D49-2491(3) x Biloxi.

D56-4065 is a high protein selection from Lee(2) x PI 163,453.

D61-3505 is a high protein selection from D49-2491(6) x PI 174,862.

N55-5931 is a selection from Roanoke x Lee.

Thirty-two Uniform Group VII nurseries were planted. Results of 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 22 locations. The combined analysis of variance for mean seed yields by production regions showed differences among strains to be significant in the East Coast, Southeast, and Upper and Central South.

F64-1683 is the only strain to have been evaluated three years. Mean seed yield was equal to Bragg in the Southeast but below Bragg in other regions. F64-1683 has a higher protein content and lower oil content than Bragg. It is 5 days later in maturity and is more susceptible to phytophthora rot and root-knot nematodes than Bragg.

Four strains, N64-2430, D65-6765, F65-1376, and F65-1753, have been included 2 years. N64-2430 ranks above Bragg in mean seed yield for each region. Oil content is significantly above that for Bragg. Maturity averages 2 days later. D67-6765 averages 3 days earlier in maturity than Bragg and has a lower mean seed yield in all regions except the Delta and West where it equals Bragg. Protein content averages 9% higher than Bragg. F65-1376 is similar to D65-6765 in protein content but is 5 days later maturing than Bragg. Seed yield is somewhat below Bragg in each region. F65-1753 yielded well in all areas. It had good field resistance to both phytophthora rot and root-knot nematodes.

Of the strains grown one year, D66-8221 had higher protein content than Bragg and ranked above Bragg in seed yield in the Delta and West, but was lower yielding in other areas. It yielded extremely well at Beaumont. D66-8666, selected to combine resistance to phytophthora rot and root-knot nematodes, with a higher level of tolerance to 2,4-DB, was above Semmes in seed yield in all areas but not quite up to Bragg. F66-242, 3 days later than Bragg, yielded well in all areas. F66-550, 5 days later than Bragg, was below Bragg in seed yield in East Coast planting, but ranked above Bragg in other areas. N64-2423 yielded well in all areas. It averaged 2 days earlier than Bragg.

Table 43. - General summary of performance for the strains in Uniform Group VII, 1969

	Bragg	Semmes	F64-1683	N64-2430	D65-6765	F65-1376
Seed Yield - 1969						
East Coast	42.1	37.0-	36.8-	43.8	39.2	37.1-
Southeast	37.5	33.1	36.4	40.9	32.9	35.3
Upper & Central South	47.0	41.1-	42.1-	50.1	40.3-	40.2-
Delta & West	35.8	33.8	34.7	35.8	36.1	35.1
- 1968-69						
East Coast	35.2	32.2	32.5	37.2	33.5	32.9
Southeast	33.6	30.6	33.4	35.7	29.2	32.4
Upper & Central South	41.4	36.5	39.9	45.6	37.0	38.5
Delta & West	39.4	36.5	36.9	40.8	39.6	38.4
- 1967-69						
East Coast	37.1	33.6	35.4			
Southeast	36.2	32.9	36.3			
Upper & Central South	41.0	37.9	38.4			
Delta & West	39.9	36.2	36.0			
Oil Content - 1969	22.1	21.8	21.0-	24.4+	19.8-	21.3-
- 1968-69	22.0	21.6	21.0	24.1	19.7	21.1
- 1967-69	21.8	21.2	20.8			
Portein Content - 1969	40.7	41.2	42.8+	39.3	44.4+	44.5+
- 1968-69	40.8	41.3	42.7	39.5	44.3	44.2
- 1967-69	40.6	41.5	42.7			
Seed size	15.6	15.0	14.9-	16.7+	12.6-	15.3
Maturity index	10-24	-3	+5	+2	-3	+5
Height	40	36	38	34	33	39
Shattering	1.0	1.0	1.3	1.5	2.0	1.3
Frogeye[1]	5.0	5.0	2.0	1.0	2.0	1.0
Phytophthora rot[2]	1.0	1.0	2.8	2.5	1.0	1.5
Root-knot nematodes[3]	1.0	4.5	4.5	4.0	4.5	3.5
Flower color	W	P	P	P	W	P
Pubescence color	T	G	T	T	T	T
Pod wall color	T	T	T	T	T	T

[1]Willard, N.C. [2]Stoneville, Miss. [3]Escambia Co., Fla.

Table 43. - (continued)

	F65-1753	D66-8221	D66-8666	F66-242	F66-550	N64-2423
Seed Yield - 1969						
East Coast	42.0	36.4-	39.0	43.8	39.8	42.0
Southeast	39.2	35.2	36.6	37.4	40.1	37.6
Upper & Central South	45.8	40.8-	43.5	47.5	47.0	46.0
Delta & West	39.3	39.0	36.2	38.6	38.2	34.4
- 1968-69						
East Coast	34.9					
Southeast	35.0					
Upper & Central South	42.0					
Delta & West	41.2					
- 1967-69						
East Coast						
Southeast						
Upper & Central South						
Delta & West						
Oil Content - 1969	22.2	20.9-	21.7-	21.3-	22.1	24.2+
- 1968-69	22.1					
- 1967-69						
Protein Content - 1969	41.0	43.2+	41.4	42.4+	40.3	39.0-
- 1968-69	40.8					
- 1967-69						
Seed size	15.7	13.1-	13.4-	17.1	13.6-	15.7
Maturity index	0	-2	0	+3	+5	-2
Height	40	32	37	39	34	37
Shattering	1.0	1.0	1.0	1.3	1.5	1.3
Progeye[1]	5.0	5.0	5.0	5.0	5.0	2.0
Phytophthora rot[2]	1.0	1.0	1.0	1.8	2.0	2.5
Root-knot nematodes[3]	1.0	5.0	1.0	1.0	4.5	4.5
Flower color	W	W	W	P	P	P
Pubescence color	T	T	G	T	G	T
Pod wall color	T	T	T	T	T	B

Table 44. - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1969

Location	Bragg	Semmes	F64-1683	N64-2430	D65-6765	F65-1376	F65-1753
East Coast							
Plymouth, N.C.	48.8	41.1-	40.1-	47.0	41.3-	37.4-	46.0
Rocky Mt., N.C.	45.3	35.7-	29.0-	47.4	36.4-	38.1	41.9
Clayton, N.C.	51.0	39.6-	41.4	48.7	45.8	41.7	52.4
Willard, N.C.	45.4	45.1	38.6-	49.7	38.8-	40.3	48.9
Florence, S.C.(A)	48.9	37.8-	45.6	54.8+	48.9	44.2	49.6
Florence, S.C.(B)	28.8	34.3	32.7	21.7	32.5	31.6	34.4
Myrtle Beach, S.C.	36.4	34.1	31.6	38.7	30.2	27.6	27.7
Hartsville, S.C.(A)	32.1	28.2	35.0	42.1+	39.8+	35.5	35.3
Mean	42.1	37.0-	36.8-	43.8	39.2	37.1-	42.0
Southeast							
Blackville, S.C.	40.8	37.6	40.8	46.8+	37.2	37.6	40.5
Tifton, Ga.	53.0	42.7-	53.0	49.3	41.9-	48.0	50.7
Gainesville, Fla.	37.7	31.9-	29.3-	47.0+	39.3	36.6	39.0
Live Oak, Fla.	22.1	25.1	24.7	28.2	21.7	27.2	26.8
Quincy, Fla.	31.8	29.7	33.6	32.9	18.7-	28.9	35.5
Jay, Fla.	48.2	36.3-	45.4	48.4	37.5-	41.9-	45.4
Fairhope, Ala.	41.6	35.1-	42.8	43.5	40.2	35.4-	44.9
Poplarville, Miss.	22.3	24.2	20.9	31.4+	15.8	28.3	29.5
Baton Rouge, La.	40.2	34.9	37.7	40.3	42.8	34.0	40.7
Mean	37.5	33.1	36.4	40.9	32.9	35.3	39.2
Upper and Central South							
Clemson, S.C.	53.8	45.2-	47.6-	56.5	42.0-	46.5-	52.5
Experiment, Ga.	49.3	47.9	49.5	56.5	42.1	41.8-	48.8
State College, Miss.	37.8	30.2-	29.3-	37.3	36.6	32.3-	36.0
Mean	47.0	41.1-	42.1-	50.1	40.3-	40.2-	45.8
Delta and West							
Stoneville, Miss.(A)	30.1	31.9	30.6	37.6+	36.1+	29.0	39.8+
Stoneville, Miss.(B)	35.3	30.9	27.3-	37.3	34.6	32.4	41.2+
Stuttgart, Ark.	36.3	26.3-	32.7	35.8	31.5-	29.6-	31.2-
Rohwer, Ark.	34.6	34.3	18.8-	21.4-	38.3	32.4	33.2
St. Joseph, La.	48.6	47.8	44.3	54.8	51.8	45.7	49.9
Curtis, La.	31.3	32.4	37.2	35.4	26.6	32.2	36.5
Crowley, La.	33.7	37.9	49.4+	36.5	43.1	44.0+	45.0+
Beaumont, Texas	36.8	28.7-	37.0	27.4-	26.9-	35.1	37.9
Mean	35.8	33.8	34.7	35.8	36.1	35.1	39.3

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

Table 44. - (continued)

Location	D66-8221	D66-8666	F66-242	F66-550	N64-2423	L.S.D. (.05)	C.V.
			East Coast				
Plymouth, N.C.	46.3	39.6-	47.9	43.7	43.4	6.5	9%
Rocky Mt., N.C.	35.3-	39.5	38.1	38.1	36.2-	8.0	12%
Clayton, N.C.	42.2	43.4	50.2	43.1	55.4	10.0	13%
Willard, N.C.	42.6	44.0	50.3	43.1	45.4	5.4	7%
Florence, S.C.(A)	39.6-	46.3	50.5	45.9	47.2	5.0	6%
Florence, S.C.(B)	28.3	27.2	33.0	37.6	30.4	N.S.	18%
Myrtle Beach, S.C.	30.4	33.9	44.3	35.2	42.2	N.S.	23%
Hartsville, S.C(A)	26.4-	37.9+	36.4	31.4	35.6	4.6	8%
Mean	36.4-	39.0	43.8	39.8	42.0	3.9	
			Southeast				
Blackville, S.C.	34.6-	40.1	40.7	40.6	38.7	4.7	7%
Tifton, Ga.	48.4	45.7-	52.6	50.8	46.5	6.9	8%
Gainesville, Fla.	32.1-	39.4	42.1	38.5	38.9	5.0	8%
Live Oak, Fla.	20.4	25.6	24.2	27.5	19.3	N.S.	15%
Quincy, Fla.	36.1	29.1	30.7	38.2	33.9	9.1	17%
Jay, Fla.	44.1	45.6	47.4	49.4	46.4	5.2	7%
Fairhope, Ala.	39.7	39.6	42.8	43.5	42.5	N.S.	10%
Poplarville, Miss.	28.5	29.2	23.7	34.7+	34.3+	7.6	17%
Baton Rouge, La.	32.4-	34.8	32.6-	37.2	38.2	7.2	10%
Mean	35.2	36.6	37.4	40.1	37.6	5.6	
			Upper and Central South				
Clemson, S.C.	46.3-	50.2-	52.7	51.4	49.4-	3.6	4%
Experiment, Ga.	42.1	47.7	52.1	54.6	48.6	7.4	9%
State College, Miss.	34.0	32.6-	37.6	34.9	40.0	4.8	8%
Mean	40.8-	43.5	47.5	47.0	46.0	4.8	
			Delta and West				
Stoneville, Miss.(A)	39.5+	36.2+	38.3+	39.2+	40.0+	5.6	9%
Stoneville, Miss.(B)	32.4	35.1	41.5+	35.8	33.9	5.7	10%
Stuttgart, Ark.	34.6	30.6-	34.6	36.4	35.5	4.1	7%
Rohwer, Ark.	34.1	38.2	28.8-	26.9-	23.1	5.0	10%
St. Joseph, La.	46.8	47.0	51.2	48.3	54.1	N.S.	10%
Curtis, La.	34.7	34.5	35.6	37.6	32.4	N.S.	14%
Crowley, La.	40.5	40.3	33.9	37.0	30.2	9.6	14%
Beaumont, Texas	49.4+	27.4-	44.6	44.4	25.9-	7.9	13%
Mean	39.0	36.2	38.6	38.2	34.4	N.S.	

