U. S. REGIONAL SOYBEAN LABORATORY
URBANA, ILLINOIS

RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS, 1964 PART II. SOUTHERN STATES

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
CROPS RESEARCH DIVISION
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RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

PART II. SOUTHERN STATES

1964

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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.

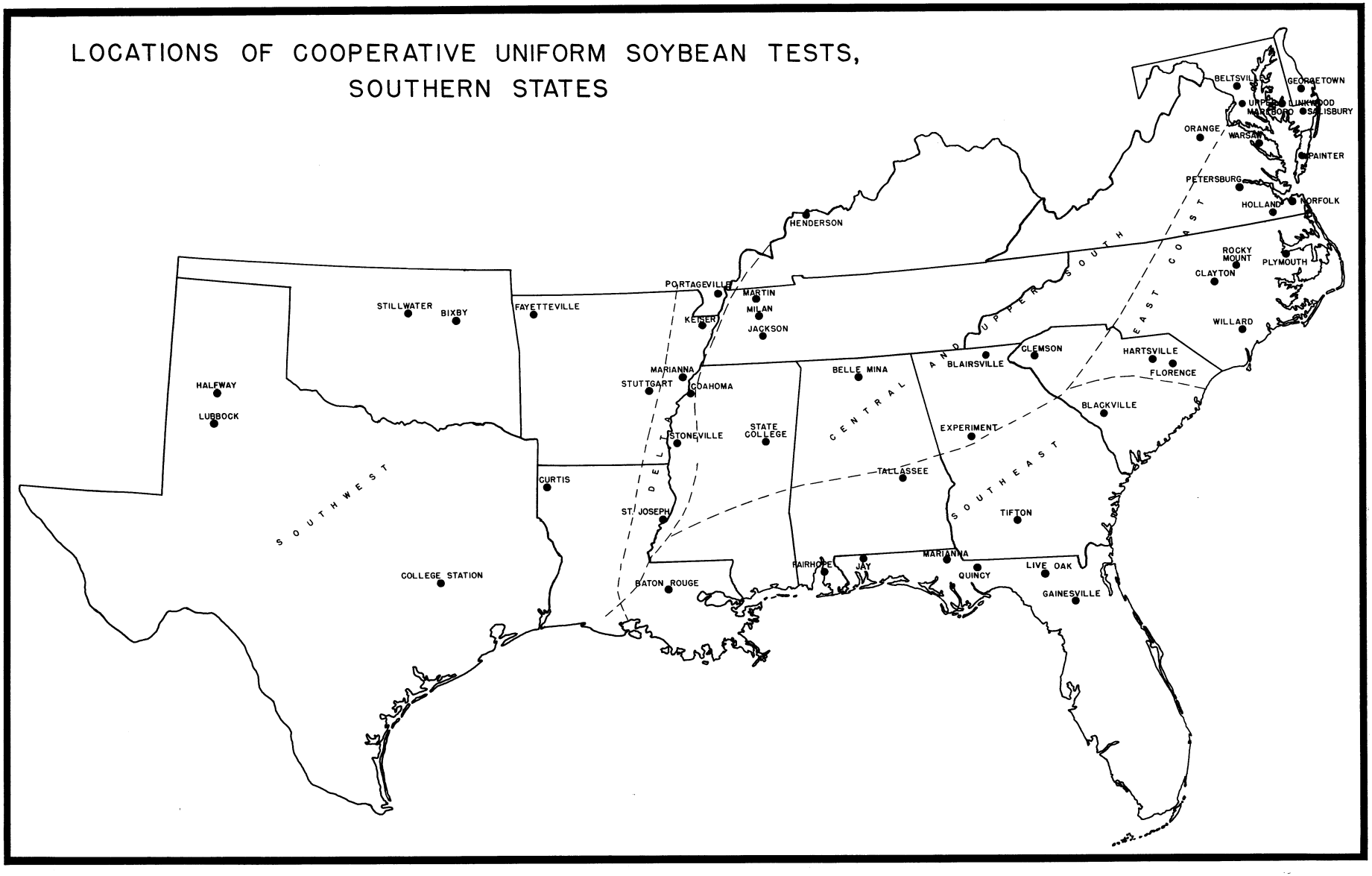
Ten uniform test groups have been established to evaluate the better strains developed in the breeding programs. The groups 00 through IV are adapted in the Northern part of the United States, and the Group IV through VIII are grown in the Southern part. Within their area of adaptation, there is a maturity 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 check varieties are Kent, Hill, Hood, Lee, Bragg, and Bienville. At Stoneville, Mississippi, where all maturity classes will mature, the approximate maturity dates of these varieties, when planted during the first half of May, are: Kent, September 8; Hill, September 20; Hood, October 8; Lee, October 16; Bragg, October 22, and Bienville, November 1.

A wide range of soil and climatic conditions exist in the region. 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 and the high plains of Texas. In this area many of the tests received supplemental irrigation. A map is included to illustrate the five production areas.

On nearly all of the Coastal Plain, Piedmont, and loessal soils, fertilization is esssential 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 phosphorous 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.

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES



As an indication of the temperature and rainfall pattern in areas where the tests are conducted, daily minimum and maximum temperatures and rainfall are reported for Plymouth, North Carolina; Blackville, South Carolina; Gainesville, Florida; Keiser, Arkansas; Stoneville, Mississippi; and Lubbock, Texas.

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
Rebel - Stoneville Pedigreed Seed Co., Stoneville, Mississippi

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

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

Location	Groups Grown IV	V	VI	VII	VIII	Soil Type	Soil Analyses P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted variety[2]
East Coast											
Georgetown, Del.	1*	1*	1			Norfolk sandy loam	H	M	6.3	0-45-90	17.5 - G
Linkwood, Md.	1*	1*	1*			Sassafras sandy loam	M	M	6.5	0-37-75	37.6 - G
Warsaw, Va.	1*	1*	1*			Sassafras sandy loam	M	M	6.4	0-0-0	35.3 - B
Painter, Va.	1	1	1			Sassafras f. sandy loam	VH	M+	5.4	0-0-0	38.1 - B
Petersburg, Va.		1	1			Goldsboro f. sandy loam	VH	M	5.9	0-0-0	33.6 - B
Norfolk, Va.		1	1			Woodstown sandy loam	VH	H	6.2	0-0-0	39.6 - B
Holland, Va.		1	1			Woostown loam f. sand	VH	M	5.6		35.9 - C
Plymouth, N.C.		1*	1*			Portsmouth fine sandy loam	H	H	6.0	0-40-80	25.4 - C
Rocky Mt., N.C.				1		Norfolk sandy loam	H	H	6.2	0-40-80	34.9 - C
Willard, N.C.			1	1*		Norfolk f. sandy loam	VH	M	5.6	0-40-80	41.2 - C
Clayton, N.C.[3]			1	1		Norfolk sandy loam	VH	M	6.0	0-40-80	44.2 - C
Florence, S.C.				1	1*	Marlboro f. sandy loam				0-0-0	47.6 - D
Hartsville, S.C.(A)			1	1	1	Norfolk sandy loam	M	M	6.3	0-40-80	35.9 - D
Hartsville, S.C.(B)					1	Coxville sandy loam	M	M	5.1	0-40-80	23.9 - F
Southeast											
Blackville, S.C.(A)				1*		Norfolk sandy loam	M	M	6.2	0-50-50	41.5 - D
Blackville, S.C.(B)					1*	Norfolk sandy loam	M	M	6.2	0-56-56	35.0 - F
Tallassee, Ala.			1	1*	1	Cahaba loamy fine sand	H	H	6.4	0-28-28	57.8 - D
Tifton Ga.				1	1	Tifton pebbly loam	65	76	6.5	22-45-68	38.4 - F
Live Oak, Fla.				1	1*	Klej fine sand	39	146	6.1	0-50-100	22.4 - H
Gainesville, Fla.				1*	1*	Arredonda fine sand	73	243	6.4	0-45-90	31.0 - H
Zellwood, Fla.			1	1		Muck	48	222	5.3	0-0-0	23.8 - C
Quincy, Fla.			1	1	1*	Norfolk loamy f. sand	21	70	6.0	20-60-60	33.9 - D
Marianna, Fla.				1	1	Ruston sandy loam				24-72-72	29.0 - D
Jay, Fla.			1*	1*	1*	Tifton fine sandy loam				24-72-72	38.2 - D
Fairhope, Ala.			1	1	1	Marlboro fine sandy loam				0-49-49	35.1 - F
Baton Rouge, La.			1	1	1*	Olivier silt loam				15-60-60	38.6 - E
Upper and Central South											
Orange, Va.	1	1				Starr clay loam	M-	H-	6.6	0-112-112	23.6 - A
Martin, Tenn.	1	1				Grenada silt loam				0-70-70	35.8 - A
Milan, Tenn.		1	1			Grenada sandy loam	VL	M	6.4	0-60-60	39.2 - C
Jackson, Tenn.		1	1			Calloway silt loam	H	H	6.2	25-50-50	40.6 - C
Belle Mina, Ala.		1	1			Decatur sandy loam	M	M	4/	0-80-80	16.2 - A
Blairsville, Ga.	1	1				Hiwassee loam	M	M	6.5	20-60-60	35.1 - A
Clemson, S.C.				1		Cecil sandy loam	H	M	6.4	0-98-98	48.4 - C
Experiment, Ga.		1	1	1*	1*	Lloyd sandy clay loam	H	L	6.2	25-50-75	
State College, Miss.		1	1	1		Verona fine sandy loam				0-60-60	35.1 - C

Location	Groups Grown IV	V	VI	VII	VIII	Soil Type	Soil Analyses P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted vareity[2]
Delta											
Henderson, Ky.	1	1				Falaya silt loam	H	L	6.0	0-0-0	34.9 - G
Portageville, Mo.(A)	1*	1*	1*			Salix silt loam	H	M	5.6	50-50-50	41.3 - B
Portageville, Mo.(B)	1*	1*	1*			Sharkey clay	H	H	6.5	50-50-50	37.0 - A
Keiser, Ark.(A)	1	1	1			Sharkey clay(overwash)	L	H	6.2	0-0-0	43.4 - A
Keiser, Ark.(B)	1	1*	1*			Sharkey clay	L	H	6.7	0-0-0	27.6 - C
Marianna, Ark.	1	1	1			Richland silt loam	M	M	6.0	0-30-30	32.7 - B
Stoneville, Miss.(A)		1	1*	1*	1	Bosket fine sandy loam	H	M+	6.0	0-0-0	40.9 - C
Stoneville, Miss.(B)	1*	1*	1*	1*		Sharkey clay	H	M+	6.2	0-0-0	32.2 - C
St. Joseph, La.		1	1	1	1	Commerce sandy loam				0-0-0	51.5 - C
West											
Stuttgart, Ark.[3]		1	1	1		Crowley silt loam	VL	L	7.0	0-48-48	42.0 - C
Curtis, La.		1	1	1	1	Yahola fine sandy loam				0-0-0	17.8 - C
Bixby, Okla.	1	1	1			Lonoke very f. sandy loam	65	316	7.4	0-0-0	47.3 - A
Halfway, Texas[3]		1	1			Pullman clay loam				0-0-0	
Lubbock, Texas[3]		1	1			Amarillo fine sandy loam				0-0-0	

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

2/ A = Hill; B = Hood; C = Lee; D = Bragg; E = Bienville; F = Hampton; G = Kent; H = Hardee

3/ Irrigated as needed.