Table 45. - Chemical composition and seed size for the strains in Uniform Group VII, 1969

Location	Bragg	Semmes	F64-1683	N64-2430	D65-6765	F65-1376
			Oil Content			
Clayton, N.C.	21.5	21.4	20.7	24.3	19.5	20.6
Hartsville, S.C.	21.8	20.9	20.6	23.7	19.6	20.9
Blackville, S.C.	22.6	23.2	21.2	25.6	20.1	22.2
Tifton, Ga.	22.1	22.2	21.7	22.8	19.7	21.7
Jay, Fla.	22.7	22.1	21.5	25.2	20.2	21.8
Clemson, S.C.	21.4	21.7	19.9	24.0	20.4	21.7
Stoneville, Miss.(A)	22.5	22.1	21.5	24.9	19.9	21.3
St. Joseph, La.	22.2	22.3	21.4	25.1	20.1	21.2
Beaumont, Texas	22.0	20.4	20.8	23.7	18.3	20.7
Mean	22.1	21.8	21.0-	24.4+	19.8-	21.3-
			Protein Content			
Clayton, N.C.	41.5	42.1	44.8	40.1	46.3	46.7
Hartsville, S.C.	39.4	40.3	41.8	38.2	42.9	43.4
Blackville, S.C.	40.7	40.4	42.3	38.3	42.5	43.7
Tifton, Ga.	41.0	40.9	44.0	40.9	45.5	45.3
Jay, Fla.	42.4	42.5	43.7	41.5	45.5	44.5
Clemson, S.C.	39.8	39.3	41.4	37.7	42.4	43.6
Stoneville, Miss.(A)	38.1	40.2	41.6	36.9	42.6	42.7
St. Joseph, La.	40.3	41.0	41.8	38.5	43.9	44.5
Beaumont, Texas	43.2	44.1	43.9	42.0	47.7	46.0
Mean	40.7	41.2	42.8+	39.3	44.4+	44.5+
			Grams per 100 Seeds			
Clayton, N.C.	18.2	16.8	15.6	18.2	13.4	16.6
Hartsville, S.C.	14.3	13.4	14.2	15.9	11.4	14.6
Blackville, S.C.	16.0	15.7	16.0	16.7	13.0	15.7
Tifton, Ga.	16.6	15.5	16.4	17.8	13.2	16.0
Jay, Fla.	16.4	15.9	15.8	18.1	13.3	16.2
Clemson, S.C.	16.5	14.9	15.1	17.0	12.9	15.9
Stoneville, Miss.(A)	12.6	14.1	12.7	13.5	11.6	13.4
Beaumont, Texas	14.0	14.0	13.0	16.0	12.0	14.0
Mean	15.6	15.0	14.9-	16.7+	12.6-	15.3

Table 45. - (continued)

Location	F65-1753	D66-8221	D66-8666	F66-242	F66-550	N64-2423	L.S.D. (.05)
			Oil Content				
Clayton, N.C.	21.8	20.0	21.3	20.5	21.4	23.4	
Hartsville, S.C.	22.0	19.8	20.9	20.6	21.3	23.3	
Blackville, S.C.	22.2	20.8	22.2	21.3	22.3	25.0	
Tifton, Ga.	22.6	21.8	21.9	21.2	23.0	25.0	
Jay, Fla.	22.0	21.6	22.0	22.0	22.6	24.8	
Clemson, S.C.	21.6	21.2	21.8	20.7	21.6	23.8	
Stoneville, Miss.(A)	22.5	21.0	22.0	21.6	22.0	24.1	
St. Joseph, La.	22.8	21.8	22.1	22.1	22.7	24.9	
Beaumont, Texas	21.9	20.1	20.8	21.3	22.2	23.5	
Mean	22.2	20.9-	21.7-	21.3-	22.1	24.2+	0.4
			Protein Content				
Clayton, N.C.	42.4	44.5	44.0	45.6	41.5	40.1	
Hartsville, S.C.	40.1	42.8	40.0	41.1	39.9	38.5	
Blackville, S.C.	39.8	42.1	40.4	42.5	40.4	37.9	
Tifton, Ga.	41.0	44.5	42.1	42.2	40.3	38.9	
Jay, Fla.	42.9	43.7	42.3	42.7	41.9	40.6	
Clemson, S.C.	39.4	41.2	40.0	41.8	39.2	37.7	
Stoneville, Miss.(A)	39.0	41.5	39.8	40.8	39.4	37.7	
St. Joseph, La.	41.3	42.3	41.0	41.6	39.8	38.5	
Beaumont, Texas	42.8	46.0	43.2	43.2	40.4	41.5	
Mean	41.0	43.2+	41.4	42.4+	40.3	39.0-	1.5
			Grams per 100 Seeds				
Clayton, N.C.	18.7	14.2	14.5	20.8	14.0	16.4	
Hartsville, S.C.	14.3	11.7	12.4	15.3	12.1	14.6	
Blackville, S.C.	15.3	13.7	14.0	16.7	13.0	15.0	
Tifton, Ga.	16.4	13.8	14.3	18.5	15.3	16.1	
Jay, Fla.	16.7	14.0	14.6	18.8	15.1	16.9	
Clemson, S.C.	17.2	13.6	14.0	18.1	13.5	16.0	
Stoneville, Miss.(A)	13.0	12.1	11.1	14.6	12.0	14.2	
Beaumont, Texas	14.0	12.0	12.0	14.0	14.0	16.0	
Mean	15.7	13.1-	13.4-	17.1	13.6-	15.7	0.7

Table 46. - Relative maturity data, days earlier (-) or later (+), than Bragg for the strains in Uniform Group VII, 1969

Location	Date planted	Bragg matured	Semmes	F64-1683	N64-2430	D65-6765
			East Coast			
Plymouth, N.C.	5-13	10-28	+2	+6	+2	0
Rocky Mt., N.C.	5-29	11-1	-8	-2	0	-10
Clayton, N.C.	5-15	11-1	-4	+6	0	+2
Willard, N.C.	6-12	10-30	-4	+8	-2	-4
Florence, S.C.(A)	5-29	10-31	-4	+6	0	-9
Florence, S.C.(B)	6-18	11-7	-11	0	+10	-9
Hartsville, S.C.(A)	5-26	10-26	-1	+9	+3	-2
Mean		10-31	-4	+5	+2	-5
			Southeast			
Blackville, S.C.	5-26	10-22	-5	+4	+1	-3
Tifton, Ga.	5-13	10-17	-2	+9	+8	0
Gainesville, Fla.	6-10	10-17	-3	+2	+4	-3
Live Oak, Fla.	5-26	10-15	-1	+3	0	-1
Quincy, Fla.	6-13	10-16	-4	+11	+1	-5
Jay, Fla.	5-13	10-13	-5	+6	+3	-2
Fairhope, Ala.	6-1	10-10	0	+8	+5	-2
Baton Rouge, La.	5-12	10-22	-6	+1	-1	-6
Mean		10-17	-3	+6	+3	-3
			Upper and Central South			
Clemson, S.C.	5-23	10-28	-1	+9	+3	-3
Experiment, Ga.	5-12	10-18	-1	+6	+2	-6
Mean		10-23	-1	+8	+3	-5
			Delta and West			
Stoneville, Miss.(A)	5-14	10-20	-2	+6	+3	-1
Stoneville, Miss.(B)	5-5	10-21	-4	+4	-1	-5
Stuttgart, Ark.	5-26	10-23	-7	+4	+4	-4
Rohwer, Ark.	5-29	10-24	-2	0	-6	-3
St. Joseph, La.	5-15	10-20	0	+3	+2	+2
Curtis, La.	5-21	10-26	-2	+3	-1	-2
Crowley, La.	5-21	10-29	0	0	0	-7
Beaumont, Texas	5-21	10-30	+1	+1	-2	+2
Mean		10-24	-2	+3	0	-2

Table 46. - (continued)

Location	F65-1376	F65-1753	D66-8221	D66-8666	F66-242	F66-550	N64-2423
			East Coast				
Plymouth, N.C.	+4	0	0	+2	+2	+2	-4
Rocky Mt., N.C.	0	-2	-2	-2	0	0	-8
Clayton, N.C.	+6	+2	-4	+4	+6	+6	-4
Willard, N.C.	+6	0	0	0	+4	+8	-4
Florence, S.C.(A)	+6	-2	-7	-7	+6	0	-7
Florence, S.C.(B)	0	+10	-5	+6	0	-2	0
Hartsville, S.C.(A)	+5	-1	-1	+1	+6	+8	+1
Mean	+4	+1	-3	0	+3	+3	-4
			Southeast				
Blackville, S.C.	+2	-2	-4	+1	+2	+3	-5
Tifton, Ga.	+8	-1	+2	-2	+5	+8	-1
Gainesville, Fla.	+3	0	-2	-3	+4	+8	-2
Live Oak, Fla.	+2	0	-2	-1	+2	+6	-5
Quincy, Fla.	+8	+2	+1	0	+1	+7	-3
Jay, Fla.	+7	-1	-3	-3	0	+5	-4
Fairhope, Ala.	+11	+2	+2	0	+6	+8	0
Baton Rouge, La.	+5	-2	-1	-2	+1	+6	-6
Mean	+6	0	0	-1	+3	+6	-3
			Upper and Central South				
Clemson, S.C.	+2	+2	0	0	+5	+8	-2
Experiment, Ga.	+3	+2	0	0	+3	+7	+2
Mean	+3	+2	0	0	+4	+8	0
			Delta and West				
Stoneville, Miss.(A)	+4	+3	-1	0	+4	+5	+2
Stoneville, Miss.(B)	+1	+1	-1	-2	+2	+4	-2
Stuttgart, Ark.	+7	-3	-1	+1	+1	+6	-1
Rohwer, Ark.	+3	-1	-3	+1	+1	+4	-3
St. Joseph, La.	+21	0	0	+2	+3	+3	0
Curtis, La.	+4	0	-1	0	+1	+4	-2
Crowley, La.	0	-7	-7	-7	0	0	0
Beaumont, Texas	-2	-2	+2	+5	+1	0	+2
Mean	+5	-1	-2	0	+3	+3	0

Table 47. - Plant height for the strains in Uniform Group VII, 1969

Location	Bragg	Semmes	F64-1683	N64-2430	D65-6765	F65-1376
			East Coast			
Plymouth, N.C.	50	45	48	43	41	49
Rocky Mt., N.C.	46	39	45	41	45	45
Willard, N.C.	49	43	39	43	35	45
Florence, S.C.(A)	43	36	40	39	36	38
Florence, S.C.(B)	33	31	36	26	27	31
Myrtle Beach, S.C.	37	36	34	33	28	35
Hartsville, S.C.(A)	42	39	43	40	41	43
Mean	43	38	41	38	36	41
			Southeast			
Blackville, S.C.	39	37	36	32	32	41
Tifton, Ga.	34	27	32	23	26	39
Gainesville, Fla.	33	29	30	25	23	35
Live Oak, Fla.	34	35	34	31	29	35
Quincy, Fla.	30	28	27	28	19	31
Jay, Fla.	43	39	43	36	38	45
Fairhope, Ala.	38	38	40	36	37	41
Baton Rouge, La.	44	37	39	34	36	41
Mean	37	34	35	31	30	38
			Upper and Central South			
Clemson, S.C.	44	36	38	38	36	38
Experiment, Ga.	41	35	37	30	35	36
State College, Miss.	36	38	40	38	40	42
Mean	40	36	38	35	37	39
			Delta and West			
Stoneville, Miss.(A)	47	45	45	43	43	48
Stoneville, Miss.(B)	46	44	42	40	39	45
Stuttgart, Ark.	41	36	36	38	37	38
Rohwer, Ark.	41	33	30	28	29	33
St. Joseph, La.	49	46	49	45	43	50
Curtis, La.	37	35	36	28	28	33
Crowley, La.	34	30	30	23	24	28
Beaumont, Texas	30	28	31	24	22	37
Mean	41	37	37	34	33	39

Table 47. - (continued)

Location	F65-1753	D66-8221	D66-8666	F66-242	F66-550	N64-2423
			East Coast			
Plymouth, N.C.	49	37	48	47	37	45
Rocky Mt., N.C.	47	39	43	45	42	45
Willard, N.C.	47	40	40	45	41	45
Florence, S.C.(A)	42	37	41	40	40	40
Florence, S.C.(B)	36	30	31	31	30	32
Myrtle Beach, S.C.	35	32	36	39	33	44
Hartsville, S.C.(A)	43	35	41	43	35	39
Mean	43	36	40	41	37	41
			Southeast			
Blackville, S.C.	42	32	35	39	37	37
Tifton, Ga.	34	21	27	35	24	18
Gainesville, Fla.	33	28	27	34	31	31
Live Oak, Fla.	33	26	32	34	27	31
Quincy, Fla.	35	23	26	32	24	29
Jay, Fla.	44	30	42	44	34	36
Fairhope, Ala.	42	30	38	41	42	43
Baton Rouge, La.	43	29	38	42	34	37
Mean	38	27	33	38	32	33
			Upper and Central South			
Clemson, S.C.	40	37	39	40	37	42
Experiment, Ga.	40	32	34	40	35	34
State College, Miss.	36	39	40	34	34	30
Mean	39	36	38	38	35	35
			Delta and West			
Stoneville, Miss.(A)	48	39	46	47	39	47
Stoneville, Miss.(B)	48	39	47	47	37	45
Stuttgart, Ark.	43	32	39	41	34	40
Rohwer, Ark.	38	30	33	33	25	30
St. Joseph, La.	48	34	47	51	42	51
Curtis, La.	37	27	30	38	32	33
Crowley, La.	32	20	24	32	23	24
Beaumont, Texas	34	25	27	31	26	26
Mean	41	31	37	40	32	37

Table 48. - Lodging scores for the strains in Uniform Group VII, 1969

Location	Bragg	Semmes	F64-1683	N64-2430	D65-6765	F65-1376
			East Coast			
Plymouth, N.C.	3.0	3.7	4.0	2.3	3.0	2.7
Rocky Mt., N.C.	4.0	3.3	4.7	3.0	3.0	3.0
Clayton, N.C.	4.0	3.0	4.0	3.0	4.0	3.0
Willard, N.C.	3.0	2.0	2.3	2.0	2.3	2.3
Florence, S.C.(A)	3.0	1.0	3.0	2.0	3.0	2.0
Florence, S.C.(B)	1.0	2.0	3.0	1.0	1.0	1.0
Myrtle Beach, S.C.	3.0	3.0	2.0	2.0	1.0	2.0
Hartsville, S.C.(A)	3.0	2.3	2.5	2.0	2.7	2.3
			Southeast			
Blackville, S.C.	2.7	1.7	2.3	1.3	1.0	1.7
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.7
Gainesville, Fla.	1.3	1.0	1.0	1.0	1.0	1.0
Live Oak, Fla.	2.3	1.0	1.0	1.0	1.3	1.0
Quincy, Fla.	2.0	1.0	1.0	1.0	1.0	1.0
Jay, Fla.	2.0	1.0	4.0	1.0	1.0	2.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.0	1.0	1.0	1.0	1.0	1.3
			Upper and Central South			
Clemson, S.C.	2.7	1.3	2.7	1.8	1.3	1.7
Experiment, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
State College, Miss.	2.0	3.0	3.0	2.0	2.0	3.0
			Delta and West			
Stoneville, Miss.(A)	3.7	2.3	3.3	3.0	3.0	3.0
Stoneville, Miss.(B)	4.0	3.0	3.0	3.0	3.0	3.3
Stuttgart, Ark.	3.3	2.0	2.3	1.3	1.3	2.0
Rohwer, Ark.	3.0	2.0	2.3	2.0	1.3	2.0
St. Joseph, La.	4.3	3.0	4.3	3.3	3.0	3.3
Curtis, La.	2.0	1.3	2.0	1.0	1.6	1.6
Crowley, La.	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 48. - (continued)

Location	F65-1753	D66-8221	D66-8666	F66-242	F66-550	N64-2423
			East Coast			
Plymouth, N.C.	3.0	2.7	2.0	4.0	3.0	3.0
Rocky Mt., N.C.	4.7	4.0	2.7	5.0	5.0	4.0
Clayton, N.C.	3.0	3.0	3.0	4.0	4.0	3.0
Willard, N.C.	3.0	3.0	2.0	3.0	3.3	3.0
Florence, S.C.(A)	3.0	2.0	1.0	2.0	3.0	3.0
Florence, S.C.(B)	2.0	2.0	1.0	1.0	3.0	1.0
Myrtle Beach, S.C.	3.0	1.0	1.0	3.0	2.0	2.0
Hartsville, S.C.(A)	3.5	2.0	2.0	3.0	2.7	2.3
			Southeast			
Blackville, S.C.	3.0	2.0	1.0	3.3	3.0	1.0
Tifton, Ga.	1.0	1.0	1.0	2.0	1.0	1.0
Gainesville, Fla.	1.3	1.0	1.0	1.0	1.3	1.0
Live Oak, Fla.	2.3	1.0	1.0	2.0	1.3	1.7
Quincy, Fla.	3.0	1.0	1.0	2.0	1.0	2.0
Jay, Fla.	3.0	1.0	1.0	3.0	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	1.0	1.0	1.0	1.0
			Upper and Central South			
Clemson, S.C.	3.2	2.0	1.3	2.7	3.5	1.8
Experiment, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
State College, Miss.	3.0	2.0	4.0	2.0	2.0	2.0
			Delta and West			
Stoneville, Miss.(A)	3.7	2.0	2.3	3.3	3.0	3.0
Stoneville, Miss.(B)	4.3	3.0	3.0	4.0	3.0	3.0
Stuttgart, Ark.	3.3	2.7	1.7	3.0	3.0	2.0
Rohwer, Ark.	2.7	2.0	1.3	1.7	2.0	2.3
St. Joseph, La.	4.3	3.3	4.0	5.0	4.3	3.7
Curtis, La.	1.0	1.3	1.0	2.0	2.0	2.0
Crowley, La.	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 49. - Seed quality scores for the strains in Uniform Group VII, 1969

Location	Bragg	Semmes	F64-1683	N64-2430	D65-6765	F65-1376
			East Coast			
Plymouth, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Rocky Mt., N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Clayton, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Willard, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	1.5	1.7	1.3	1.0	1.7	1.2
			Southeast			
Blackville, S.C.	1.0	2.0	1.7	1.0	1.3	1.3
Tifton, Ga.	2.0	1.8	1.8	1.8	2.3	1.7
Gainesville, Fla.	1.0	2.0	1.7	1.0	1.0	1.0
Live Oak, Fla.	1.7	1.3	1.0	1.3	1.5	1.0
Quincy, Fla.	3.0	2.0	2.0	3.0	3.0	2.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fiarhope, Ala.	1.0	2.0	3.0	1.3	2.3	1.7
Baton Rouge, La.	2.7	2.3	2.7	1.7	2.7	3.0
			Upper and Central South			
Clemson, S.C.	1.5	1.5	3.0	2.0	3.5	2.0
Experiment, Ga.	1.4	2.0	1.4	1.5	1.8	1.4
State College, Miss.	2.0	2.0	1.0	1.0	2.0	2.0
			Delta and West			
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
Stuttgart, Ark.	2.0	2.7	2.0	2.7	1.7	2.0
Rohwer, Ark.	3.0	3.0	3.7	3.7	2.3	3.3
St. Joseph, La.	1.3	2.0	3.0	1.0	1.0	1.7
Curtis, La.	2.0	1.0	2.0	1.7	1.7	1.7
Beaumont, Texas	2.0	2.0	2.0	2.0	2.0	2.0

Table 49. - (continued)

Location	F65-1753	D66-8221	D66-8666	F66-242	F66-550	N64-2423
			East Coast			
Plymouth, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Rocky Mt., N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Clayton, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Willard, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	1.3	1.3	1.0	1.0	1.8	1.5
			Southeast			
Blackville, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.8	1.8	1.5	2.0	1.3	1.5
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.7
Live Oak, Fla.	1.0	1.0	1.0	1.0	1.0	2.0
Quincy, Fla.	3.0	2.0	2.0	3.0	2.0	3.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.3	1.7	1.3	2.0	2.7	1.0
Baton Rouge, La.	2.0	1.0	1.0	1.7	1.3	2.3
			Upper and Central South			
Clemson, S.C.	2.0	2.0	1.5	2.0	1.5	1.0
Experiment, Ga.	1.3	1.0	1.1	1.6	1.2	1.4
State College, Miss.	1.0	2.0	1.0	2.0	2.0	2.0
			Delta and West			
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
Stuttgart, Ark.	1.7	1.7	2.7	2.3	1.7	3.0
Rohwer, Ark.	3.3	2.7	2.3	3.3	3.3	3.3
St. Joseph, La.	1.0	1.0	1.0	2.0	1.0	1.0
Curtis, La.	1.0	1.3	1.0	1.7	1.3	1.7
Beaumont, Texas	2.0	2.0	1.0	2.0	2.0	3.0

PRELIMINARY GROUP VII

1969

Preliminary Group VII nurseries, including 34 experimental strains and the two check varieties Bragg and Lee, 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. Differences among strains were significant at the 5% level of confidence at six locations. The combined analysis of variance showed differences among strains to be significant. There were no strains which had a mean seed yield significantly higher than Bragg, but there were eight strains which had mean seed yields significantly lower than Bragg. Six strains ranked above Bragg in mean seed yield.

Lee and 28 strains were significantly higher in protein percentage than Bragg. Lee, F67-3955, and N67-3130, while significantly higher in protein content, equalled Bragg in oil content. Five of the six strains ranking above Bragg in seed yield were significantly higher in protein percentage. D67-6215 and D67-6021, which ranked second and fourth for seed yield, were 11% higher in protein content than Bragg.

Strains which appear to merit advancing to Uniform VII are: D66-8556, D67-5940, D67-6021, D67-6215, F67-3944, and N67-3130.

Table 50. - Parentage of strains in Preliminary Group VII, 1969

	Variety or strain	Parentage	Generation composited
1.	Bragg		
2.	Lee		
3.	D66-8293	Bragg x D60-8107	F_5
4.	D66-8537	Bragg x Semmes	F_5
5.	D66-8556	Bragg x Semmes	F_5
6.	D66-8600	Bragg x Semmes	F_5
7.	D66-8663	Bragg x Semmes	F_5
8.	D67-5825	Semmes x D60-8107	F_5
9.	D67-5940	Semmes x D60-8107	F_5
10.	D67-6021	Semmes x D60-8107	F_5
11.	D67-6060	Semmes x D60-8107	F_5
12.	D67-6163	Semmes x D60-7965	F_5
13.	D67-6215	Semmes x D60-7965	F_5
14.	D67-6392	D62-3286 x D60-7965	F_5
15.	D67-6568	D62-3286 x D60-7965	F_5
16.	D67-6738	Roanoke x CNS	F_5
17.	F66-207	F55-822 x (Roanoke x CNS-4)	F_9
18.	F67-3783	Bragg x D60-8107	F_6
19.	F67-3931	Bragg(2) x D60-7965	F_4
20.	F67-3933	Bragg(2) x D60-7965	F_4
21.	F67-3940	Bragg(2) x D60-7965	F_4
22.	F67-3944	Bragg(2) x D60-7965	F_4
23.	F67-3955	Bragg(2) x D60-7965	F_4
24.	F67-3963	Bragg(2) x D60-7965	F_4
25.	F67-3984	Bragg(2) x D60-7965	F_4
26.	F67-4051	Bragg(2) x D60-7965	F_4
27.	F67-4433	(D60-9647 x F57-4391-4) x (D60-9647 x F59-2496)	F_4
28.	N66-82	D49-2491(2) x PI 165,673	
29.	N66-1337	N56-4202 x N57-6801	F_4
30.	N66-1753	N56-4202 x N57-6801	F_4
31.	N66-3197	D49-2491(2) x PI 154,618	
32.	N67-1525	N56-4202 x N57-6801	
33.	N67-1529	N56-4202 x N57-6801	
34.	N67-1550	N56-4202 x N57-6801	
35.	N67-3130	Dare x N60-5234	F_4
36.	N67-4143	Dare x N60-5234	F_4

Table 51. - General summary of performance for the strains in Preliminary Group VII, 1969