4/ 2 T. lime applied

* Preliminary nursery grown in addition to uniform nursery

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 all 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 6 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 seed.

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, Bienville.

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 brighteness. While the seed quality score indicates relative appearance of seed for the several varieties at one location, considerable differences 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 surrounding 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

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 coefficient of variability are not included in calculating averages.

UNIFORM GROUP IV

1964

	Variety or strain	Parentage	Generation Composited
1.	Kent	Lincoln x Ogden	F_7
2.	Scott	D49-2525 x L6-5679	F_4
3.	Clark 63	[Clark(5) x L49-4091] x [Clark(6) x Blackhawk]	
4.	Delmar	C799 x FC 33243	F_6
5.	D60-5702	Hill x D53-354	F_5
6.	D60-5818	Hill x D53-354	F_5
7.	D60-5847	Hill x D53-354	F_5
8.	D61-214	D54-3270 x D54-2437	F_5
9.	D61-238	D54-3270 x D54-2437	F_5
10.	L57-0034	L46-2132 x Adams	F_6
11.	Md59-285	Lincoln x C985	F_5
12.	Md59-1552	Adams x C985	F_6

Background of strains used as parent:

D49-2525 is a sister strain of Lee from the cross S-100 x CNS.

L6-5679 is a selection from Lincoln x Richland which was tested in Uniform Group IV for the years 1949-1953.

L49-4091 is a pustule-resistant selection from [Lincoln(2) x Richland] x [Lincoln x CNS].

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

FC 33243 is a type which has proved to be highly resistant to root-knot nematodes in Delaware.

D53-354 is a selection from D49-2525 x L6-5679 which was tested in Uniform Group IV for the years 1956-1958.

D54-3270 is a selection from D49-2525 x L6-5679 highly susceptible to phytophthora rot.

D54-2437 is a selection from N48-1394 x L6-5679 having a resistant reaction to phytophthora rot. It was tested in Uniform Group IV for the years 1957-1961.

L46-2132 is a selection from Lincoln(2) x Richland.

C985 is an F_4 line selected from Lincoln x Ogden and is progenitor of Kent.

Eighteen Group IVS nurseries were planted. Results of 13 are summarized in table 1 through 7, with table 1 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. Two- and three-year oil and protein percentages are also reported.

The same 12 strains were included in this group as were included in 1963. Seed yield differences among strains were significant at only 4 of the 13 locations. In 1963, the combined analysis of variance for mean seed yields within the East Coast region showed differences to be nonsignificant. However, in 1964, D60-5702, D60-5847, and D61-238 yielded significantly less than Kent but not less than Delmar. Differences among strains were significant in the Delta area in 1963 but not in 1964. In 1963, differences in yield among strains at Stoneville were large, because of development of bacterial pustule and phytophthora rot on susceptible material. The Stoneville nursery was not planted until July 6, 1964, and as a result there was considerably less disease development.

A major problem with strains of this maturity is seed quality. Kent has received a score of 3 or poorer for seed quality in 23 of 35 tests during the past 3 years. In addition, Kent is susceptible to purple stain development. Delmar shows less purple stain development but has had a quality score of 3 or poorer in 50% of the tests during the past 3 years. The best record for seed quality is that of D60-5702, which received a score of 3 only four times in the 35 tests covering the 3 years. D60-5702 has had very little purple stain development. Seed yields for D60-5702 have exceeded yields of named varieties in the Delta area, but it has not yielded as well in the East Coast area as the named varieties. D60-5818 has received quality ratings better than 3 in 75% of the plantings over the past 3 years, has had low purple stain ratings, and has yielded well in all areas. It is superior to Kent in seed holding, is resistant to bacterial pustule, and has good field tolerance to phytophthora rot.

Table 1. - General summary of performance for the strains in Uniform Group IV, 1964

	Kent	Scott	Clark 63	Delmar	D60-5702	D60-5818
Seed Yield - 1964						
East Coast	36.3	35.9	33.3	34.0	31.0-	34.7
Upper & Central South	39.6	34.6	33.0	33.3	35.0	37.8
Delta	34.9	34.3	33.1	31.8	35.4	37.1
1963-64						
East Coast	30.0	29.6	28.2	28.8	27.0	30.0
Delta	35.5	33.1	34.9	31.9	36.6	37.4
1962-64						
East Coast	31.6	29.6	28.8	29.3	27.0	30.1
Delta	36.0	34.4	35.3	30.3	37.8	38.1
Oil Content - 1964	22.1	21.9	22.4	22.4	22.0	21.5
- 1963-64	21.8	21.9	22.2	22.4	21.8	21.5
- 1962-64	21.8	21.9	22.1	22.1	21.7	21.3
Protein Content - 1964	40.3	38.3-	40.4	39.5	39.9	40.0
- 1963-64	40.5	38.1	40.4	39.7	40.0	39.6
- 1962-64	40.8	38.7	40.6	40.4	40.3	40.1
Seed Size	19.2	15.7-	17.1-	17.6-	15.4-	15.4-
Maturity Index	9-29	0	-5	0	-2	+3
Height	36	37	37	36	35	38
Seed Quality 1963-64	3.0	2.5	2.7	2.9	2.2	2.2
Bacterial Pustule 1/	4.0	1.0	1.0	4.0	1.0	1.0
Phytophthora Rot 2/	2.5	3.0	1.0	1.0	1.0	1.0
Purple Stain 3/	3.0	2.0	2.0	1.0	1.0	2.0
Shattering 4/	3.8	2.8	1.6	1.2	1.2	1.2
Flower Color	P	P	P	W	W	W
Pubescence Color	T	G	T	G	G	G

1/ Stoneville data.
2/ Stoneville and Keiser data
3/ Linkwood and Warsaw data
4/ Linkwood, Keiser and Stoneville data

Table 1. - (continued)

	D60-5847	D61-214	D61-238	L57-0034	Md59-285	Md59-1552
Seed Yield - 1964						
East Coast	32.0-	33.9	31.3-	35.4	36.1	35.3
Upper & Central South	41.7	34.5	36.7	38.1	34.1	37.3
Delta	34.3	35.0	34.0	34.5	31.5	32.7
- 1963-64						
East Coast	28.2	28.5	27.7	30.7	29.8	29.8
Delta	35.1	35.0	33.9	33.5	31.9	30.8
- 1962-64						
East Coast	28.0					
Delta	35.6					
Oil Content - 1964	22.2	21.9	21.7	22.7	22.0	21.9
- 1963-64	21.8	22.0	21.5	22.7	22.2	21.8
- 1962-64	21.6					
Protein Content - 1964	39.1-	38.8-	39.7	39.4-	40.5	40.4
- 1963-64	39.0	39.0	39.7	39.4	40.3	40.4
- 1962-64	39.7					
Seed Size	14.9-	14.2-	14.9-	16.2-	16.8-	16.4-
Maturity Index	0	0	+2	-2	-1	+3
Height	38	35	36	33	33	39
Seed Quality 1963-64	2.3	2.3	2.3	2.7	2.7	2.3
Bacterial Pustule[1/]	1.0	1.0	1.0	5.0	5.0	4.0
Phytophthora Rot[2/]	1.0	1.0	1.0	3.0	2.0	2.0
Purple Stain[3/]	2.0	1.0	2.0	2.0	3.0	2.0
Shattering[4/]	1.5	1.3	2.0	1.5	2.8	2.4
Flower Color	W	W	W	P	W	P
Pubescence Color	G	G	G	G	T	G

Table 2. - Seed yield, in bushels per acre, for the strains in Uniform Group IV, 1964

Location	Kent	Scott	Clark 63	Delmar	D60-5702	D60-5818	D60-5847
			East Coast				
Linkwood, Md.	37.6	38.8	36.1	33.2	30.9	36.6	33.7
Painter, Va.	33.0	29.7	29.3	29.5	25.8	27.9	27.0
Warsaw, Va.	38.2	39.1	34.6	39.1	36.2	39.4	35.4
Mean	36.3	35.9	33.3	34.0	31.0-	34.7	32.0-
			Upper and Central South				
Blairsville, Ga.	38.8	34.4	30.6	31.6	34.1	37.0	39.9
Martin, Tenn.	40.4	34.9	35.4	34.9	35.8	38.6	43.5
Mean	39.6	34.6	33.0	33.3	35.0	37.8	41.7
			Delta				
Henderson, Ky.	34.9	31.7	37.7	26.6-	33.7	36.4	27.0-
Portageville, Mo.(A)	45.4	47.3	51.1+	42.2	49.7	47.4	46.4
Portageville, Mo.(B)	33.2	35.1	36.5	27.5	35.5	40.5	36.3
Keiser, Ark.(A)	43.6	42.8	28.6	43.0	37.7	41.4	42.3
Keiser, Ark.(B)	29.8	29.4	27.8	22.8	27.2	29.8	31.6
Marianna, Ark.	33.5	35.1	28.6	32.3	33.9	36.9	33.6
Stoneville, Miss.(B)	24.3	19.5-	23.1	25.1	24.9	26.6	24.5
Bixby, Okla.	34.2	33.7	31.4	34.6	40.5	37.6	32.5
Mean	34.9	34.3	33.1	31.8	35.4	37.1	34.3

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

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

Table 2. - (continued)

Location	D61-214	D61-238	L57-0034	Md59-285	Md59-1552	L.S.D. (.05)	C.V.
			East Coast				
Linkwood, Md.	37.6	33.6	40.0	35.5	33.7	N.S.	9%
Painter, Va.	27.2	25.8	30.0	34.8	33.4	N.S.	9%
Warsaw, Va.	37.1	34.4	36.2	37.9	38.8	N.S.	6%
Mean	33.9	31.3-	35.4	36.1	35.3	3.6	
			Upper and Central South				
Blairsville, Ga.	31.7	33.1	34.4	31.9	40.2	N.S.	13%
Martin, Tenn.	37.2	40.4	41.7	36.3	34.5	N.S.	13%
Mean	34.5	36.7	38.1	34.1	37.3	N.S.	
			Delta				
Henderson, Ky.	26.8-	30.9	33.4	32.1	29.4-	4.4	6%
Portageville, Mo.(A)	51.4+	44.1	47.1	45.9	39.8-	4.4	6%
Portageville, Mo.(B)	35.1	38.0	33.6	32.9	28.0	N.S.	13%
Keiser, Ark.(A)	41.4	43.5	46.6	36.1	41.3	N.S.	13%
Keiser, Ark.(B)	34.1	26.4	30.0	24.0	27.9	N.S.	17%
Marianna, Ark.	32.6	38.1	32.7	32.5	35.5	N.S.	13%
Stoneville, Miss.(B)	21.9	21.3-	26.2	19.0-	20.1-	2.8	7%
Bixby, Okla.	36.8	29.9	26.4	29.6	39.9	8.0	14%
Mean	35.0	34.0	34.5	31.5	32.7	N.S.	