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	Seed holding	P.R.	Frog-eye	R.K.	Percent mottled seed
Bragg	35.2	10-20	44	22.5	41.2	1.0	1.0	2.0	1.0	3
Lee	33.6	-4	29	22.6	42.2+	1.0	1.0	1.0	5.0	0
D66-8293	34.9	0	40	20.1-	46.3+	2.0	1.0	5.0	4.5	0
D66-8537	34.7	+3	42	21.7-	42.7+	1.0	1.0	2.0	4.0	2
D66-8556	36.0	-3	40	22.7	41.3	1.0	1.0	2.0	1.0	0
D66-8600	33.9	-2	40	21.7-	41.1	1.0	1.0	5.0	1.0	0
D66-8663	33.1	0	40	21.4-	42.2+	1.0	1.0	2.0	2.5	0
D67-5825	31.5	-1	39	19.9-	45.3+	1.5	1.0	1.0	5.0	3
D67-5940	37.4	-3	36	21.8-	42.8+	1.0	1.0	5.0	5.0	3
D67-6021	35.9	0	36	19.7-	45.9+	1.5	1.0	1.0	5.0	0
D67-6060	31.2	+1	39	20.9-	44.7+	2.0	1.0	5.0	5.0	2
D67-6163	35.5	+3	40	22.7	41.6	1.0	1.0	1.0	4.0	2
D67-6215	36.4	-1	35	20.9-	45.6+	1.0	1.0	1.0	4.0	0
D67-6392	28.9-	+2	32	19.4-	46.0+	1.0	1.0	1.0	3.0	3
D67-6568	32.5	+2	33	20.0-	47.5+	2.0	1.0	1.0	4.5	0
D67-6738	30.2-	+1	32	22.1	42.1	2.0	1.0	1.0	3.5	0
F66-207	35.1	+2	43	21.0-	43.4+	1.0	1.0	1.0	2.0	0
F67-3783	30.4-	-2	34	20.8-	45.6+	2.0	2.0	1.0	1.0	25
F67-3931	32.5	+2	42	20.8-	44.0+	1.0	1.0	1.0	1.0	0
F67-3933	30.2-	+1	39	20.9-	43.0+	1.0	3.0	2.0	1.0	0
F67-3940	32.6	-1	40	19.7-	46.2+	1.0	1.0	1.0	1.0	0
F67-3944	35.2	0	40	20.7-	44.4+	2.0	1.0	2.0	1.0	0
F67-3955	33.8	+4	38	22.1	42.3+	1.0	2.0	2.0	1.0	0
F67-3963	32.0	+1	42	20.5-	44.1+	1.0	1.0	5.0	1.0	0
F67-3984	31.8	+2	44	20.4-	45.1+	1.0	1.0	1.0	1.0	0
F67-4051	34.7	+2	41	20.9-	44.3+	1.0	1.0	1.0	1.0	2
F67-4433	33.6	+2	27	19.9-	47.2+	2.0	1.0	1.0	3.5	0
N66-82	31.5	-1	36	21.6-	41.6	1.0	1.0	2.0	3.5	0
N66-1337	35.7	-2	39	21.7-	42.5+	3.0	1.0	5.0	4.0	0
N66-1753	27.2-	-3	31	21.5-	43.4+	2.0	2.0	5.0	3.5	0
N66-3197	28.4-	-4	26	21.8-	43.0+	2.0	3.0	5.0	3.0	0
N67-1525	28.9-	-4	26	21.6-	43.9+	3.0	2.0	5.0	3.0	0
N67-1529	30.8-	-1	36	21.2-	42.3+	2.0	1.0	5.0	1.0	0
N67-1550	31.6	-1	34	22.3	42.9+	2.0	1.0	1.0	3.5	0
N67-3130	35.8	-1	39	22.2	42.2+	2.0	3.0	1.0	4.5	0
N67-4143	34.6	0	36	21.8-	41.9	2.0	1.0	2.0	3.5	0
L.S.D.(.05)	4.4			0.6	1.0					
L.S.D.(.01)	5.8			0.8	1.4					

Table 52. - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1969

Strain	Willard, N.C.	Blackville, S.C.	Live Oak, Fla.	Jay, Fla.	Stone-ville, Miss.(A)	Stone-ville, Miss.(B)	Beaumont, Texas
Bragg	40.0	37.2	16.7	46.9	37.9	36.4	31.7
Lee.	42.0	32.4	12.6	37.5-	46.0+	36.2	29.0
D66-8293	32.9	37.2	16.9	43.9	34.4	36.9	42.4+
D66-8537	39.9	37.0	21.6	46.2	28.3-	38.2	31.9
D66-8556	44.3	37.9	13.6	43.5	42.5	39.1	31.0
D66-8600	37.3	34.4	18.2	46.9	35.7	30.5	34.3
D66-8663	40.2	35.3	19.4	42.4	35.0	28.1	31.1
D67-5825	38.5	36.4	13.6	42.4	37.0	25.4-	27.3
D67-5940	41.8	39.4	18.1	46.5	40.4	38.7	36.0
D67-6021	43.6	35.2	21.2	41.3	37.2	34.2	38.7
D67-6060	35.9	34.7	17.5	40.5	37.7	28.8	23.7
D67-6163	38.4	38.2	22.6+	40.1	37.7	35.1	36.5
D67-6215	41.9	38.4	20.1	44.6	33.6	36.8	39.7
D67-6392	30.9	28.6-	13.7	36.7-	32.1	29.1	31.3
D67-6568	34.7	32.4	17.3	42.0	31.8-	34.5	34.7
D67-6738	31.3	34.5	10.7-	40.5	35.0	33.4	26.0
F66-207	43.7	36.5	23.0+	44.3	35.2	32.1	30.8
F67-3783	34.9	36.4	15.7	39.7-	28.7-	25.0	32.4
F67-3931	32.7	35.8	17.0	47.3	33.5	30.3	31.2
F67-3933	31.1	33.1	13.4	46.9	37.8	18.2-	30.3
F67-3940	30.5	30.8-	21.6	44.3	32.4	33.2	36.4
F67-3944	43.8	38.1	16.3	47.3	39.0	35.8	26.0
F67-3955	38.1	36.8	22.6+	42.0	33.9	23.2-	40.3+
F67-3963	36.8	32.4	17.1	43.1	38.7	28.0	27.8
F67-3984	38.4	31.5-	19.0	42.8	30.9-	24.9-	34.9
F67-4051	38.7	42.9+	17.1	39.0-	33.5	35.4	36.4
F67-4433	36.8	31.5-	15.6	43.5	35.2	33.4	39.2
N66-82	35.3	30.3-	19.7	45.4	31.8-	29.6	28.2
N66-1337	42.4	38.1	15.5	40.5	37.4	38.1	37.9
N66-1753	36.4	27.0-	3.4-	33.3-	36.7	34.7	18.8-
N66-3197	35.7	31.8	9.6-	40.1	37.0	25.0-	20.0-
N67-1525	35.9	33.8	2.5-	39.0-	41.4	36.4	13.7-
N67-1529	34.6	31.9	8.4-	40.9	36.1	36.7	27.4
N67-1550	42.4	36.5	5.0-	31.8-	33.4	40.0	32.1
N67-3130	37.2	37.0	19.7	44.2	37.1	30.1	45.3+
N67-4143	38.9	36.2	19.1	42.0	38.2	33.3	34.5
L.S.D.(.05)	N.S.	5.7	5.8	7.0	5.9	10.6	8.3
C.V.	15%	8%	18%	8%	8%	16%	13%

Table 53. - Oil percentages for the strains in Preliminary Group VII, 1969

Strain	Willard, N.C.	Blackville, S.C.	Jay, Fla.	Stoneville, Miss.(A)	Beaumont, Texas
Bragg	22.7	22.6	22.6	22.8	21.9
Lee	22.3	23.1	22.7	23.1	21.8
D66-8293	20.1	20.0	20.0	20.1	20.1
D66-8537	21.7	22.2	21.8	21.2	21.7
D66-8556	22.9	22.9	23.0	23.0	21.6
D66-8600	22.3	21.7	22.0	21.8	20.7
D66-8663	21.8	21.4	21.7	21.4	20.8
D67-5825	20.5	19.9	20.2	20.5	18.3
D67-5940	23.3	22.7	22.2	21.3	19.3
D67-6021	19.5	19.9	20.0	19.9	19.2
D67-6060	21.8	21.7	20.5	21.1	19.4
D67-6163	22.3	22.8	23.1	23.4	21.7
D67-6215	21.2	21.0	21.0	21.3	19.9
D67-6392	19.3	19.3	19.7	20.0	18.5
D67-6568	19.2	20.5	20.5	20.2	19.7
D67-6738	21.7	22.2	22.1	22.7	22.0
F66-207	20.7	21.2	21.2	20.6	21.3
F67-3783	19.5	21.2	21.3	22.0	20.0
F67-3931	20.2	21.2	21.1	21.5	20.2
F67-3933	20.1	21.3	21.2	21.3	20.7
F67-3940	19.8	19.3	19.9	20.4	19.3
F67-3944	20.1	21.0	21.2	21.1	19.9
F67-3955	21.6	22.7	22.6	22.1	21.4
F67-3963	20.1	20.3	21.4	21.1	19.8
F67-3984	20.1	20.3	20.6	20.8	20.0
F67-4051	20.6	21.3	21.6	21.0	19.8
F67-4433	19.7	20.3	20.0	20.3	19.3
N66-82	20.9	21.8	22.2	21.9	21.1
N66-1337	21.4	21.9	22.0	22.0	21.1
N66-1753	21.0	22.1	21.7	22.2	20.5
N66-3197	21.8	22.3	21.6	22.2	21.3
N67-1525	21.1	22.6	22.2	22.4	19.9
N67-1529	20.8	22.6	21.0	21.2	20.5
N67-1550	22.1	23.5	22.5	22.4	21.0
N67-3130	22.1	22.9	22.0	22.5	21.3
N67-4143	21.1	21.7	22.4	22.4	21.6

Table 54. - Protein percentages for the strains in Preliminary Group VII, 1969

Strain	Willard, N.C.	Blackville, S.C.	Jay, Fla.	Stoneville, Miss.(A)	Beaumont, Texas
Bragg	41.3	40.4	41.7	39.0	43.7
Lee	43.1	40.7	42.3	40.3	44.8
D66-8293	48.8	45.7	46.4	44.4	46.1
D66-8537	43.1	41.1	43.6	41.8	43.8
D66-8556	41.8	40.8	41.0	38.7	44.2
D66-8600	40.9	40.5	41.7	40.3	42.0
D66-8663	42.2	40.6	42.7	41.2	44.2
D67-5825	46.5	43.7	45.5	42.8	48.1
D67-5940	42.8	41.6	43.0	41.4	45.1
D67-6021	48.0	43.7	46.3	44.2	47.2
D67-6060	44.7	44.1	45.5	42.5	46.6
D67-6163	41.8	41.3	41.4	39.6	44.1
D67-6215	46.7	44.4	45.0	44.5	47.4
D67-6392	47.9	44.7	46.1	43.9	47.3
D67-6568	50.2	46.6	48.0	45.3	47.5
D67-6738	42.3	41.1	43.6	39.9	43.4
F66-207	44.7	42.7	44.8	41.5	43.4
F67-3783	46.9	44.9	45.0	43.9	47.3
F67-3931	44.5	43.9	44.0	41.6	46.0
F67-3933	44.0	42.1	43.7	40.9	44.4
F67-3940	46.7	46.1	47.2	44.0	46.9
F67-3944	45.4	43.6	45.0	42.5	45.7
F67-3955	42.3	41.8	42.8	40.5	44.1
F67-3963	46.5	44.5	43.9	41.0	44.5
F67-3984	46.3	46.1	45.0	42.6	45.6
F67-4051	43.7	44.0	45.0	43.5	45.3
F67-4433	48.0	46.6	48.3	45.4	47.5
N66-82	42.1	40.8	41.8	39.2	43.9
N66-1337	43.0	42.0	42.3	40.8	44.5
N66-1753	43.5	43.0	45.0	41.3	44.3
N66-3197	43.7	42.2	44.1	40.6	44.6
N67-1525	44.2	43.1	44.8	40.4	47.2
N67-1529	41.9	40.9	43.6	40.6	44.6
N67-1550	42.7	41.0	44.6	40.2	46.0
N67-3130	41.5	41.6	43.6	40.2	44.2
N67-4143	42.8	41.5	42.1	39.6	43.4