Table 3. - Chemical composition and seed size for the strains in Uniform Group IV, 1964

Location	Kent	Scott	Clark 63	Delmar	D60-5702	D60-5818
			Oil Percentage			
Linkwood, Md.	22.1	20.9	22.7	22.1	22.0	20.8
Warsaw, Va.	23.0	22.5	22.6	22.7	22.1	21.7
Henderson, Ky.	21.4	20.6	21.3	21.3	21.2	20.0
Portageville, Mo.(A)	22.9	23.1	24.4	22.7	22.5	22.0
Keiser, Ark.(B)	21.7	22.8	22.8	23.2	22.5	23.0
Bixby, Okla.	21.6	21.5	20.7	22.5	21.9	21.3
Mean	22.1	21.9	22.4	22.4	22.0	21.5
			Protein Percentage			
Linkwood, Md.	41.6	38.2	40.7	41.4	40.7	40.5
Warsaw, Va.	40.1	38.0	39.7	39.1	39.0	39.8
Henderson, Ky.	41.7	41.6	42.9	41.8	40.8	41.7
Portageville,Mo.(A)	38.3	36.0	38.4	36.4	39.5	39.0
Keiser, Ark.(B)	39.4	35.9	38.3	37.4	37.8	37.3
Bixby, Okla.	40.6	39.9	42.3	41.0	41.7	41.4
Mean	40.3	38.3-	40.4	39.5	39.9	40.0
			Grams Per 100 Seeds			
Linkwood, Md.	20.7	17.7	18.0	18.6	16.2	17.3
Warsaw, Va.	20.9	17.3	16.9	19.7	15.4	16.6
Henderson, Ky.	16.8	14.4	16.3	17.4	14.5	14.5
Keiser, Ark.(B)	15.0	13.0	15.3	13.0	12.7	12.0
Bixby, Okla.	22.4	15.9	19.1	19.5	18.2	16.7
Mean	19.2	15.7-	17.1-	17.6-	15.4-	15.4-

Table 3. - (continued)

Location	D60-5847	D61-214	D61-238	L57-0034	Md59-285	Md59-1552	L.S.D. (.05)
			Oil Percentage				
Linkwood, Md.	21.6	21.3	21.4	22.2	22.0	21.4	
Warsaw, Va.	23.1	21.6	21.0	22.7	22.3	22.3	
Henderson, Ky.	20.5	21.1	20.1	22.2	21.4	20.7	
Portageville, Mo.(A)	22.9	22.2	23.9	23.3	22.8	23.2	
Keiser, Ark.(B)	23.7	22.3	22.5	23.8	22.4	21.8	
Bixby, Okla.	21.2	22.6	21.4	21.9	21.2	22.0	
Mean	22.2	21.9	21.7	22.7	22.0	21.9	0.7
			Protein Percentage				
Linkwood, Md.	40.3	38.6	39.6	39.8	41.0	41.6	
Warsaw, Va.	38.5	38.0	39.3	38.7	39.5	40.3	
Henderson, Ky.	40.9	40.7	42.2	41.9	41.3	41.9	
Portageville, Mo.(A)	39.1	38.4	38.8	36.8	38.5	38.2	
Keiser, Ark.(B)	35.5	37.6	38.0	38.3	39.6	39.6	
Bixby, Okla.	40.3	39.4	40.4	40.9	42.8	40.6	
Mean	39.1-	38.8-	39.7	39.4-	40.5	40.4	0.9
			Grams Per 100 Seeds				
Linkwood, Md.	16.8	16.2	16.7	17.0	19.1	19.4	
Warsaw, Va.	15.9	15.0	15.1	16.9	19.1	19.2	
Henderson, Ky.	13.4	13.2	14.4	16.0	15.4	14.8	
Keiser, Ark.(B)	11.7	10.7	11.3	14.3	14.3	12.3	
Bixby, Okla.	16.6	15.7	16.8	16.8	16.3	16.3	
Mean	14.9-	14.2-	14.9-	16.2-	16.8-	16.4-	1.2

Table 4. - Relative maturity data, days earlier (-) or later (+) than Kent, for the strains in Uniform Group IV, 1964

Location	Date Planted	Kent Matured	Scott	Clark 63	Delmar	D60-5702
			East Coast			
Linkwood, Md.	6-5	9-29	+4	-9	+2	-6
Warsaw, Va.	5-19	10-2	-1	-11	+1	-5
Orange, Va.	5-25	10-13	0	-9	0	0
Mean		10-4	+1	-10	+1	-4
			Upper and Central South			
Blairsville, Ga.	5-26	9-27	-3	-2	-4	-4
Martin, Tenn.	5-20	9-26	0	+3	-4	-5
Mean		9-27	-2	0	-4	-5
			Delta			
Henderson, Ky.	5-5	10-14	0	-14	0	0
Portageville, Mo.(A)	5-18	9-21	+5	-4	+4	+3
Portageville, Mo.(B)	5-19	9-24	-1	-8	+1	0
Keiser, Ark.(A)	4-30	9-14	+4	0	+4	0
Keiser, Ark.(B)	5-8	9-25	+2	-1	+1	0
Marianna, Ark.	5-15	9-12	+7	-8	+2	+1
Stoneville, Miss.(B)	7-6	10-13	-5	-6	-3	-1
Bixby, Okla.	5-19	10-16	-1	-2	0	-4
Mean		9-29	+1	-5	+1	0

Table 4. - (continued)

Location	D60-5818	D60-5847	D61-214	D61-238	L57-0034	Md59-285	Md59-1552
			East Coast				
Linkwood, Md.	+3	+2	+2	+4	-7	-1	+6
Warsaw, Va.	+8	-3	0	+7	-7	-3	+6
Orange, Va.	0	0	-2	0	-4	0	+4
Mean	+4	0	0	+4	-6	-1	+5
			Upper and Central South				
Blairsville, Ga.	-4	-3	-5	-5	-5	-3	-1
Martin, Tenn.	-2	-7	-4	-2	+2	+1	-7
Mean	-3	-5	-5	-4	-2	-1	-4
			Delta				
Henderson, Ky.	0	0	0	0	0	0	0
Portageville, Mo.(A)	+5	+5	+5	+5	-4	-1	+8
Portageville, Mo.(B)	+3	0	+1	+3	-7	-1	+3
Keiser, Ark.(A)	+8	0	+6	+5	+2	+1	+4
Keiser, Ark.(B)	+2	0	-2	0	+3	0	+4
Marianna, Ark.	+11	+9	+9	+9	0	+3	+9
Stoneville, Miss.(B)	0	0	0	-2	-6	-6	0
Bixby, Okla.	-1	-1	-2	-4	+4	-4	+2
Mean	+4	+2	+2	+2	-1	-1	+4

Table 5. - Plant height for the strains in Uniform Group IV, 1964

Location	Kent	Scott	Clark 63	Delmar	D60-5702	D60-5818
			East Coast			
Linkwood, Md.	41	46	43	43	40	44
Painter, Va.	27	32	27	28	25	29
Warsaw, Va.	37	42	38	40	37	41
Orange, Va.	33	33	33	37	34	37
Mean	35	38	35	37	34	38
			Upper and Central South			
Blairsville, Ga.	34	33	33	32	36	39
Martin, Tenn.	35	31	30	27	31	28
Mean	35	32	32	30	34	34
			Delta			
Henderson, Ky.	46	40	53	44	46	51
Portageville, Mo.(A)	47	48	49	50	45	49
Portageville, Mo.(B)	37	36	36	38	35	37
Keiser, Ark.(A)	33	34	32	40	37	37
Keiser, Ark.(B)	30	33	31	20	29	29
Marianna, Ark.	37	35	39	37	38	41
Stoneville, Miss.(B)	32	33	32	29	30	33
Bixby, Okla.	36	38	37	35	31	37
Mean	37	37	39	37	36	39

Table 5. - (continued)

Location	D60-5847	D61-214	D61-238	L57-0034	Md59-285	Md59-1552
			East Coast			
Linkwood, Md.	47	43	42	39	40	44
Painter, Va.	27	28	27	24	26	26
Warsaw, Va.	42	40	36	33	35	41
Orange, Va.	35	29	32	26	30	34
Mean	38	35	34	31	33	36
			Upper and Central South			
Blairsville, Ga.	39	32	30	31	32	39
Martin, Tenn.	31	37	34	34	34	32
Mean	35	35	32	33	33	36
			Delta			
Henderson, Ky.	43	36	44	36	39	44
Portageville, Mo.(A)	50	46	46	44	46	57
Portageville, Mo.(B)	41	36	36	33	33	43
Keiser, Ark.(A)	38	36	38	32	31	42
Keiser, Ark.(B)	32	30	33	28	27	36
Marianna, Ark.	41	37	36	37	32	41
Stoneville, Miss.(B)	30	29	29	27	29	33
Bixby, Okla.	37	35	35	31	31	35
Mean	39	36	37	34	34	41

Table 6. - Lodging scores for the strains in Uniform Group IV, 1964

Location	Kent	Scott	Clark 63	Delmar	D60-5702	D60-5818
			East Coast			
Linkwood, Md.	2.3	3.0	2.5	2.2	2.7	3.0
Painter, Va.	1.0	1.3	1.0	1.0	1.0	1.3
Warsaw, Va.	1.0	1.7	1.3	1.0	1.1	1.7
Orange, Va.	1.0	1.0	2.0	2.0	1.0	2.0
			Upper and Central South			
Blairsville, Ga.	1.0	1.0	2.0	1.3	1.3	1.3
Martin, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
			Delta			
Henderson, Ky.	3.0	2.0	3.0	2.0	2.0	2.0
Portageville, Mo.(A)	1.0	1.7	1.7	1.7	2.2	2.8
Portageville, Mo.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Keiser, Ark.(A)	2.3	2.0	1.7	2.0	1.3	1.7
Keiser, Ark.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, Ark.	1.3	1.7	2.0	1.0	1.7	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
Bixby, Okla.	1.0	2.0	2.0	2.0	1.0	2.0

Table 6. - (continued)

Location	D60-5847	D61-214	D61-238	L57-0034	Md59-285	Md59-1552
			East Coast			
Linkwood, Md.	3.0	3.0	3.0	2.7	2.3	2.2
Painter, Va.	1.5	1.3	1.3	1.0	1.0	1.0
Warsaw, Va.	2.0	2.2	1.5	1.2	1.0	1.0
Orange, Va.	1.0	2.0	2.0	2.0	2.0	2.0
			Upper and Central South			
Blairsville, Ga.	1.7	1.3	1.3	1.0	1.3	1.0
Martin, Tenn.	2.0	2.0	1.0	2.0	1.0	1.0
			Delta			
Henderson, Ky.	2.0	3.0	1.0	2.0	1.0	1.0
Portageville, Mo.(A)	2.3	3.3	2.3	1.7	1.3	1.5
Portageville, Mo.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Keiser, Ark.(A)	2.3	3.3	2.3	2.7	1.7	1.7
Keiser, Ark.(B)	1.0	1.7	2.0	1.0	1.0	1.0
Marianna, Ark.	2.5	2.0	1.7	2.0	1.5	1.3
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
Bixby, Okla.	1.0	2.0	2.0	1.0	1.0	1.0

Table 7. - Seed quality scores for the strains in Uniform Group IV, 1964

Location	Kent	Scott	Clark 63	Delmar	D60-5702	D60-5818
			East Coast			
Linkwood, Md.	3.0	3.0	2.0	3.0	3.0	3.0
Painter, Va.	4.5	3.0	3.7	3.2	2.0	3.7
Warsaw, Va.	3.5	3.0	3.0	1.8	1.5	2.5
Orange, Va.	3.0	3.0	2.0	2.0	2.0	3.0
			Delta			
Henderson, Ky.	2.0	2.0	2.5	2.0	1.3	1.0
Portageville, Mo.(A)	2.2	2.2	2.2	2.8	1.8	1.8
Portageville, Mo.(B)	3.0	2.0	2.0	2.5	2.0	1.8
Keiser, Ark.(A)	3.7	3.7	4.0	4.0	2.0	2.3
Keiser, Ark.(B)	3.7	3.0	4.0	4.0	2.7	2.0
Marianna, Ark.	4.0	3.7	3.3	4.3	2.3	3.0
Stoneville, Miss.(B)	2.0	2.3	2.0	2.0	2.0	2.0
Bixby, Okla.	1.0	2.0	2.0	2.0	2.0	1.0

Table 7. - (continued)

Location	D60-5847	D61-214	D61-238	L57-0034	Md59-285	Md59-1552
		East Coast				
Linkwood, Md.	3.0	3.0	4.0	2.0	3.0	3.0
Painter, Va.	2.7	2.2	2.8	3.0	3.7	2.0
Warsaw, Va.	1.5	1.0	3.0	1.8	2.0	2.5
Orange, Va.	3.0	3.0	4.0	2.0	2.0	1.0
		Delta				
Henderson, Ky.	2.0	2.0	1.0	2.0	2.0	2.0
Portageville, Mo.(A)	2.1	1.7	1.3	1.9	1.9	1.8
Portageville, Mo.(B)	1.8	1.5	1.8	2.0	2.5	2.0
Keiser, Ark.(A)	2.3	3.0	2.7	3.7	3.3	2.7
Keiser, Ark.(B)	3.0	2.7	2.7	3.0	3.7	3.0
Marianna, Ark.	3.3	3.0	3.0	3.3	4.0	3.3
Stoneville, Miss.(B)	2.0	2.0	2.0	1.7	2.0	2.0
Bixby, Okla.	2.0	2.0	2.0	2.0	2.0	2.0

PRELIMINARY GROUP IVS

1964

Five Preliminary Group IV nurseries, including 28 experimental strains along with Kent and Delmar as checks, were planted. The parentage of these strains is reported in table 8. Performance data are summarized in tables 9 through 14. Differences in seed yield were significant within each of the 4 nurseries summarized. The combined analysis of variance for seed yield showed yields of 6 strains to be significantly less than the yield of Kent. Only one strain, D62-6252, yielded significantly less than Delmar. There were no strains which yielded significantly better than either Kent or Delmar.

All strains of IV maturity previously tested have had an indeterminate growth habit. Two strains, D62-6225 and D62-6252, had a determinate growth type. Both strains are selections from Hill x Sioux and were selected for a higher protein percentage. Both produced seed approximately 9% higher in protein than Kent and also had a lower oil percentage. The growth and performance of these strains was reasonably satisfactory in view of the poor agronomic qualities of the Sioux parent.

Twelve strains produced seed having significantly lower protein content than Kent. None of these were significantly higher in oil content than Kent. One strain had significantly higher oil content than Kent and equalled Kent in protein percentage.

Nine of the ten Delaware selections were much too late to be considered to be of Group IV maturity. These lines averaged 16 to 19 days later in maturity than Kent.

Only one strain shattered as badly as Kent. This was C1316, a rogue in Kent. Twenty of the 28 strains were excellent in seed holding. Twenty-two strains were resistant to bacterial pustule. The Stoneville nursery was planted July 6 -- too late to obtain good observation on phytophthora rot development. The two strains S62-4048 and S62-4051 are Scott types to which resistance to phytophthora rot has been added. D61-198 and D61-243 have the CNS type of field resistance.

Purple seed stain development was rather severe at Warsaw and moderate at Linkwood. None of the strains showed as much purple stain development as Kent; but C1316, the rogue in Kent, followed closely. There were 5 strains of Group IV maturity which showed very little purple stain development.

Among the more promising strains which should merit being advanced to Uniform Group IV are C1311, D61-198, D61-6225, S59-119, and S62-4051.

Table 8. - Parentage of the strains in Preliminary Group IVS, 1964

	Vareity or strain	Parentage	Generation Composited
1.	Kent		
2.	Delmar		
3.	C1311	Wabash x C1069	F_6
4.	C1316	Rogue in Kent	
5.	D60-5729	Hill x D53-354	F_5
6.	D60-5764	Hill x D53-354	F_5
7.	D60-5777	Hill x D53-354	F_5
8.	D61-198	D54-3270 x D54-2437	F_5
9.	D61-243	D54-3270 x D54-2437	F_5
10.	D62-6225	Hill x Sioux	F_5
11.	D62-6252	Hill x Sioux	F_5
12.	Md59-290-5	C799 x Perry	
13.	S59-119	S5-27 x S2-7160	F_5
14.	S59-806	S5-46 x S2-7160	F_5
15.	S62-10	S5-45 x S5-35	F_7
16.	S62-18	S2-7160 x S4-1714	F_7
17.	S62-19	S2-7160 x S4-1714	F_7
18.	S62-49	S2-7160 x C985	F_7
19.	S62-4048	Scott(6) x Blackhawk	F_3
20.	S62-4051	Scott(6) x Blackhawk	F_3
21.	UD60-1135	FC33243 x D49-2491	
22.	UD61-1801	FC33243 x D49-2491	
23.	UD61-1802	FC33243 x D49-2491	
24.	UD61-1803	FC33243 x D49-2491	
25.	UD61-1810	FC33243 x D49-2491	
26.	UD61-1818	FC33243 x D49-2491	
27.	UD61-1821	FC33243 x D49-2491	
28.	UD61-1833	FC33243 x D49-2491	
29.	UD61-1845	FC33243 x D49-2491	
30.	UD61-1861	FC33243 x D49-2491	

Table 9. - General summary of performance for the strains grown in Preliminary Group IVS, 1964

Strain	Seed Yield	Maturity Index	Ht.	Percent Oil	Percent Protein	Shatter	Bacterial Pustule	Purple Stain
Kent	38.2	9-29	37	22.9	39.7	4.0	3.0	5.0
Delmar	35.6	-1	40	23.1	39.3	1.0	3.0	3.0
C1311	37.1	-4	41	23.3	39.6	1.5	3.0	1.0
C1316	32.2-	-8	36	21.9-	40.9+	4.5	3.0	4.0
D60-5729	37.3	+2	43	21.8-	39.3	1.3	1.0	3.0
D60-5764	35.4	0	42	22.0	38.8	1.3	1.0	3.0
D60-5777	34.7	0	42	21.0-	40.0	1.0	1.0	3.0
D61-198	38.2	+5	45	21.7-	40.2	1.3	1.0	3.0
D61-243	34.0	-3	43	22.4	39.4	1.8	1.0	3.0
D62-6225	32.7-	-1	29	18.5-	43.1+	1.0	1.0	1.0
D62-6252	28.8-	-3	35	18.2-	43.1+	2.0	1.0	1.0
Md59-290-5	33.8	-3	35	24.1+	39.5	1.5	3.0	3.0
S59-119	38.0	-4	37	22.1	39.7	1.0	1.0	3.0
S59-806	38.9	-1	40	22.8	36.9-	3.0	1.0	4.0
S62-10	33.7	-8	42	21.9-	39.5	3.0	2.0	2.0
S62-18 1/	35.1	-4	39	23.0	38.5-	2.5	1.0	3.0
S62-19	34.5	-3	41	22.7	39.4	3.0	1.0	3.0
S62-49	38.4	-2	39	22.9	38.3-	1.3	1.0	4.0
S62-4048	36.1	-3	44	22.8	36.6-	2.5	1.0	4.0
S62-4051	37.8	-1	44	22.5	36.4-	3.5	1.0	2.0
UD60-1135 1/	34.8	+3	41	22.8	39.5	1.0	1.0	4.0
UD61-1801	33.4	+18	48	21.3-	38.5-	1.0	1.0	1.0
UD61-1802	33.2	+17	49	22.5	37.5-	1.0	3.0	2.0
UD61-1803	33.7	+17	52	22.9	38.3-	1.0	1.0	2.0
UD61-1810	32.2-	+17	47	22.3	38.2-	1.0	1.0	2.0
UD61-1818	33.9	+18	50	22.7	37.5-	1.0	1.0	2.0
UD61-1821	31.7-	+16	45	21.0-	38.9	1.0	3.0	2.0
UD61-1833	37.0	+19	48	21.7-	38.0-	1.0	1.0	1.0
UD61-1845	36.3	+17	46	21.6-	38.0-	1.0	1.0	1.0
UD61-1861	31.2-	+18	47	21.0-	37.9-	1.0	1.0	3.0
L.S.D. (.05)	5.5			1.0	1.2			
L.S.D. (.01)	N.S.			1.3	1.6			

1/ Segregating for flower color.

Table 10. - Seed yield, in bushels per acre, for the strains in Preliminary Group IVS, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss.
Kent	39.6	44.8	41.6	26.7
Delmar	32.2-	43.4	39.2	27.7
C1311	37.4	39.4-	44.6	27.1
C1316	33.2-	36.5-	43.0	16.0-
D60-5729	33.1-	41.7	46.5	27.9
D60-5764	33.8	40.4	43.8	23.7
D60-5777	32.8-	41.6	40.7	23.9
D61-198	39.0	38.2-	43.3	32.3+
D61-243	32.4-	36.0-	43.1	24.6
D62-6225	29.5-	39.3-	39.1	22.0
D62-6252	30.0-	28.6-	36.0	20.5-
Md59-290-5	30.4-	43.7	38.4	22.6
S59-119	34.2	42.3	49.8+	25.6
S59-806	33.8	45.6	50.7+	25.3
S62-10	32.4-	35.8-	41.6	25.2
S62-18	39.2	36.5-	47.3	17.4-
S62-19	34.8	36.9-	42.0	24.5
S62-49	38.0	43.3	44.2	28.2
S62-4048	36.4	39.7-	46.1	22.1
S62-4051	38.3	42.1	47.6	23.2
UD60-1135	34.6	40.2	35.0	29.4
UD61-1801	27.3-	36.7-	36.6	32.8+
UD61-1802	31.4-	38.4-	33.2-	29.9
UD61-1803	32.3-	40.2	33.1-	29.2
UD61-1810	27.0-	35.3-	34.2	32.5+
UD61-1818	28.2-	34.5-	42.0	30.9
UD61-1821	27.8-	35.2-	36.5	27.3
UD61-1833	36.8	38.2-	41.0	32.4+
UD61-1845	36.0	39.6-	39.4	30.0
UD61-1861	28.0-	32.2-	34.3	30.2
L.S.D. (.05)	6.1	4.9	7.7	5.0
C.V.	9%	6%	9%	9%