Table 55. - Plant height for the strains in Preliminary Group VII, 1969

Strain	Willard, N.C.	Blackville, S.C.	Live Oak, Fla.	Jay, Fla.	Stone-ville, Miss.(A)	Stone-ville, Miss.(B)	Beaumont, Texas
Bragg	44	49	35	42	48	48	39
Lee	38	30	19	24	34	31	25
D66-8293	43	44	28	39	47	48	31
D66-8537	42	41	36	44	49	46	38
D66-8556	44	38	28	42	47	45	33
D66-8600	42	35	34	38	48	47	35
D66-8663	42	43	33	46	47	45	25
D67-5825	45	37	30	44	47	37	34
D67-5940	37	33	28	39	46	44	28
D67-6021	37	37	31	29	47	44	30
D67-6060	34	39	34	46	46	43	32
D67-6163	36	41	34	43	47	48	34
D67-6215	37	33	29	37	42	37	30
D67-6392	33	35	25	33	37	35	25
D67-6568	38	37	25	35	37	34	25
D67-5738	40	37	25	34	38	28	24
F66-207	47	43	34	45	50	46	36
F67-3783	38	34	25	38	40	38	23
F67-3931	38	43	37	48	48	46	36
F67-3933	42	42	32	40	48	38	31
F67-3940	40	40	33	50	46	40	33
F67-3944	39	41	32	40	46	44	35
F67-3955	40	37	32	38	46	42	32
F67-3963	45	40	32	38	47	47	33
F67-3984	44	44	36	51	48	45	43
F67-4051	43	41	35	43	48	46	34
F67-4433	31	24	21	28	34	30	22
N66-82	39	42	32	38	37	36	30
N66-1337	40	41	30	38	50	42	32
N66-1753	41	33	17	28	38	35	24
N66-3197	38	28	15	22	34	25	22
N67-1525	36	28	13	22	32	31	18
N67-1529	35	36	26	33	42	46	32
N67-1550	41	36	17	29	41	42	30
N67-3130	42	38	29	45	46	41	32
N67-4143	35	34	30	38	44	42	31

Table 56. - Seed quality scores for the strains in Preliminary Group VII, 1969

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	1.0	1.5	1.0	2.0	2.0	1.0
Lee	3.5	1.0	2.5	1.0	2.0	2.0	2.0
D66-8293	2.5	1.0	2.0	1.0	2.0	2.0	2.0
D66-8537	2.0	1.0	1.0	1.0	2.0	2.0	3.0
D66-8556	2.0	1.0	3.0	1.0	2.0	2.0	1.0
D66-8600	2.5	1.5	1.5	1.0	2.0	2.0	1.0
D66-8663	2.5	1.0	1.5	1.0	2.0	2.0	1.0
D67-5825	2.5	1.0	1.0	1.0	2.0	2.0	1.0
D67-5940	2.0	1.3	2.5	1.0	2.0	2.0	3.0
D67-6021	2.0	1.5	1.0	1.0	2.0	2.0	1.0
D67-6060	2.0	1.0	1.5	1.0	2.0	2.0	1.0
D67-6163	2.0	2.0	1.0	1.0	2.0	2.0	2.0
D67-6215	2.0	1.0	1.5	1.0	2.0	2.0	1.0
D67-6392	3.5	1.0	1.0	1.0	2.0	2.0	2.0
D67-6568	3.0	2.0	1.0	1.0	2.0	2.0	2.0
D67-6738	3.0	1.5	2.0	1.0	2.0	2.0	1.0
F66-207	2.5	1.0	1.0	1.0	2.0	2.0	1.0
F67-3783	2.5	1.0	1.5	2.0	2.0	2.0	1.0
F67-3931	2.5	1.5	2.0	1.0	2.0	2.5	1.0
F67-3933	2.5	1.5	1.5	1.0	2.0	2.0	1.0
F67-3940	2.0	2.0	1.0	1.0	2.0	2.0	1.0
F67-3944	2.0	1.0	1.5	1.0	2.0	2.0	2.0
F67-3955	2.0	2.0	1.0	1.0	2.0	2.5	2.0
F67-3963	3.0	1.0	1.0	1.0	2.0	2.0	2.0
F67-3984	2.5	1.0	1.5	1.0	2.0	2.0	2.0
F67-4051	2.0	2.0	1.5	1.0	2.0	2.0	1.0
F67-4433	2.0	2.0	1.0	1.0	2.0	2.0	1.0
N66-82	3.0	1.0	1.0	1.0	2.0	2.0	2.0
N66-1337	2.5	1.0	2.0	1.0	2.0	2.0	2.0
N66-1753	2.0	2.5	4.0	1.0	2.0	2.0	3.0
N66-3197	2.5	1.0	1.5	1.0	2.0	2.0	2.0
N67-1525	2.0	2.0	4.0	1.0	2.0	2.0	2.0
N67-1529	2.0	2.0	2.0	1.0	2.0	2.0	2.0
N67-1550	2.5	2.0	2.5	2.0	2.0	2.0	4.0
N67-3130	2.0	1.5	1.0	1.0	2.0	2.0	1.0
N67-4143	2.5	1.0	1.0	1.0	2.0	2.0	1.0

UNIFORM GROUP VIII

1969

	Variety or strain	Parentage	Generation composited
1.	Hampton 266A	Majos x Lee	
2.	Hardee	D49-772 x Improved Pelican	F_7
3.	F63-4000	F55-822 x (Roanoke x CNS-4)	F_6
3.	Coker 318	Jackson x Co56-251	F_4
5.	F64-1928	F57-1471 x D53-1301	F_5
6.	F64-1917	F57-1471 x D53-1301	F_6
7.	Co4504	Jackson x Co56-251	
8.	F66-648	Jackson x (Ogden x D53-1301)	F_6
9.	F66-1080	F57-735 x D58-3358	F_6
10.	F66-1109	F57-735 x D58-3358	F_6
11.	F66-1166	F57-735 x D58-3358	F_6
12.	F66-1689	Hardee x D58-3358	F_6

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.

Co56-251 is a selection from Majos x Lee.

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

D53-1301 is a strain of Lee maturity from the same cross as Hill.

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.

Twenty-five Uniform Group VIII nurseries were planted. Results from 21 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 12 locations. The combined analysis of variance for seed yield showed differences among strains to be significant. There were no strains yielding significantly better than Hampton 266A, although F63-4000, F66-1109, F66-1166, and F66-1689 did rank above Hampton 266A in mean seed yield.

F63-4000 has a 3-year mean yield equal to Hampton 266A. It has a higher protein percentage, lower oil percentage, and averages 1 day earlier in maturity. Coker 318 and F64-1928 both average lower in seed yield than Hampton 266A, but are equal to Hardee. F64-1928 averages 4 days later than Hardee and 5 inches taller.

Only F64-1917 has been included 2 years. It is 2 days earlier than Hardee but is not superior in seed yield.

Six strains were included in this group only one year. Co4504 ranked below Hampton 266A in seed yield. F66-1080 had a mean yield 1 bushel below Hampton 266A, but appeared highly resistant to root-knot nematodes, phytophthora rot, and frogeye leaf spot. F66-1166 also appeared to have good root-knot resistance.

Table 57. - General summary of performance for the strains in Uniform Group VIII, 1969

	Hampton		Coker			
	266A	Hardee	F63-4000	318	F64-1928	F64-1917
Seed Yield - 1969	38.6	35.3	39.5	34.4-	33.6-	36.1
- 1968-69	36.3	32.6	36.2	32.4	31.9	33.9
- 1967-69	38.9	34.4	38.8	34.6	33.7	
Oil Content - 1969	23.4	22.3-	22.0-	22.4-	22.4-	23.3
- 1968-69	22.9	21.9	21.4	21.8	22.3	22.9
- 1967-69	22.7	21.8	21.2	21.5	22.0	
Protein Content - 1969	39.1	41.6+	41.6+	40.2+	40.1+	39.7
- 1968-69	39.1	41.9	42.0	40.3	40.1	39.8
- 1967-69	39.0	41.7	42.2	40.4	40.0	
Seed size	16.1	14.4-	16.7	14.7-	13.6-	15.3
Maturity index	10-31	+7	-1	+5	+11	+5
Height	38	44	37	43	49	39
Root-knot nematodes	4.0	4.0	3.0	2.0	5.0	5.0
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	2.5	1.0	2.0	4.0	2.0	2.0
Frogeye	5.0	1.0	5.0	5.0	1.0	5.0
Target spot	1.7	3.0	1.3	4.7	3.0	1.3

Table 57. - (continued)

	Co4504	F66-648	F66-1080	F66-1109	F66-1166	F66-1689
Seed Yield - 1969	35.5	37.9	37.5	39.2	40.8	39.3
- 1968-69						
- 1967-69						
Oil Content - 1969	23.0	23.5	24.0+	23.9+	23.4	23.5
- 1968-69						
- 1967-69						
Protein Content - 1969	40.0+	38.6	39.2	40.3+	40.2+	39.9+
- 1968-69						
- 1967-69						
Seed size	14.7-	14.2-	14.6-	16.3	15.5	14.2-
Maturity index	+4	+7	+8	+4	+7	+2
Height	40	37	41	37	42	36
Root-knot nematodes	4.0	5.0	1.0	3.0	1.0	4.0
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	4.0	2.0	1.0	1.0	2.0	1.0
Frogeye	5.0	1.0	1.0	1.0	1.0	1.0
Target spot	3.7	2.0	3.0	2.0	2.7	3.3

Table 58. - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1969

Location	Hampton 266A	Hardee	F63-4000	Coker 318	F64-1928	F64-1917	Co4504
			South				
Willard, N.C.	44.3	37.5	44.7	31.4-	33.6-	39.9	32.7-
Florence, S.C.(A)	27.6	33.9	46.5	26.1	40.8	31.1	30.4
Florence, S.C.(B)	22.6	30.0	39.0	32.0	32.5	34.6	24.7
Myrtle Beach, S.C.	28.6	22.1	36.2	22.1	25.8	31.8	26.7
Hartsville, S.C.(A)	36.5	31.5-	33.3	34.0	30.6-	31.1-	36.5
Hartsville, S.C.(B)	40.4	40.0	38.0	33.8-	35.1-	33.6-	36.8-
Blackville, S.C.(A)	41.6	37.7	42.9	43.1	36.6-	37.5	41.0
Blackville, S.C.(B)	43.9	34.3-	42.8	40.7	33.2-	37.9-	43.3
Experiment Ga.	53.5	46.4	59.3	46.8	45.0-	52.2	49.5
Tifton, Ga.	55.5	45.2-	54.7	50.7	45.1-	50.9	52.7
Live Oak, Fla.*	8.3	27.7	21.0	21.9	18.0	20.5	24.9
Gainesville, Fla.	38.8	43.4	39.3	30.6	37.6	35.9	35.4
Quincy, Fla.	38.1	35.5	38.3	34.6	28.3-	35.9	34.6
Jay, Fla.	45.4	45.1	41.3	36.6-	37.0-	39.9-	37.0-
Fairhope, Ala.	39.4	39.2	42.8	35.6	38.7	37.0	35.8
Poplarville, Miss.	25.9	23.4	14.9-	24.2	16.5-	21.1	25.8
Baton Rouge, La.	34.1	27.2	27.5	28.4	24.7	27.4	31.0
St. Joseph, La.	40.6	40.9	49.3	44.0	43.2	45.3	40.9
Curtis, La.	35.6	24.3-	31.3	29.0-	23.3-	34.9	32.2
Crowley, La.	32.8	33.6	27.4	27.1	30.1	33.0	31.1
Beaumont, Texas	41.2	33.9	41.1	38.1	34.3	30.3-	31.8-
Mean	38.6	35.3	39.5	34.4-	33.6-	36.1	35.5

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

* - Not included in mean.