Table 11. - Oil percentages for the strains in Preliminary Group IVS, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.
Kent	22.5	23.0	23.2
Delmar	22.6	23.3	23.4
C1311	22.9	23.9	23.1
C1316	22.2	22.0	21.5
D60-5729	21.8	21.8	21.8
D60-5764	21.9	22.1	21.9
D60-5777	20.8	21.3	21.0
D61-198	21.3	21.4	22.4
D61-243	21.6	23.0	22.6
D62-6225	17.5	19.1	18.8
D62-6252	17.2	18.6	18.9
Md59-290-5	23.8	24.6	24.0
S59-119	22.0	22.2	22.0
S59-806	22.7	22.6	23.2
S62-10	21.0	22.6	22.0
S62-18	22.8	23.2	23.0
S62-19	22.5	23.2	22.4
S62-49	22.7	23.1	22.8
S62-4048	22.6	23.3	22.5
S62-4051	21.8	23.3	22.3
UD60-1135	22.4	23.3	22.8
UD61-1801	22.0	21.0	21.0
UD61-1802	22.9	22.7	22.0
UD61-1803	23.1	22.6	23.1
UD61-1810	21.2	23.0	22.7
UD61-1818	22.6	22.9	22.5
UD61-1821	19.7	21.6	21.8
UD61-1833	21.3	21.8	21.9
UD61-1845	21.6	21.5	21.7
UD61-1861	18.1	22.7	22.3

Table 12. - Protein percentages for the strains in Preliminary Group IVS, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.
Kent	40.1	39.6	39.5
Delmar	40.8	38.1	39.0
C1311	41.6	37.2	40.1
C1316	41.6	39.8	41.4
D60-5729	39.6	38.2	40.2
D60-5764	38.5	37.8	40.1
D60-5777	40.5	39.4	40.0
D61-198	40.8	39.7	40.0
D61-243	40.0	38.5	39.6
D62-6225	43.7	42.1	43.4
D62-6252	43.6	41.5	44.2
Md59-290-5	39.7	38.9	39.9
S59-119	39.9	39.1	40.2
S59-806	36.7	36.9	37.1
S62-10	40.9	38.5	39.0
S62-18	38.5	37.7	39.3
S62-19	39.8	37.7	40.6
S62-49	38.2	38.2	38.4
S62-4048	36.8	35.5	37.5
S62-4051	36.9	35.6	36.8
UD60-1135	40.6	37.8	40.0
UD61-1801	39.0	38.4	38.2
UD61-1802	38.6	37.0	37.0
UD61-1803	39.0	38.6	37.4
UD61-1810	40.2	36.9	37.5
UD61-1818	38.6	36.8	37.1
UD61-1821	38.9	38.9	39.0
UD61-1833	38.5	37.9	37.5
UD61-1845	38.4	37.7	37.9
UD61-1861	39.0	37.3	37.5

Table 13. - Plant height for the strains in Preliminary Group IVS, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss.
Kent	38	38	43	29
Delmar	43	42	46	30
C1311	42	41	47	35
C1316	37	37	41	30
D60-5729	45	46	50	32
D60-5764	44	43	47	32
D60-5777	44	40	46	35
D61-198	46	46	51	38
D61-243	46	46	46	32
D62-6225	29	35	26	24
D62-6252	38	40	34	26
Md59-290-5	37	34	38	29
S59-119	34	38	45	30
S59-806	40	40	45	34
S62-10	44	42	46	36
S62-18	42	40	44	31
S62-19	42	42	46	33
S62-49	40	41	42	31
S62-4048	46	46	48	37
S62-4051	45	45	46	36
UD60-1135	43	42	44	34
UD61-1801	48	52	54	39
UD61-1802	49	52	58	36
UD61-1803	50	50	57	39
UD61-1810	46	48	54	38
UD61-1818	50	51	57	39
UD61-1821	50	46	50	33
UD61-1833	47	49	58	36
UD61-1845	46	48	55	36
UD61-1861	44	50	58	34

Table 14. - Seed quality scores for the strains in Preliminary Group IVS, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss.
Kent	3.0	3.8	2.3	2.0
Delmar	3.0	2.0	2.8	2.0
C1311	3.0	2.0	2.0	2.5
C1316	3.0	3.8	2.5	2.5
D60-5729	3.0	2.0	2.1	2.0
D60-5764	3.0	2.5	2.0	2.5
D60-5777	3.0	2.0	1.8	2.0
D61-198	3.0	3.0	2.2	2.0
D61-243	3.0	2.0	2.2	2.0
D62-6225	4.0	2.0	1.9	2.0
D62-6252	4.0	1.8	1.9	2.5
Md59-290-5	3.0	2.5	2.4	2.0
S59-119	3.0	2.5	2.2	2.0
S59-806	3.0	3.0	2.0	2.0
S62-10	3.0	3.0	1.9	2.0
S62-18	3.0	3.0	2.3	2.5
S62-19	3.0	2.5	2.1	2.5
S62-49	3.0	2.5	1.9	2.0
S62-4048	4.0	3.4	2.0	2.0
S62-4051	4.0	2.5	2.7	3.0
UD60-1135	4.0	3.0	2.4	2.5
UD61-1801	2.0	1.0	2.0	1.5
UD61-1802	2.0	1.2	2.2	3.0
UD61-1803	2.0	1.2	2.4	2.0
UD61-1810	2.0	1.5	1.8	2.0
UD61-1818	2.0	1.2	2.0	2.0
UD61-1821	2.0	1.5	2.0	2.0
UD61-1833	3.0	1.5	2.0	2.0
UD61-1845	3.0	1.5	2.2	2.0
UD61-1861	2.0	1.8	1.9	2.0

UNIFORM GROUP V

1964

	Variety or strain	Parentage	Generation Composited
1.	Hill	D632-15 x D49-2525	F_5
2.	Dorman	Dunfield x Arksoy	F_6
3.	D59-693	Hill x D52-810	F_5
4.	N59-6926	Hill x D52-810	F_5
5.	N59-6955	Hill x D52-810	F_5
6.	N60-6053	Hill x D49-2491	F_5
7.	R60-66	Dortchsoy 67 x Lee	
8.	D61-901	Hill(2) x D51-4877	F_5
9.	N59-6091	Hill x D52-810	F_5
10.	N59-6913	Hill x D52-810	F_5
11.	N60-6056	Hill x D49-2491	F_5
12.	V61-20	Dorman x Hood	

Background of strains used as parents:

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

D49-2525 and D49-2491 are sister strains 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.

D51-4877 is a selection from Roanoke x N45-745 which was included in Uniform Group VII for the years 1954-1956.

Thirty-three Uniform Group V nurseries were planted. Results of 28 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. Two- and three-year oil and protein percentages are also reported.

Seed yield differences among strains were significant at 14 of the 28 locations. The combined analysis of variance for mean seed yields by production regions showed differences among strains to be significant in the East Coast, Upper and Central, and Delta regions.

D59-693 has been grown 4 years and has been continued as a later maturing check. Seed yields have consistently run above the yield for Hill. The 3-year yield performance of N59-6926 and N59-6955 is very similar to that of D59-693, but neither holds its seed as well.

The 2-year means for N60-6053 are somewhat below the means for D59-693. R60-66 has equalled D59-693 in the East and Upper and Central and has averaged higher in yield in the Delta and West. R60-66 does not hold its seed as well as Hill or D59-693.

D61-901 planting seed was mixed and, consequently, the results obtained cannot be considered a true performance of this strain. Seed yields of N59-6091 and N60-6056 were very similar to D59-693 in all regions. N59-6913 averaged 1.7 bushel above D59-693 in the East, while V60-20 yielded 4.0 bushels better. V60-20 has rather large seed.

Dorman and V60-20 were the only two strains which did not show any hilum color diffusion at Plymouth and Willard.

Table 15. - General summary of performance for the strains in Uniform Group V, 1964

	Hill	Dorman	D59-693	N59-6926	N59-6955	N60-6053
Seed Yield - 1964						
East Coast	35.4	35.2	37.4+	38.3+	37.5+	37.8+
Upper & Central South	32.5	29.8	33.1	32.8	32.0	30.9
Delta	37.1	36.3	36.5	37.0	38.5	35.6
West	36.9	33.5	38.4	37.7	36.8	36.5
- 1963-64						
East Coast	33.3	33.0	36.0	36.0	35.9	35.0
Upper & Central South	30.0	28.3	33.2	31.3	31.1	29.7
Delta	36.3	35.9	37.5	37.9	39.1	36.4
West	32.9	29.3	34.9	34.8	36.4	33.1
- 1962-64						
East Coast	32.8	32.6	36.4	36.2	36.0	
Upper & Central South	23.1	26.3	32.8	30.6	30.4	
Delta	35.7	34.3	38.7	38.1	38.6	
West	31.1	27.5	35.9	36.0	36.0	
Oil Content - 1964	21.2	21.7+	21.0	20.9	21.6+	19.7-
- 1963-64	21.0	21.4	20.8	20.8	21.2	19.6
- 1962-64	20.9	21.1	20.8	20.8	21.2	
Protein Content - 1964	39.7	38.7-	40.0	39.9	38.7-	41.4+
- 1963-64	39.1	38.7	39.7	39.7	38.8	41.1
- 1962-64	39.2	38.9	39.7	39.8	38.9	
Seed Size	13.8	14.5	14.0	14.8+	13.7	13.0-
Maturity Index	10-3	+2	+5	+8	+5	+4
Height	32	35	31	34	34	32
Bacterial Pustule 1/	1.0	4.0	1.0	1.0	1.0	1.0
Phytophthora Rot 1/	1.0	2.0	1.0	1.0	1.5	1.0
Shattering 2/	1.0	2.0	1.0	2.0	2.0	2.0
Mottled Seed 3/	3.0	1.0	3.0	2.0	3.0	3.0
Purple Stain 4/	2.0	3.0	2.0	1.0	2.0	2.0
Flower Color	W	W	W	W	W	W
Pubescence Color	T	G	G	T	G	T

1/ Stoneville data.
2/ Stoneville and State College data.
3/ Painter and Plymouth data.
4/ Warsaw data.

Table 15. - (continued)

	R60-66	D61-901	N59-6091	N59-6913	N60-6056	V61-20
Seed Yield - 1964						
East Coast	39.3+	36.7	37.1	39.1+	36.7	41.4+
Upper & Central South	34.7	31.3	32.0	32.5	31.9	35.2
Delta	40.2+	36.2	36.6	36.6	35.6	37.5
West	38.7	34.9	39.0	37.6	36.6	36.7
- 1963-64						
East Coast	36.5					
Upper & Central South	33.2					
Delta	40.0					
West	36.5					
- 1962-64						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1964	21.3	20.9	19.8-	20.8-	20.3-	21.3
- 1963-64	21.1					
- 1962-64						
Protein Content - 1964	39.4	38.8-	40.8+	40.0	40.9+	38.5-
- 1963-64	39.6					
- 1962-64						
Seed Size	15.1+	13.8	14.0	13.8	13.2	17.8+
Maturity Index	+3	+7	+4	+4	+2	+7
Height	33	38	31	31	33	34
Bacterial Pustule[1/]	1.0	1.0	1.0	1.0	1.0	3.0
Phytophthora Rot [1/]	1.0	1.0	1.0	1.0	1.0	1.0
Shattering[2/]	2.5	1.0	2.0	1.0	1.0	2.0
Mottled Seed[3/]	2.0	4.0	2.0	3.0	2.0	1.0
Purple Stain[4/]	2.0	1.0	2.0	2.0	3.0	2.0
Flower Color	P	W	W	W	W	P
Pubescence Color	G	T	T	G	T	G