Table 58. - (continued)

Location	F66-648	F66-1080	F66-1109	F66-1166	F66-1689	L.S.D. (.05)	C.V.
			South				
Willard, N.C.	36.5	38.5	44.4	44.7	42.1	9.6	14%
Florence, S.C.(A)	41.0	30.0	36.9	26.9	37.6	N.S.	27%
Florence, S.C.(B)	34.8	25.3	34.8	31.8	29.9	N.S.	25%
Myrtle Beach, S.C.	33.0	33.7	28.6	24.2	29.7	N.S.	23%
Hartsville, S.C.(A)	34.5	35.1	38.5	37.1	36.0	4.5	8%
Hartsville, S.C.(B)	38.0	38.4	43.6+	39.7	41.4	3.0	5%
Blackville, S.C.(A)	43.3	40.4	42.0	43.0	43.0	4.4	6%
Blackville, S.C.(B)	40.4	40.2	40.3	39.2	41.9	5.7	8%
Experiment, Ga.	54.0	50.4	55.5	57.3	56.6	7.6	9%
Tifton, Ga.	52.6	54.7	53.9	52.9	57.5	5.7	6%
Live Oak, Fla.*	23.6	19.7	18.0	26.6	21.7	N.S.	35%
Gainesville, Fla.	41.3	38.9	37.8	45.7	38.4	N.S.	12%
Quincy, Fla.	35.4	33.5	32.9	37.5	37.8	6.7	11%
Jay, Fla.	44.9	41.6	44.4	50.4+	46.1	4.4	6%
Fairhope, Ala.	39.4	40.1	42.1	47.3	41.8	N.S.	10%
Poplarville, Miss.	24.5	23.5	33.3	24.7	36.9+	9.2	22%
Baton Rouge, La.	26.0	29.0	27.6	38.2	27.4	N.S.	18%
St. Joseph, La.	49.7	42.8	49.1	48.7	43.0	N.S.	9%
Curtis, La.	32.0	36.5	32.9	39.0	33.8	4.9	9%
Crowley, La.	29.1	29.4	28.0	31.2	28.9	N.S.	11%
Beaumont, Texas	27.9-	47.0	37.3	55.9+	35.8	7.4	12%
Mean	37.9	37.5	39.2	40.8	39.3	4.1	

Table 59. - Chemical composition and seed size for the strains in Uniform Group VIII, 1969

Location	Hampton 266A	Hardee	F63-4000	Coker 318	F64-1928	F64-1917
			Oil Percentage			
Hartsville, S.C.(A)	21.9	21.0	20.9	21.4	21.7	22.2
Blackville, S.C.(B)	22.5	21.5	21.8	21.7	22.0	22.7
Tifton, Ga.	24.4	23.4	22.1	22.9	23.0	24.3
Gainesville, Fla.	24.7	23.4	23.4	23.4	23.1	24.4
Jay, Fla.	23.5	23.2	21.9	23.0	22.5	23.9
Baton Rouge, La.	24.1	21.9	22.4	22.4	21.3	22.8
Beaumont, Texas	22.7	21.6	21.5	21.7	23.4	22.7
Mean	23.4	22.3-	22.0-	22.4-	22.4-	23.3
			Protein Percentage			
Hartsville, S.C.(A)	38.4	41.6	41.5	39.4	40.0	39.5
Blackville, S.C.(B)	38.8	41.5	41.0	40.4	39.6	39.0
Tifton, Ga.	38.4	40.7	40.8	40.0	39.4	39.6
Gainesville, Fla.	40.2	42.0	41.6	41.2	41.2	40.5
Jay, Fla.	39.3	41.7	42.5	40.4	39.6	39.1
Baton Rouge, La.	38.3	40.4	40.7	39.0	40.4	39.4
Beaumont, Texas	40.4	43.6	43.0	40.9	40.5	40.8
Mean	39.1	41.6+	41.6+	40.2+	40.1+	39.7
			Grams per 100 Seeds			
Hartsville, S.C.(A)	13.5	13.1	14.9	13.3	11.7	13.7
Blackville, S.C.(B)	16.3	14.0	18.0	16.7	13.7	16.0
Tifton, Ga.	17.9	15.3	18.4	16.1	14.7	17.1
Gainesville, Fla.	17.7	17.5	20.2	15.3	14.5	18.2
Jay, Fla.	17.5	17.3	19.7	16.2	15.9	17.2
Baton Rouge, La.	15.8	11.5	13.7	13.4	10.4	12.7
Beaumont, Texas	14.0	12.0	12.0	12.0	14.0	12.0
Mean	16.1	14.4-	16.7	14.7-	13.6-	15.3

Table 59. - (continued)

Location	Co4504	F66-648	F66-1080	F66-1109	F66-1166	F66-1689	L.S.D. (.05)
			Oil Percentage				
Hartsville, S.C.(A)	22.1	22.5	23.6	23.4	22.8	22.5	
Blackville, S.C.(B)	22.8	22.9	23.5	24.1	22.9	23.2	
Tifton, Ga.	23.8	23.4	24.3	24.4	24.7	24.7	
Gainesville, Fla.	24.7	24.7	25.6	25.3	24.0	25.3	
Jay, Fla.	22.9	24.1	24.0	24.2	23.6	24.3	
Baton Rouge, La.	22.6	23.8	23.5	23.4	23.4	22.5	
Beaumont, Texas	22.4	22.9	23.6	22.6	22.5	21.9	
Mean	23.0	23.5	24.0+	23.9+	23.4	23.5	0.5
			Protein Percentage				
Hartsville, S.C.(A)	39.4	37.3	38.9	39.8	39.1	39.1	
Blackville, S.C.(B)	39.0	38.6	38.4	39.8	38.4	39.0	
Tifton, Ga.	40.0	39.5	39.3	40.5	39.3	40.5	
Gainesville, Fla.	39.8	39.7	40.1	41.9	40.9	41.2	
Jay, Fla.	39.7	38.9	39.7	40.2	43.8	38.0	
Baton Rouge, La.	40.1	36.7	38.3	38.0	38.2	39.5	
Beaumont, Texas	41.7	39.8	39.9	42.0	41.6	41.8	
Mean	40.0+	38.6	39.2	40.3+	40.2+	39.9+	0.8
			Grams per 100 Seeds				
Hartsville, S.C.(A)	12.8	11.9	13.1	15.4	14.0	12.7	
Blackville, S.C.(B)	15.0	14.3	14.8	15.7	14.3	15.0	
Tifton, Ga.	16.4	16.0	16.9	18.7	17.8	16.0	
Gainesville, Fla.	15.1	17.5	18.2	19.6	20.5	17.8	
Jay, Fla.	16.2	16.1	17.0	18.9	17.6	15.9	
Baton Rouge, La.	13.2	11.4	12.0	12.5	12.5	11.2	
Beaumount, Texas	14.0	12.0	10.0	13.0	12.0	11.0	
Mean	14.7-	14.2-	14.6-	16.3	15.5	14.2-	1.1

Table 60. - Relative maturity, days earlier (-) or later (+) than Hampton 266A, for the strains in Uniform Group VIII, 1969

Location	Date planted	Hampton 266A matured	Hardee	F63-4000	Coker 318	F64-1928
			South			
Willard, N.C.	6-12	11-9	+6	-2	-2	
Florence, S.C.(A)	5-29	11-7	+8	0	-6	+8
Florence, S.C.(B)	6-18	11-5	+12	+4	+6	+12
Hartsville, S.C.(A)	5-26	11-5	+8	-2	+5	+9
Hartsville, S.C.(B)	6-23	11-8	+7	-4	+4	+8
Blackville, S.C.(A)	5-26	10-29	+5	-3	+6	+10
Blackville, S.C.(B)	6-26	11-4	+6	-3	+6	+7
Experiment, Ga.	5-13	10-26	+11	-2	+10	+18
Tifton, Ga.	5-13	10-25	+17	0	+20	+20
Live Oak, Fla.	5-26	10-17	+8	+1	+6	+14
Gainesville, Fla.	6-10	10-27	+3	-3	-1	+13
Quincy, Fla.	6-13	10-25	+12	0	+11	+20
Jay, Fla.	5-13	10-21	+9	0	+7	+10
Fairhope, Ala.	6-1	10-18	+7	-3	+7	+10
Baton Rouge, La.	5-13	10-27	+4	0	+2	+14
St. Joseph, La.	5-15	10-29	+1	0	+1	+12
Curtis, La.	5-21	11-9	+2	-1	+1	+5
Crowley, La.	5-21	11-4	--	--	--	--
Beaumont, Texas		11-8	+4	+1	+3	+9
Mean		10-31	+7	-1	+5	+11

Table 60. - (continued)

Location	F64-1917	Co4504	F66-648	F66-1080	F66-1109	F66-1166	F66-1689
			South				
Willard, N.C.	0	-2	0	+8	-2	+6	-2
Florence, S.C.(A)	-2	+5	-2	+2	-2	+2	-8
Florence, S.C.(B)	+6	0	+12	+12	+12	+4	0
Hartsville, S.C.(A)	+4	+4	+5	+7	+5	+8	+1
Hartsville, S.C.(B)	+3	+3	+7	+6	+5	+5	+4
Blackville, S.C.(A)	+3	+3	+6	+6	+4	+8	+3
Blackville, S.C.(B)	+3	+2	+7	+5	+4	+5	+3
Experiment, Ga.	+4	+3	+13	+4	+4	+4	+5
Tifton, Ga.	+12	+18	+20	+20	+16	+20	+6
Live Oak, Fla.	+7	+6	+5	+5	+3	+8	+5
Gainesville, Fla.	+7	-4	+8	+9	+4	+8	+1
Quincy, Fla.	+11	+14	+15	+18	+7	+15	+6
Jay, Fla.	+7	+6	+12	+11	+8	+11	+6
Fairhope, Ala.	+10	+2	+7	+10	+4	+4	+2
Baton Rouge, La.	+5	+3	0	+6	0	+5	0
St. Joseph, La.	+2	0	+4	+10	+5	+8	+1
Curtis, La.	+1	+1	-1	+3	-3	0	-3
Crowley, La.	--	--	--	--	--	--	--
Beaumont, Texas	+7	+6	+9	+3	+1	+13	0
Mean	+5	+4	+7	+8	+4	+7	+2

Table 61. - Plant height for the strains in Uniform Group VIII, 1969

Location	Hampton 266A	Hardee	F63-4000	Coker 318	F64-1928	F64-1917
			South			
Willard, N.C.	47	51	43	50	53	49
Florence, S.C.(A)	34	41	37	40	51	41
Myrtle Beach, S.C.	26	34	28	28	42	36
Hartsville, S.C.(A)	46	49	43	50	51	42
Hartsville, S.C.(B)	47	51	44	51	51	47
Blackville, S.C.(A)	36	51	38	50	51	42
Blackville, S.C.(B)	40	42	32	42	48	39
Experiment, Ga.	39	51	42	49	53	42
Tifton, Ga.	31	42	32	41	49	35
Live Oak, Fla.	32	39	33	37	47	33
Gainesville, Fla.	36	42	33	42	51	37
Quincy, Fla.	34	39	31	28	40	39
Jay, Fla.	46	50	43	50	54	44
Fairhope Ala.	38	38	33	42	41	39
Baton Rouge, La.	39	49	40	48	57	39
St. Joseph, La.	49	55	49	56	59	41
Curtis, La.	39	43	39	44	48	40
Crowley, La.	28	33	28	35	40	28
Beaumont, Texas	34	39	30	40	42	31
Mean	38	44	37	43	49	39

Table 61. - (continued)

Location	C04504	F66-648	F66-1080	F66-1109	F66-1166	F66-1689
			South			
Willard, N.C.	45	43	45	43	49	43
Florence, S.C.(A)	38	35	34	36	40	33
Myrtle Beach, S.C.	30	34	38	29	31	29
Hartsville, S.C.(A)	47	43	49	43	48	41
Hartsville, S.C.(B)	48	42	48	45	51	45
Blackville, S.C.(A)	44	40	44	42	48	37
Blackville, S.C.(B)	38	34	37	36	43	32
Experiment, Ga.	44	43	45	42	47	42
Tifton, Ga.	38	31	37	33	39	31
Live Oak, Fla.	35	31	35	29	33	30
Gainesville, Fla.	36	31	34	29	33	31
Quincy, Fla.	35	34	40	35	39	27
Jay, Fla.	48	43	50	43	50	43
Fairhope, Ala.	38	38	40	34	39	35
Baton Rouge, La.	42	37	43	36	44	39
St. Joseph, La.	51	49	52	46	52	47
Curtis, La.	39	34	41	39	46	37
Crowley, La.	30	27	31	27	31	27
Beaumont, Texas	32	38	42	34	40	34
Mean	40	37	41	37	42	36

Table 62. - Lodging scores for the strains in Uniform Group VIII, 1969

Location	Hampton 266A	Hardee	F63-4000	Coker 318	F64-1928	F64-1917
			South			
Willard, N.C.	3.3	3.0	2.7	3.0	3.0	3.7
Florence, S.C.(A)	2.0	3.0	2.0	2.0	3.0	3.0
Florence, S.C.(B)	2.0	3.0	3.0	3.0	3.0	4.0
Myrtle Beach, S.C.	1.0	1.0	1.0	1.0	2.0	2.0
Hartsville, S.C.(A)	3.2	3.7	4.2	3.0	3.3	3.8
Hartsville, S.C.(B)	3.5	3.8	3.3	2.8	3.5	4.0
Blackville, S.C.(A)	1.7	3.7	4.5	1.7	3.8	3.2
Blackville, S.C.(B)	2.7	2.8	2.7	1.0	3.2	3.2
Experiment, Ga.	1.3	2.0	1.7	1.0	2.7	1.3
Tifton, Ga.	1.0	2.0	1.3	1.3	2.7	1.0
Live Oak, Fla.	1.0	1.0	1.7	1.7	2.7	1.7
Gainesville, Fla.	1.3	2.0	1.0	1.3	2.0	1.3
Quincy, Fla.	2.0	3.0	1.0	1.0	3.0	2.0
Jay, Fla.	3.0	3.0	2.0	2.0	4.0	3.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.7	3.0	1.0	1.7	3.7	1.7
St. Joseph, La.	4.7	5.0	4.3	3.7	5.0	5.0
Curtis, La.	2.0	2.6	2.0	2.7	4.0	2.7
Crowley, La.	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 62. - (continued)