Table 16. - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1964

Location	Hill	Dorman	D59-693	N59-6926	N59-6955	N60-6053	R60-66
			East Coast				
Georgetown, Del.*	13.8	17.1	22.0	21.1	22.4	13.4	26.4
Linkwood, Md.	30.2	30.1	29.5	29.9	32.2	30.3	34.5+
Painter Va.	37.3	38.2	41.0	38.4	40.4	38.5	44.0
Warsaw, Va.	37.5	36.2	39.4	42.3+	39.5	40.9	41.6+
Petersburg, Va.	33.3	33.4	36.9	38.1	34.8	33.5	36.1
Norfolk, Va.	41.1	40.2	38.1-	38.3-	40.4	41.9	40.0
Holland, Va.	33.2	36.8	40.9+	41.2+	38.9+	39.6+	44.2+
Plymouth, N. C.	34.8	31.8	35.9	39.8	35.9	39.5	34.4
Mean	35.4	35.2	37.4+	38.3+	37.5+	37.8+	39.3+
			Upper & Central South				
Orange, Va.	23.6	25.0	22.3	21.2	19.7	20.0	25.6
Martin, Tenn.	35.8	26.8	30.4	30.8	32.7	33.6	33.6
Milan, Tenn.	43.7	37.6	41.4	44.7	42.9	40.6	42.7
Jackson, Tenn.	40.3	41.9	47.8+	44.9	42.5	44.7	48.4+
Belle Mina, Ala.	16.2	18.5	14.4	18.1	16.5	19.1	19.9+
Blairsville, Ga.	35.1	27.4	36.9	39.0	37.8	27.1	38.8
State College, Miss.	32.6	31.2	38.4+	30.9	32.2	30.9	33.6
Mean	32.5	29.8	33.1	32.8	32.0	30.9	34.7
			Delta				
Henderson, Ky.	35.0	33.7	34.1	32.7	35.1	34.0	37.4
Portageville, Mo.(A)	40.2	38.0	40.7	39.5	39.5	36.8	39.2
Portageville, Mo.(B)	37.0	34.9	36.6	36.3	41.5	34.7	40.9
Keiser, Ark.(A)	43.4	38.5	38.1	38.0	43.4	37.6	42.7
Keiser, Ark.(B)	31.7	35.2	22.7-	30.5	32.7	31.5	33.7
Marianna, Ark.	22.8	23.7	24.8	22.2	24.9	21.4	28.6
Stoneville, Miss.(A)	42.6	40.0	45.7	43.5	44.8	42.1	50.1+
Stoneville, Miss.(B)	28.0	26.2	31.9	33.0+	33.7+	28.5	35.3+
St. Joseph, La.	53.2	56.0	53.6	57.6	51.3	53.6	54.0
Mean	37.1	36.3	36.5	37.0	38.5	35.6	40.2+
			West				
Stuttgart, Ark.	36.1	37.7	39.6	42.6+	40.1+	38.1	42.9+
Curtis, La.*	18.7	20.9	20.5	16.0	20.7	17.1	22.7
Bixby, Okla.	47.3	43.3	47.8	45.2	43.8	43.8	44.1
Lubbock, Texas	27.3	19.5	27.8	25.3	26.7	27.6	29.0
Halfway, Texas*	29.6	31.5	39.1+	25.8	27.7	28.6	22.9
Mean	36.9	33.5	38.4	37.7	36.8	36.5	38.7

* Not included in mean.
(+) - Strains yielding significantly more (odds 19:1 or greater) than Hill.
(-) - Strains yielding significantly less (odds 19:1 or greater) than Hill.

Table 16. - (continued)

Location	D61-901	N59-6091	N59-6913	N60-6056	V61-20	L.S.D. (.05)	C.V.
			East Coast				
Georgetown, Del.*	20.8	22.5	21.1	17.1	19.6	5.5	17%
Linkwood, Md.	28.4	33.3+	33.4+	30.8	34.1+	2.1	4%
Painter, Va.	38.4	40.0	41.6	37.9	40.1	N.S.	6%
Warsaw, Va.	38.9	40.8	39.7	37.5	45.3+	4.1	6%
Petersburg, Va.	36.1	34.7	39.5	38.7	38.0	N.S.	14%
Norfolk, Va.	39.3	38.9	42.6	40.6	48.6+	2.7	4%
Holland, Va.	42.0+	38.9+	39.4+	36.7	45.1+	4.9	7%
Plymouth, N. C.	33.8	32.8	37.6	34.5	38.5	N.S.	12%
Mean	36.7	37.1	39.1+	36.7	41.4+	1.9	
			Upper & Central South				
Orange, Va.	23.0	22.8	28.4+	23.9	24.5	4.6	12%
Martin, Tenn.	29.5	29.5	27.6	34.9	36.7	N.S.	15%
Milan, Tenn.	43.9	41.9	38.6	39.1	38.1	N.S.	9%
Jackson, Tenn.	45.1	46.4+	42.0	40.3	51.1+	5.2	7%
Belle Mina, Ala.	14.6	17.9	17.9	20.3+	20.9+	4.4	11%
Blairsville, Ga.	31.7	32.2	39.4	32.0	35.5	N.S.	19%
State College, Miss.	31.3	33.0	33.5	32.7	39.8+	3.1	5%
Mean	31.3	32.0	32.5	31.9	35.2	3.0	
			Delta				
Henderson, Ky.	31.4	36.5	34.1	33.0	36.3	N.S.	10%
Portageville, Mo.(A)	34.7	38.7	38.4	35.9	38.5	N.S.	5%
Portageville, Mo.(B)	35.3	36.2	37.9	38.8	39.5	4.4	7%
Keiser, Ark.(A)	36.6	35.8	41.9	42.2	41.6	N.S.	14%
Keiser, Ark.(B)	31.9	27.3-	28.0	29.3	32.1	4.3	8%
Marianna, Ark.	28.0	20.7	23.3	19.1	25.3	N.S.	16%
Stoneville, Miss.(A)	44.8	44.8	45.2	41.2	38.2-	4.2	6%
Stoneville, Miss.(B)	29.8	31.1	30.8	30.3	31.7	4.2	8%
St. Joseph, La.	53.8	58.5	50.0	50.4	54.0	N.S.	6%
Mean	36.2	36.6	36.6	35.6	37.5	2.3	
			West				
Stuttgart, Ark.	36.0	41.5+	42.5+	39.0	44.1+	3.6	5%
Curtis, La.*	25.9	24.7	24.5	24.9	16.9	N.S.	27%
Bixby, Okla.	45.7	50.7	47.5	46.3	42.8	N.S.	7%
Lubbock, Texas	23.0	24.8	22.9	24.5	23.0	N.S.	22%
Halfway, Texas*	31.5	31.5	33.4	30.5	37.2+	6.3	14%
Mean	34.9	39.0	37.6	36.6	36.7	N.S.	

Table 17. - Chemical composition and seed size for the strains in Uniform Group V, 1964

Location	Hill	Dorman	D59-693	N59-6926	N59-6955	N60-6053
			Oil Percentage			
Linkwood, Md.	20.6	21.0	20.4	21.0	21.8	20.9
Warsaw, Va.	20.2	20.0	20.3	21.3	22.0	19.9
Plymouth, N. C.	21.5	22.1	20.3	20.4	21.9	19.7
Henderson, Ky.	19.7	20.2	20.1	19.3	20.1	18.1
Portageville, Mo.(A)	20.7	21.5	19.9	21.0	20.9	18.0
Keiser, Ark.(B)	21.5	22.2	20.8	21.8	21.5	20.4
Stoneville, Miss.(A)	23.0	23.9	23.0	21.9	22.7	21.0
Stuttgart, Ark.	21.6	22.6	21.6	21.3	21.7	19.3
Bixby, Okla.	22.0	21.5	22.4	20.5	21.8	20.2
Mean	21.2	21.7+	21.0	20.9	21.6+	19.7-
			Protein Percentage			
Linkwood, Md.	40.3	38.7	40.1	39.3	38.8	39.7
Warsaw, Va.	38.8	39.0	38.9	38.6	37.7	39.8
Plymouth, N. C.	40.2	38.4	41.5	41.8	39.3	42.0
Henderson, Ky.	40.8	39.9	41.0	41.6	39.7	43.3
Portageville, Mo.(A)	38.9	37.2	39.9	39.0	38.3	41.7
Keiser, Ark.(B)	39.1	37.6	39.6	38.5	37.5	40.5
Stoneville, Miss.(A)	39.1	37.4	40.4	40.6	39.1	41.7
Stuttgart, Ark.	41.6	42.0	40.7	40.9	39.9	43.1
Bixby, Okla.	38.1	38.0	38.3	39.1	38.1	40.6
Mean	39.7	38.7-	40.0	39.9	38.7-	41.4+
			Grams per 100 Seeds			
Linkwood, Md.	15.7	17.4	16.0	16.2	15.5	15.9
Warsaw, Va.	15.6	17.1	16.7	18.1	16.7	15.4
Plymouth, N. C.	12.6	12.7	13.6	14.7	11.7	11.6
Henderson, Ky.	14.2	13.6	13.7	14.3	13.2	13.7
Keiser, Ark.(B)	10.7	12.0	10.7	11.3	10.3	10.3
Stoneville, Miss.(A)	12.8	12.4	13.6	13.8	13.6	11.6
Stuttgart, Ark.	12.7	14.3	14.3	13.7	13.7	12.3
Bixby, Okla.	15.9	16.6	13.0	16.6	14.5	13.2
Mean	13.8	14.5	14.0	14.8+	13.7	13.0-

Table 17. - (continued)

Location	R60-66	D61-901	N59-6091	N59-6913	N60-6056	V61-20	L.S.D. (.05)
			Oil Percentage				
Linkwood, Md.	21.7	20.5	19.9	20.3	20.9	21.5	
Warsaw, Va.	20.6	20.2	19.5	20.5	20.0	20.4	
Plymouth, N. C.	21.7	21.1	20.1	21.2	20.6	21.4	
Henderson, Ky.	19.5	19.5	17.2	18.7	19.1	20.2	
Portageville, Mo. (A)	20.9	20.2	19.2	20.2	20.0	20.9	
Keiser, Ark.(B)	20.9	21.1	20.0	20.9	19.9	21.7	
Stoneville, Miss.(A)	23.5	23.0	21.5	22.5	21.5	23.0	
Stuttgart, Ark.	21.0	21.0	19.9	20.9	19.5	21.6	
Bixby, Okla.	22.1	21.6	20.6	22.0	21.4	21.4	
Mean	21.3	20.9	19.8-	20.8-	20.3-	21.3	0.4
			Protein Percentage				
Linkwood, Md.	39.0	38.1	40.1	41.1	39.4	37.1	
Warsaw, Va.	39.3	37.8	39.8	39.0	39.7	38.5	
Plymouth, N. C.	40.6	40.1	41.7	40.9	41.7	40.2	
Henderson, Ky.	41.6	39.6	43.1	41.6	42.0	38.7	
Portageville, Mo.(A)	38.7	38.9	40.5	39.5	41.4	38.5	
Keiser, Ark.(B)	38.1	37.2	39.0	39.2	39.9	37.0	
Stoneville, Miss.(A)	39.1	39.1	41.1	40.0	40.9	39.2	
Stuttgart, Ark.	40.5	39.4	42.2	40.5	42.6	38.5	
Bixby, Okla.	38.0	38.7	39.3	38.2	40.8	38.8	
Mean	39.4	38.8-	40.8+	40.0	40.9+	38.5-	0.7
			Grams per 100 Seeds				
Linkwood, Md.	18.2	14.6	16.5	16.0	15.8	18.9	
Warsaw, Va.	17.9	16.7	16.1	16.2	15.2	21.1	
Plymouth, N. C.	14.5	13.7	13.0	13.0	11.9	18.2	
Henderson, Ky.	14.2	14.2	14.4	13.3	13.6	15.2	
Keiser, Ark.(B)	11.7	11.3	10.0	11.0	10.0	15.0	
Stoneville, Miss.(A)	14.6	12.2	14.1	14.0	13.0	15.5	
Stuttgart, Ark.	14.3	13.3	13.7	13.3	12.7	18.3	
Bixby, Okla.	15.3	14.6	14.5	13.6	13.3	20.5	
Mean	15.1+	13.8	14.0	13.8	13.2	17.8+	0.8