Location	Co4504	F66-648	F66-1080	F66-1109	F66-1166	F66-1689
			South			
Willard, N.C.	2.7	3.3	3.0	3.7	3.0	2.7
Florence, S.C.(A)	2.0	2.0	1.0	2.0	2.0	2.0
Florence, S.C.(B)	1.0	3.0	2.0	3.0	3.0	2.0
Myrtle Beach, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	2.7	2.7	3.2	3.3	3.2	3.0
Hartsville, S.C.(B)	2.5	2.5	3.3	3.8	3.8	2.8
Blackville, S.C.(A)	1.7	3.5	2.7	2.7	3.0	3.0
Blackville, S.C.(B)	1.2	2.8	1.0	2.3	2.0	1.7
Experiment, Ga.	1.0	2.0	1.7	1.3	2.0	1.0
Tifton, Ga.	1.0	1.3	1.0	1.0	1.0	1.0
Live Oak, Fla.	1.3	1.0	1.3	1.7	2.3	1.0
Gainesville, Fla.	1.3	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	2.0	1.0
Jay, Fla.	2.0	2.0	3.0	2.0	3.0	2.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	2.0	1.0	1.7	1.0	1.3	1.0
St. Joseph, La.	3.3	3.7	4.7	5.0	5.0	4.0
Curtis, La.	2.3	2.0	1.7	2.3	3.0	1.3
Crowley, La.	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 63. - Seed quality scores for the strains in Uniform Group VIII, 1969

Location	Hampton 266A	Hardee	F63-4000	Coker 318	F64-1928	F64-1917
			South			
Willard, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	1.0	2.0	2.0	1.0	1.0	2.0
Hartsville, S.C.(B)	1.0	1.0	1.5	1.0	1.0	2.0
Blackville, S.C.(A)	1.0	1.0	2.0	1.0	1.0	2.0
Blackville, S.C.(B)	1.3	1.0	1.7	1.3	1.3	2.0
Experiment, Ga.	1.9	1.2	1.5	1.5	1.0	1.1
Tifton, Ga.	2.0	2.5	2.2	1.8	1.3	2.7
Live Oak, Fla.	2.0	1.0	1.0	1.3	1.3	1.0
Gainesville, Fla.	1.7	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.	2.0	1.0	2.3	2.0	1.7	2.0
Baton Rouge, La.	3.0	2.3	3.0	2.3	1.3	2.0
St. Joseph, La.	1.3	2.0	1.3	1.3	1.7	3.0
Curtis, La.	1.7	2.0	1.3	2.0	1.7	3.0
Beaumont, Texas	2.0	1.0	2.0	2.0	2.0	2.0

Table 63. - (continued)

Location	Co4504	F66-648	F66-1080	F66-1109	F66-1166	F66-1689
			South			
Willard, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	1.5	1.0	1.0	1.5	1.0	1.0
Hartsville, S.C.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Blackville, S.C.(A)	1.0	1.0	1.0	1.0	1.0	1.0
Blackville, S.C.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Experiment, Ga.	1.4	1.4	1.1	1.1	1.3	1.0
Tifton, Ga.	1.7	2.0	1.5	1.8	1.8	1.7
Live Oak, Fla.	1.0	1.0	1.3	1.3	1.0	1.0
Gainesville, 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.	2.3	2.0	1.0	2.0	1.0	1.3
Baton Rouge, La.	1.7	1.7	2.7	1.3	2.7	2.0
St. Joseph, La.	2.0	1.3	1.3	1.0	1.0	1.3
Curtis, La.	2.0	1.0	1.0	1.7	1.0	1.3
Beaumont, Texas	2.0	2.0	3.0	2.0	1.0	1.0

PRELIMINARY GROUP VIII

1969

Preliminary Group VIII nurseries, including 34 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 to evaluate field reaction to phytophthora rot. The parentage of these strains is reported in Table 64. Performance data are summarized in Tables 65 through 70. Differences in seed yield among strains were significant at the 5% level of confidence at five of the seven locations. The combined analysis of variance for seed yield showed differences in mean seed yields among strains to be significant. Thirteen strains ranked above Hampton 266A in seed yield, but the difference did not reach the 5% level of confidence for any of these strains. Four strains yielded significantly less than Hampton 266A.

Eight strains appeared to have a high level of resistance to root-knot nematodes in the planting in west Florida. Of these, Co6718 and F66-1510 appeared quite susceptible to target spot. Hardee, considered to be moderately resistant to root-knot nematodes in previous evaluations, was quite susceptible in these plantings.

There was a fairly heavy development of both frogeye leaf spot and target spot at Gainesville. Target spot development was apparently rather late and did not have a very great effect upon seed yield. Only two strains, F67-1647 and F67-1806, had low scores for each of the four diseases for which ratings were made.

Among the strains which appear to merit being advanced to Uniform Group VIII are: Co6718, F66-594, F66-646, F66-973, F67-1647, and F67-1806.

Table 64. - Parentage of strains in Preliminary Group VIII, 1969

	Variety or strain	Parentage	Generation composited
1.	Hampton 266A		
2.	Hardee		
3.	Co6718	Stuart x F56-3492	
4.	Co6721	Yelnanda x Hampton	
5.	F64-2544	F57-1471 x F58-3726	F_5
6.	F66-570	Ogden x D53-1301	F_6
7.	F66-575	Jackson x (Ogden x D53-1301)	F_6
8.	F66-594	Jackson x (Ogden x D53-1301)	F_6
9.	F66-615	Jackson x (Ogden x D53-1301)	F_6
10.	F66-646	Jackson x (Ogden x D63-1301)	F_6
11.	F66-710	Bragg x D60-8107	F_5
12.	F66-739	Bragg x D60-8107	F_5
13.	F66-880	D49-2491(2) x PI 230,201	F_5
14.	F66-939	D49-2491(2) x PI 230,201	F_5
15.	F66-973	Hardee x D58-3358	F_7
16.	F66-1016	Hardee x D58-3358	F_6
17.	F66-1489	F57-1471 x D53-1301	F_7
18.	F66-1495	D49-588 x F58-3726	F_7
19.	F66-1510	D49-588 x F58-3726	F_7
20.	F67-1533	F57-1471 x D53-1301	F_8
21.	F67-1535	F57-1471 x D53-1301	F_8
22.	F57-1563	D55-4110 x (D49-2491 x PI 163,453)	F_8
23.	F67-1647	F57-1471 x F58-3726	F_8
24.	F67-1693	F57-1471 x F58-3726	F_8
25.	F67-1701	F57-1471 x F58-3726	F_8
26.	F67-1712	F57-1471 x F58-3726	F_8
27.	F67-1749	F57-1471 x F58-3726	F_8
28.	F67-1751	F57-1471 x F58-3726	F_8
29.	F67-1763	F57-1471 x F58-3726	F_8
30.	F67-1806	F57-1471 x F58-3726	F_8
31.	F67-1812	F57-1471 x F58-3726	F_8
32.	F67-3578	D55-4110 x (Biloxi x Sioux)	F_7
33.	F67-3970	Bragg(2) x D60-7965	F_4
34.	F67-4086	Bragg(2) x D60-7965	F_4
35.	F67-4425	(D60-9647 x F57-4391-4) x (D60-9647 x F59-2496)	
36.	F67-4629	F59-2496 x (Hardee x D60-9647)	F_4

Table 65. - General summary of performance for the strains in Preliminary Group VIII, 1969

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	R.K.	P.R.	Frogeye	T.S.
Hampton 266A	36.5	10-28	37	24.2	38.5	3.0	2.0	3.5	2.0
Hardee	37.2	+5	43	22.7-	41.5+	4.0	1.0	1.0	3.3
Co6718	39.2	0	33	22.9-	39.1	1.0	2.0	3.8	3.8
Co6721	35.3	-1	37	24.2	39.1	2.0	4.0	4.5	4.0
F64-2544	34.8	+6	40	22.1-	41.2+	1.5	3.0	3.8	2.8
F66-570	33.7	+1	34	25.4	38.5	2.0	3.0	4.0	3.8
F66-575	31.7	0	26	24.5	39.0	1.0	3.0	3.5	3.0
F66-594	37.2	+3	38	22.1-	40.6+	2.0	1.0	4.3	1.3
F66-615	31.0-	+2	34	22.7-	40.4+	1.0	1.0	4.8	1.0
F66-646	36.7	-1	37	23.4	38.0	1.0	3.0	1.5	2.3
F66-710	29.4-	+1	39	23.1-	41.9+	3.5	1.0	4.5	1.5
F66-739	33.7	+4	43	22.4-	42.5+	3.5	1.0	3.5	1.8
F66-880	32.5	-1	37	22.6-	40.4+	3.0	1.0	3.8	2.5
F66-939	32.0	+5	33	21.7-	42.4+	3.5	3.0	3.8	2.3
F66-973	37.3	+3	36	23.3-	40.2+	1.0	3.0	1.0	1.8
F66-1016	38.8	+6	40	22.9-	40.4+	3.0	1.0	1.0	3.0
F66-1489	33.7	+7	30	23.2-	39.3	3.0	2.0	4.0	1.8
F66-1495	35.6	+7	44	22.3-	42.1+	2.5	1.0	1.0	1.5
F66-1510	36.8	+8	53	22.3-	42.1+	1.5	2.0	1.0	3.8
F67-1533	37.0	+9	53	21.7-	40.8+	1.5	3.0	1.0	2.8
F67-1535	33.2	+11	49	23.1-	39.6+	3.0	1.0	2.8	2.0
F67-1563	33.2	+5	46	22.7-	40.6+	2.5	1.0	1.0	3.8
F67-1647	35.4	+10	41	22.4-	41.5+	2.0	1.0	1.0	1.5
F67-1693	35.7	+11	44	21.6-	40.2+	3.0	1.0	1.0	1.3
F67-1701	34.0	+10	45	21.5-	41.0+	3.0	1.0	1.5	1.5
F67-1712	35.4	+8	40	22.3-	40.1+	3.5	2.0	1.0	2.3
F67-1749	38.4	+5	36	21.8-	40.6+	3.5	2.0	1.0	2.5
F67-1751	37.0	+7	41	22.8-	39.8+	3.0	2.0	1.0	2.0
F67-1763	37.7	+9	40	22.4-	40.1+	4.5	2.0	1.0	2.0
F67-1806	38.6	+7	40	22.6-	40.0+	2.0	1.0	1.0	2.3
F67-1812	39.1	+9	40	22.3-	41.1+	4.0	4.0	1.0	2.3
F67-3578	36.1	+4	44	23.6	40.7+	4.0	2.0	1.0	3.3
F67-3970	38.7	-1	35	23.3-	40.6+	3.0	2.5	3.3	1.8
F67-4086	34.7	+5	39	22.3-	40.7+	3.0	2.0	4.3	1.8
F67-4425	28.9-	+3	37	20.2-	47.0+	5.0	2.0	1.0	4.0
F67-4629	31.3-	+4	40	20.7-	45.3+	4.0	4.0	1.0	3.5
L.S.D.(.05)	5.1			0.9	0.9				
L.S.D.(.01)	6.7			1.2	1.2				

Table 66. - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1969

Strain	Blackville, S.C.	Live Oak, Fla.*	Gainesville, Fla.	Quincy, Fla.	Jay, Fla.	Baton Rouge, La.	Beaumont, Texas
Hampton 266A	37.4	19.9	33.5	35.3	45.4	37.2	29.8
Hardee	35.5	14.5	40.9+	33.2	47.6	30.1	36.0
Co6718	39.4	19.9	34.0	35.6	46.5	38.6	41.1+
Co6721	43.7+	18.1	29.4	33.7	42.4	35.2	27.7
F64-2544	35.8	25.6	27.8-	32.7	49.6	27.8	35.2
F66-570	37.6	17.2	28.7	31.4	51.8	28.7	23.8
F66-575	32.0-	14.1	27.1-	30.3	40.5	31.6	24.0
F66-594	41.8+	15.3	32.1	33.5	49.2	27.8	38.6
F66-615	36.1	20.6	27.0-	38.9	30.3-	28.4	25.5
F66-646	39.2	15.4	42.4+	34.2	46.5	30.8	28.1
F66-710	32.8-	14.5	27.9	29.6	41.6	22.5	22.2
F66-739	32.6-	13.2	34.6	31.7	43.1	22.0	38.3
F66-880	36.0	13.7	31.7	30.5	47.3	25.6	24.4
F66-939	33.1-	20.2	29.2	29.2	33.7-	34.8	31.9
F66-973	37.8	21.3	38.9+	39.6	47.3	31.8	28.3
F66-1016	39.6	25.4	39.3+	33.5	55.6+	27.0	38.1
F66-1489	35.9	15.7	26.4-	31.9	46.2	24.6	37.1
F66-1495	36.1	20.0	38.9+	35.3	42.8	26.6	33.7
F66-1510	32.8-	16.8	33.5	31.2	46.2	30.6	46.6+
F67-1533	33.2-	13.4	36.5	25.9-	53.0	25.6	48.1+
F67-1535	30.9-	17.7	33.1	24.4-	45.8	28.0	37.2
F67-1563	27.9-	18.2	31.9	30.5	41.6	26.7	40.5
F67-1647	32.9-	20.1	41.4+	32.4	49.2	27.6	29.1
F67-1693	31.2-	15.2	39.6+	27.5-	52.9	26.6	36.3
F67-1701	30.0	19.7	37.1	28.5	45.0	28.4	34.9
F67-1712	35.7	17.3	39.0+	31.5	43.5	26.3	36.6
F67-1749	37.9	26.5	41.4+	35.1	48.0	30.0	38.3
F67-1751	38.1	22.6	39.3+	27.9	46.1	28.2	42.3+
F67-1763	36.2	21.7	41.2+	32.1	49.6	29.4	37.5
F67-1806	33.8-	11.6	40.2+	31.8	48.8	29.0	48.3+
F67-1812	37.9	14.1	41.2+	27.1-	46.9	32.6	48.7+
F67-3578	37.4	15.1	36.7	33.3	39.7	31.4	37.9
F67-3970	41.6+	20.0	33.3	37.2	47.6	33.8	38.6
F67-4086	38.2	26.3	32.0	37.6	47.7	24.2	28.7
F67-4425	30.6-	20.3	26.6-	27.8	37.5	22.0	28.7
F67-4629	31.0-	16.9	29.1	29.9	43.9	25.8	28.5
L.S.D.(.05)	3.6	N.S.	5.0	7.8	8.7	N.S.	11.0
C.V.	5%	32%	7%	12%	9%	16%	16%

* - Not included in mean.

Table 67. - Oil percentages for the strains in Preliminary Group VIII, 1969

Strain	Blackville, S.C.	Gainesville, Fla.	Jay, Fla.	Baton Rouge, La.
Hampton 266A	23.0	25.3	23.5	24.8
Hardee	21.4	24.2	23.0	22.2
Co6718	22.5	23.0	22.5	23.4
Co6721	23.3	24.8	24.0	24.7
F64-2544	20.9	22.6	22.5	22.4
F66-570	25.0	26.0	25.9	24.7
F66-575	23.6	25.2	24.5	24.5
F66-594	22.1	23.1	21.9	21.2
F66-615	22.0	23.3	22.1	23.3
F66-646	22.9	25.0	22.1	23.7
F66-710	22.4	23.3	24.0	22.8
F66-739	22.5	23.2	22.4	21.4
F66-880	21.7	23.1	22.0	23.4
F66-939	20.7	22.1	22.7	21.1
F66-973	22.4	25.4	21.8	23.7
F66-1016	22.0	23.6	23.5	22.4
F66-1489	22.5	24.3	22.8	23.1
F66-1495	21.5	23.4	22.3	21.8
F66-1510	20.9	23.0	22.6	22.5
F67-1533	20.9	22.7	22.3	20.7
F67-1535	22.6	24.4	23.3	22.0
F67-1563	22.0	23.8	22.5	22.3
F67-1647	21.5	23.1	23.1	21.8
F67-1693	20.0	22.1	21.9	22.3
F67-1701	20.0	22.7	22.4	20.8
F67-1712	21.3	23.6	23.4	20.8
F67-1749	20.6	23.6	22.5	20.5
F67-1751	21.8	24.4	23.1	21.9
F67-1763	20.6	23.7	23.4	21.8
F67-1806	20.9	24.5	23.0	21.9
F67-1812	20.9	23.6	22.6	21.9
F67-3578	22.9	24.5	23.7	23.3
F67-3970	22.8	23.5	23.1	23.6
F67-4086	21.7	22.6	22.1	22.9
F67-4425	19.8	20.4	20.9	19.8
F67-4629	19.8	21.7	21.5	19.8

Table 68. - Protein percentages for the strains in Preliminary Group VIII, 1969

Strain	Blackville, S.C.	Gainesville, Fla.	Jay, Fla.	Baton Rouge, La.
Hampton 266A	38.0	39.7	39.3	36.8
Hardee	41.7	41.5	42.2	40.7
Co6718	39.0	39.8	40.1	37.5
Co6721	38.8	39.6	39.7	38.4
F64-2544	41.7	41.7	41.8	39.7
F66-570	37.8	39.8	38.5	37.8
D66-575	37.7	40.2	38.8	38.9
F66-594	39.0	41.8	41.1	40.3
F66-615	39.2	42.1	41.3	38.8
F66-646	37.1	38.9	39.9	36.0
F66-710	41.3	42.2	42.4	41.8
F66-739	41.9	42.6	43.4	41.9
F66-880	40.6	41.1	40.8	39.0
F66-939	42.5	43.6	41.8	41.7
F66-973	40.4	41.5	41.0	38.0
F66-1016	40.1	41.2	41.5	38.8
F66-1489	39.3	40.2	40.0	37.6
F66-1495	41.5	42.7	42.6	41.7
F66-1510	41.8	43.0	42.6	41.0
F67-1533	40.4	41.0	41.0	40.7
F67-1535	38.4	40.1	40.1	39.7
F67-1563	41.5	42.4	38.6	39.9
F67-1647	41.0	41.6	41.8	41.7
F67-1693	39.8	40.4	40.7	40.0
F67-1701	40.9	41.0	41.7	40.4
F67-1712	40.4	40.4	39.4	40.1
F67-1749	40.4	40.3	40.0	41.5
F67-1751	38.2	40.8	39.8	40.2
F67-1763	40.4	40.0	40.0	39.8
F67-1806	40.5	40.0	39.9	39.4
F67-1812	40.9	41.5	41.5	40.4
F67-3578	40.4	41.4	40.0	40.8
F67-3970	40.0	40.5	40.9	40.9
F67-4086	40.3	41.5	40.8	40.1
F67-4425	46.2	49.1	46.2	46.6
F67-4629	45.6	46.8	44.0	44.9

Table 69. - Plant height for the strains in Preliminary Group VIII, 1969

Strain	Blackville, S.C.	Live Oak, Fla.	Gainesville, Fla.	Quincy, Fla.	Jay, Fla.	Baton Rouge, La.	Beaumont, Texas
Hampton 266A	42	30	35	33	46	41	32
Hardee	42	37	43	41	48	50	40
Co6718	31	30	28	28	42	39	32
Co6721	39	33	36	33	45	40	30
F64-2544	41	29	38	40	40	43	37
F66-570	32	27	29	31	52	34	30
F66-575	27	22	25	23	32	30	25
F66-594	40	33	34	37	47	41	32
F66-615	32	33	30	32	44	40	30
F66-646	39	31	34	37	45	40	34
F66-710	38	34	36	39	45	45	33
F66-739	39	39	40	43	52	44	46
F66-880	37	37	41	34	42	38	32
F66-939	34	28	34	32	38	34	28
F66-973	40	31	32	34	43	40	33
F66-1016	40	37	41	37	49	48	30
F66-1489	32	27	32	31	33	30	25
F66-1495	42	42	45	40	52	50	40
F66-1510	49	45	59	47	62	62	48
F67-1533	52	48	56	49	60	59	48
F67-1535	44	48	50	42	58	55	45
F67-1563	43	40	49	43	53	49	32
F67-1647	45	33	41	40	43	46	39
F67-1693	45	41	46	44	45	48	40
F67-1701	48	41	45	46	56	52	28
F67-1712	41	37	42	39	45	41	33
F67-1749	40	33	35	36	40	38	33
F67-1751	41	37	44	41	48	41	38
F67-1763	41	37	44	36	48	40	35
F67-1806	41	36	44	39	46	38	39
F67-1812	41	35	40	38	48	42	39
F67-3578	44	42	37	42	52	46	44
F67-3970	32	31	31	31	44	40	33
F67-4086	36	37	35	35	50	44	34
F67-4425	34	32	35	41	43	38	36
F67-4629	40	34	39	39	48	43	40

Table 70. - Seed quality scores for the strains in Preliminary Group VIII, 1969

Strain	Blackville, S.C.	Live Oak, Fla.	Gainesville, Fla.	Quincy, Fla.	Jay, Fla.	Baton Rouge, La.	Beaumont, Texas
Hampton 266A	2.0	2.0	1.5	2.0	1.0	2.0	1.0
Hardee	2.0	1.0	1.0	3.0	1.0	2.5	1.0
Co6718	2.0	1.5	1.5	2.0	1.0	2.0	1.0
Co6721	1.5	1.0	2.0	3.0	1.0	2.0	2.0
F64-2544	1.0	1.0	1.0	3.0	1.0	1.5	1.0
F66-570	1.0	1.5	1.5	3.0	1.0	3.0	2.0
F66-575	2.0	2.0	2.0	2.0	1.0	2.5	1.0
F66-594	1.5	2.0	1.0	3.0	1.0	3.0	1.0
F66-615	2.0	2.0	1.0	3.0	1.0	2.5	1.0
F66-646	2.5	1.0	1.0	4.0	1.0	3.5	1.0
F66-710	2.5	2.5	2.0	4.0	1.0	2.5	2.0
F66-739	2.5	2.0	1.0	4.0	1.0	3.0	1.0
F66-880	3.0	1.5	1.0	4.0	2.0	2.5	2.0
F66-939	2.5	1.0	1.0	3.0	1.0	2.0	2.0
F66-973	1.0	1.5	1.5	2.0	1.0	2.5	1.0
F66-1016	1.0	1.0	1.0	2.0	1.0	3.0	1.0
F66-1489	2.0	1.0	1.0	2.0	1.0	1.5	1.0
F66-1495	1.0	1.0	2.0	2.0	1.0	3.0	1.0
F66-1510	2.5	1.5	1.0	4.0	1.0	2.5	1.0
F67-1533	2.0	1.0	1.0	3.0	1.0	2.5	1.0
F67-1535	1.0	1.0	1.0	3.0	1.0	2.5	1.0
F67-1563	1.5	1.0	1.0	3.0	1.0	2.0	1.0
F67-1647	1.5	1.5	1.0	4.0	1.0	2.0	1.0
F67-1693	1.0	1.0	1.0	4.0	1.0	1.5	1.0
F67-1701	2.0	1.0	1.0	4.0	1.0	2.0	1.0
F67-1712	1.5	1.0	1.0	3.0	1.0	2.0	1.0
F67-1749	1.0	1.0	1.0	2.0	1.0	2.5	1.0
F67-1751	1.0	1.0	1.0	3.0	1.0	2.0	1.0
F67-1763	1.0	1.0	1.0	3.0	1.0	2.5	1.0
F67-1806	1.5	1.5	1.0	4.0	1.0	2.0	2.0
F67-1812	2.0	1.0	1.5	4.0	1.0	2.0	1.0
F67-3578	1.5	1.5	1.0	4.0	1.0	2.5	1.0
F67-3970	2.0	2.0	1.5	4.0	1.0	2.5	1.0
F67-4086	1.0	1.0	1.0	4.0	1.0	2.5	1.0
F67-4425	2.0	1.0	1.0	4.0	1.0	2.5	1.0
F67-4629	2.0	1.0	1.0	3.0	2.0	3.5	2.0