Table 18. - Relative maturity, days earlier (-) or later (+) than Hill, for the strains in Uniform Group V, 1964

Location	Date Planted	Hill Matured	Dorman	D59-693	N59-6926	N59-6955
			East Coast			
Georgetown, Del.*	5-21	10-15	+4	+7	+9	+5
Linkwood, Md.	6-5	10-14	+4	+6	+8	+7
Warsaw, Va.	5-19	10-19	0	+5	+6	+4
Plymouth, N. C.	5-13	9-30	+11	+9	+15	+8
Mean		10-11	+5	+7	+10	+6
			Upper and Central South			
Martin, Tenn.	5-20	9-29	+2	+5	+10	+5
Jackson, Tenn.	5-29	9-26	+7	+12	+14	+8
Belle Mina, Ala.	6-2	10-7	0	0	0	0
Blairsville, Ga.	5-26	10-10	0	+7	+5	+4
State College, Miss.	5-8	9-16	+1	0	+7	+2
Mean		9-30	+2	+5	+7	+4
			Delta			
Henderson, Ky.	5-5	10-22	0	0	0	0
Portageville, Mo.(A)	5-18	9-27	+4	+8	+13	+8
Portageville, Mo.(B)	5-19	9-26	+7	+12	+17	+11
Keiser, Ark.(B)	4-30	9-23	+1	+2	+6	+6
Keiser, Ark.(B)	5-8	9-30	-1	+6	+10	+8
Marianna, Ark.	5-15	10-6	-6	0	+7	+2
Stoneville, Miss.(A)	5-14	9-21	0	+4	+9	+4
Stoneville, Miss.(B)	7-6	10-18	-3	+2	+7	+7
St. Joseph, La.	5-18	9-14	-2	+4	+9	+8
Mean		10-1	0	+4	+9	+6
			West			
Stuttgart, Ark.	5-27	9-29	+6	+9	+13	+9
Curtis, La.	5-21	9-16	-4	+5	+8	+5
Bixby, Okla.	5-19	10-14	+1	+1	+5	+3
Mean		9-26	+1	+5	+9	+6

* Not included in mean.

Table 18. - (continued)

Location	N60-6053	R60-66	D61-901	N59-6091	N59-6913	N60-6056	V61-20
			East Coast				
Georgetown, Del.*	+3	0	+8	+5	+5	+3	+5
Linkwood, Md.	+4	+5	+6	+4	+4	+4	+5
Warsaw, Va.	+2	+2	+5	+1	+4	+1	+5
Plymouth, N. C.	+8	+8	+11	+8	+8	+4	+18
Mean	+5	+5	+7	+4	+5	+3	+9
			Upper and Central South				
Martin, Tenn.	0	0	+10	0	-2	0	+5
Jackson, Tenn.	+9	+10	+11	+9	+12	+1	+12
Belle Mina, Ala.	+1	0	0	0	0	0	0
Blairsville, Ga.	+3	+3	+4	+1	+3	+1	+2
State College, Miss.	+1	-1	+6	+1	+1	+1	0
Mean	+3	+2	+6	+2	+3	0	+4
			Delta				
Henderson, Ky.	0	0	0	0	0	0	0
Portageville, Mo.(A)	+5	+7	+8	+5	+8	+3	+7
Portageville, Mo.(B)	+8	+11	+14	+8	+9	+8	+13
Keiser, Ark.(A)	+3	0	+8	+4	+1	+1	+5
Keiser, Ark.(B)	+7	+7	+11	+4	+6	+5	+9
Marianna, Ark.	0	-7	+4	0	0	0	+4
Stoneville, Miss.(A)	+6	+3	+6	+4	+3	0	+5
Stoneville, Miss.(B)	+1	+5	+4	+1	+3	0	+7
St. Joseph, La.	+8	+6	+6	+7	+4	+4	+8
Mean	+4	+4	+7	+4	+4	+2	+6
			West				
Stuttgart, Ark.	+9	+8	+9	+8	+8	-1	+17
Curtis, La.	+5	+4	+5	+8	+3	+8	+6
Bixby, Okla.	+6	0	+2	+2	+4	+2	+4
Mean	+7	+4	+5	+6	+5	+3	+9

Table 19. - Plant height data for the strains in Uniform Group V, 1964

Location	Hill	Dorman	D59-693	N59-6926	N59-6955	N60-6053
			East Coast			
Georgetown, Del.*	29	35	26	29	32	29
Linkwood, Md.	41	43	34	39	38	38
Painter, Va.	36	43	32	38	41	40
Warsaw, Va.	39	43	34	40	40	38
Petersburg, Va.	32	33	33	35	31	33
Norfolk, Va.	32	39	29	30	35	35
Holland, Va.	38	41	36	39	39	37
Plymouth, N. C.	37	40	35	39	39	36
Mean	36	40	33	37	38	37
			Upper and Central South			
Orange, Va.	35	37	29	36	32	33
Martin, Tenn.	29	34	29	31	35	30
Jackson, Tenn.	44	44	42	50	48	42
Belle Mina, Ala.	35	35	29	34	35	33
Blairsville, Ga.	38	36	35	38	38	35
State College, Miss.	26	35	28	28	29	26
Mean	35	37	32	36	36	33
			Delta			
Henderson, Ky.	30	35	30	30	35	36
Portageville, Mo.(A)	36	37	35	38	43	38
Portageville, Mo.(B)	32	35	35	33	33	30
Keiser, Ark.(A)	30	29	29	32	34	29
Keiser, Ark.(B)	26	25	26	29	28	24
Marianna, Ark.	27	33	28	25	28	26
Stoneville, Miss.(A)	32	33	34	37	35	37
Stoneville, Miss.(B)	27	27	29	27	27	28
St. Joseph, La.	30	33	31	34	36	32
Mean	30	32	31	32	33	31
			West			
Stuttgart, Ark.	27	27	28	30	27	24
Curtis, La.	16	18	20	20	20	22
Bixby, Okla.	33	34	33	34	35	30
Mean	25	26	27	28	27	25

* Not included in mean.

Table 19. - (continued)

Location	R60-66	D61-901	N59-6091	N59-6913	N60-6056	V61-20
			East Coast			
Georgetown, Del.*	27	35	31	27	30	31
Linkwood, Md.	39	41	41	37	40	41
Painter, Va.	34	44	38	31	37	39
Warsaw, Va.	38	44	38	35	39	41
Petersburg, Va.	37	36	31	33	35	33
Norfolk, Va.	30	35	33	35	36	33
Holland, Va.	37	44	37	37	41	37
Plymouth, N. C.	35	40	32	35	37	39
Mean	36	41	36	35	38	38
			Upper and Central South			
Orange, Va.	33	37	31	30	33	34
Martin, Tenn.	33	37	28	25	31	35
Jackson, Tenn.	46	46	46	44	44	48
Belle Mina, Ala.	31	37	32	29	32	32
Blairsville, Ga.	37	41	36	33	36	37
State College, Miss.	26	36	25	27	30	31
Mean	34	39	33	31	34	36
			Delta			
Henderson, Ky.	36	42	32	31	36	39
Portageville, Mo.(A)	37	44	35	36	37	40
Portageville, Mo.(B)	35	37	29	29	31	32
Keiser, Ark.(A)	30	39	27	29	29	35
Keiser, Ark.(B)	30	35	21	24	26	26
Marianna, Ark.	29	33	23	25	23	26
Stoneville, Miss.(A)	36	39	31	33	31	33
Stoneville, Miss.(B)	28	33	26	24	28	25
St. Joseph, La.	31	37	30	29	32	32
Mean	32	38	28	29	30	32
			West			
Stuttgart, Ark.	29	32	23	28	23	28
Curtis, La.	24	25	21	20	22	23
Bixby, Okla.	34	33	31	31	33	32
Mean	29	30	25	26	26	28

Table 20. - Lodging scores for the strains in Uniform Group V, 1964

Location	Hill	Dorman	D59-693	N59-6926	N59-6955	N60-6053
			East Coast			
Georgetown, Del.	3.0	3.0	2.0	2.5	2.3	3.5
Linkwood, Md.	3.3	3.3	3.3	3.3	3.2	3.2
Painter, Va.	2.8	3.5	1.3	2.3	2.8	3.3
Warsaw, Va.	1.7	2.2	1.5	1.8	1.5	1.5
Petersburg, Va.	2.0	2.0	2.0	2.0	2.0	1.0
Norfolk, Va.	3.0	3.0	2.0	2.0	3.0	2.0
Holland, Va.	3.3	4.3	1.7	1.0	3.0	3.0
Plymouth, N. C.	3.3	4.3	2.3	3.0	3.3	3.0
			Upper and Central South			
Orange, Va.	2.0	3.0	2.0	2.0	2.0	2.0
Martin, Tenn.	2.0	3.0	2.0	2.0	2.0	2.0
Milan, Tenn.	5.0	4.0	4.0	3.0	3.0	3.0
Jackson, Tenn.	1.0	2.0	1.0	1.0	1.0	1.0
Belle Mina, Ala.	2.7	2.3	1.0	1.3	1.0	1.0
Blairsville, Ga.	3.0	3.3	3.7	2.0	3.3	2.3
State College, Miss.	2.0	4.0	2.0	2.0	2.0	2.0
			Delta			
Henderson, Ky.	3.0	3.0	2.0	2.0	2.0	2.0
Portageville, Mo.(A)	2.2	2.5	1.3	1.8	1.8	1.6
Portageville, Mo.(B)	1.3	1.7	1.0	1.1	1.4	1.3
Keiser, Ark.(A)	2.3	3.7	1.0	1.0	1.7	1.7
Keiser, Ark.(B)	1.0	1.0	1.0	1.0	1.3	1.0
Marianna, Ark.	1.3	2.0	1.0	1.3	1.3	1.3
Stoneville, Miss.(A)	1.7	2.0	1.0	2.0	2.3	1.7
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, La.	2.0	3.0	2.0	2.0	2.0	2.0
			West			
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Curtis, La.	1.0	2.0	2.0	2.0	2.0	2.0
Bixby, Okla.	2.0	1.0	1.0	1.0	1.0	2.0

Table 20. - (continued)

Location	R60-66	D61-901	N59-6091	N59-6913	N60-6056	V61-20
			East Coast			
Georgetown, Del.	1.7	2.5	2.5	1.3	3.3	2.0
Linkwood, Md.	3.3	3.5	3.2	2.8	3.3	3.3
Painter, Va.	2.0	2.3	2.5	1.3	2.5	3.2
Warsaw, Va.	1.5	2.0	1.2	1.2	1.3	1.7
Petersburg, Va.	2.0	2.0	1.0	1.0	1.0	1.0
Norfolk, Va.	2.0	3.0	2.0	2.0	3.0	2.0
Holland, Va.	1.3	2.3	2.7	2.0	2.0	1.0
Plymouth, N. C.	3.3	3.7	3.0	2.3	3.0	3.0
			Upper and Central South			
Orange, Va.	2.0	3.0	1.0	1.0	1.0	2.0
Martin, Tenn.	2.0	2.0	1.0	1.0	1.0	2.0
Milan, Tenn.	2.0	2.0	2.0	3.0	2.0	2.0
Jackson, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
Belle Mina, Ala.	1.0	1.3	1.0	1.0	1.7	1.3
Blairsville, Ga.	2.7	2.3	2.3	2.0	2.0	2.3
State College, Miss.	1.0	3.0	2.0	1.0	2.0	2.0
			Delta			
Henderson, Ky.	3.0	2.0	1.0	2.0	2.0	2.0
Portageville, Mo.(A)	1.8	1.7	2.2	1.5	2.3	1.5
Portageville, Mo.(B)	1.4	1.2	1.0	1.0	1.2	1.5
Keiser, Ark.(A)	1.7	2.0	1.0	1.0	1.7	1.0
Keiser, Ark.(B)	1.3	1.0	1.0	1.0	1.0	1.0
Marianna, Ark.	1.3	1.0	1.0	1.0	1.3	1.3
Stoneville, Miss.(A)	2.3	2.7	2.0	1.3	2.0	2.0
Stoneville, Miss.(B)	3.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, La.	2.0	2.0	2.0	1.0	2.0	1.0
			West			
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Curtis, La.	1.0	2.0	2.0	2.0	2.0	2.0
Bixby, Okla.	2.0	2.0	1.0	2.0	1.0	1.0

Table 21. - Seed quality scores for the strains in Uniform Group V, 1964

Location	Hill	Dorman	D59-693	N59-6926	N59-6955	N60-6053
			East Coast			
Georgetown, Del.	3.8	2.7	2.7	4.2	2.5	4.2
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Painter, Va.	2.3	1.7	1.8	3.0	2.0	2.5
Warsaw, Va.	3.0	2.0	1.2	1.0	2.0	1.2
Petersburg, Va.	2.3	1.0	2.0	3.0	2.0	2.0
Norfolk, Va.	3.0	2.0	4.0	3.0	3.0	2.0
Holland, Va.	3.0	1.5	1.5	2.0	1.5	2.5
Plymouth, N. C.	3.0	3.0	3.0	2.0	3.0	3.0
			Upper and Central South			
Orange, Va.	3.0	2.0	1.0	2.0	2.0	2.0
Milan, Tenn.	1.0	1.0	2.0	1.0	2.0	2.0
Jackson, Tenn.	3.0	2.0	2.0	2.0	3.0	3.0
State College, Miss.	3.0	2.0	2.0	2.0	2.0	2.0
			Delta			
Henderson, Ky.	2.0	2.0	1.0	1.5	1.0	2.0
Portageville, Mo.(A)	1.3	1.8	1.5	1.3	1.5	1.5
Portageville, Mo.(B)	1.8	2.0	1.8	2.0	1.8	1.5
Keiser, Ark.(A)	3.0	2.0	2.3	3.0	2.0	3.0
Keiser, Ark.(B)	2.3	2.0	1.7	3.0	2.0	2.3
Marianna, Ark.	3.7	3.0	2.7	2.7	2.3	3.0
Stoneville, Miss.(A)	2.0	1.7	1.7	2.0	1.7	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	2.0	2.0	1.0
			West			
Stuttgart, Ark.	2.3	2.0	1.7	2.3	1.7	2.0
Curtis, La.	3.0	2.0	3.0	2.0	2.0	3.0
Bixby, Okla.	1.0	1.0	1.0	1.0	2.0	1.0

Table 21. - (continued)

Location	R60-66	D61-901	N59-6091	N59-6913	N60-6056	V61-20
			East Coast			
Georgetown, Del.	2.7	3.5	3.0	3.2	3.8	2.7
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Painter, Va.	2.2	3.0	1.8	1.5	2.2	2.0
Warsaw, Va.	1.5	2.0	1.2	2.5	2.0	1.5
Petersburg, Va.	2.0	3.0	2.0	2.0	2.0	1.0
Norfolk, Va.	3.0	3.0	2.0	3.0	2.0	1.0
Holland, Va.	2.0	1.0	2.0	2.0	2.0	1.5
Plymouth, N. C.	3.5	3.0	2.5	3.0	3.0	1.5
			Upper and Central South			
Orange, Va.	2.0	2.0	2.0	2.0	2.0	2.0
Milan, Tenn.	1.0	2.0	1.0	2.0	1.0	1.0
Jackson, Tenn.	2.0	2.0	2.0	2.0	3.0	2.0
State College, Miss.	2.0	2.0	2.0	2.0	3.0	2.0
			Delta			
Henderson, Ky.	2.0	2.0	1.5	1.0	2.0	1.0
Portageville, Mo.(A)	1.5	1.5	1.3	1.3	1.3	1.3
Portageville, Mo.(B)	2.0	1.8	1.8	1.3	2.0	1.5
Keiser, Ark.(A)	2.0	3.0	2.3	1.3	2.0	2.0
Keiser, Ark.(B)	2.7	3.0	2.3	1.3	2.3	2.3
Marianna, Ark.	3.0	2.7	2.3	2.3	2.7	3.0
Stoneville, Miss.(A)	2.0	2.0	1.7	1.3	1.7	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	2.0	1.0	1.0
			West			
Stuttgart, Ark.	2.3	2.0	2.3	1.7	1.7	3.0
Curtis, La.	3.0	2.0	2.0	3.0	2.0	3.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0

PRELIMINARY GROUP V

1964

Seven Preliminary Group V nurseries, including 34 experimental strains along with Hill and D59-693 as checks, were planted. The parentage of these strains is reported in table 22. Performance data are summarized in tables 21 through 28. Differences in seed yield were significant at each of the 6 locations summarized. The combined analysis of variance for seed yield for the 6 locations also showed differences to be significant. One strain, N59-6873, yielded significantly better than either Hill or D59-693. It was 9 days later in maturity than Hill. Six strains yielded significantly less than Hill -- D62-6248, D62-6289, D62-6346, D62-6379, Rebel 22, and UD1844. One additional strains, UD1831, yielded less than D59-693. Rebel 22 was too late for this group.

Two strains, D62-6248 and D62-6289, had lower oil percentage and higher protein precentage than Hill. Both had been selected from Hill x Sioux. D62-6289 has sufficiently good agronomic qualities along with higher protein percentage to be good breeding material. D62-6342 and D62-6346 have lower oil percentage. D63-6346 has rather low protein along with low oil. This combination is contributed by the Pine Dell Perfection parent. These two lines along with D63-6117 are considered to carry a gene for mildew resistance which gives resistance to all races of mildew.

All but 3 strains carry resistance to bacterial pustule, and all strains were considered to have satisfactory seed holding. Five strains, D61-410, D61-414, D61-474, D61-823, and R61-496, had a fair amount of purple seed stain development at Warsaw. Diffusion of hilum color was excessive for many strains at Plymouth.

D61-1513, which is D49-2491 converted to early maturity, produced very well. It averaged 8 days later than Hill. D61-5141 was supposed to be Dorman converted to a narrow leaf type, but it carried a mechnical mixture of S-100. D62-730 is Dorman with resistance to bacterial pustule.

Five strains, D61-410, D61-1076, N59-6873, N59-6927, and R61-496, were repeated from the 1963 Preliminary V nursery. N59-6873 was the highest yielding strain in the group.

Among the more promising strains are N59-6873, F62-359, R62-550, D61-858, D62-703, and D63-6117.

Table 22. - Parentage of the strains in Preliminary Group V, 1964

	Variety or strain	Parentage	Generation Composited
1.	Hill		
2.	D59-693		
3.	D61-410	Hill(2) x PI 171,442	F_5
4.	D61-414	Hill(2) x PI 171,442	F_5
5.	D61-415	Hill(2) x PI 171,442	F_5
6.	D61-474	Hill(2) x PI 171,442	F_5
7.	D61-739	Hill(2) x D51-4877	F_5
8.	D61-742	Hill(2) x D51-4877	F_5
9.	D61-759	Hill(2) x D51-4877	F_5
10.	D61-787	Hill(2) x D51-4877	F_5
11.	D61-823	Hill(2) x D51-4877	F_5
12.	D61-858	Hill(2) x D51-4877	F_5
13.	D61-1076	Hill(2) x D51-4877	F_5
14.	D61-1513	D49-2491(5) x Hawkeye	F_4
15.	D61-5141	Dorman(5) x PI 181,537	F_4
16.	D62-730	Dorman(5) x N58-1515	F_4
17.	D62-6248	Hill x Sioux	F_5
18.	D62-6289	Hill x Sioux	F_5
19.	D62-6342	Pine Dell Perfection x Hill	F_5
20.	D62-6346	Pine Dell Perfection x Hill	F_5
21.	D62-6379	PI 166,147 x Hill	F_5
22.	D62-6424	Hill x PI 200,446	F_5
23.	D63-6117	Hill(4) x PI 171,442	F_4
24.	N59-6873	Hill x D52-810	F_5
25.	N59-6927	Hill x D52-810	F_5
26.	N60-6407	Hill x D49-2491	F_5
27.	R61-496	R54-168 x Hill	F_4
28.	R62-359	R54-168 x Hill	F_5
29.	R62-550	(R54-168 x Hill) x (Lee x Dortchsoy 110)	F_4
30.	R62-580	(R54-168 x Hill) x (Lee x Dortchsoy 110)	F_4
31.	R62-660	(R54-168 x Hill) x (Lee x Dortchsoy 110)	F_4
32.	Rebel 22		
33.	UD1141	FC 33243 x D49-2491	
34.	UD1823	FC 33243 x D49-2491	
35.	UD1831	FC 33243 x D49-2491	
36.	UD1844	FC 33243 x D49-2491	

Table 23. - General summary of performance for the strains grown in Preliminary Group V, 1964

Strain	Seed Yield	Maturity Index	Ht.	Percent Oil	Percent Protein	Shatter 1/	B.P. 1/	Purple stain 2/	Mildew 1/	Hilum Diffusion 3/
Hill	33.5	10-9	35	21.7	38.4	1.0	1.0	2.0	3.0	4.0
D59-693	34.3	+5	32	21.1	39.6+	1.0	1.0	2.0	3.0	4.0
D61-410	31.9	+3	35	21.3	39.2	1.0	1.0	3.0	3.0	5.0
D61-414	26.0-	-3	29	21.3	39.4+	1.0	1.0	3.0	4.0	4.0
D61-415	32.6	+5	34	21.3	38.2	1.0	1.0	1.0	2.0	5.0
D61-474	32.3	0	32	21.8	38.7	1.0	1.0	4.0	2.0	5.0
D61-739	33.2	+9	35	21.0-	38.4	1.0	1.0	1.0	4.0	2.0
D61-742	33.6	+9	33	20.7-	39.0	1.0	1.0	1.0	3.0	2.0
D61-759	33.6	+5	40	20.8-	38.5	1.0	1.0	1.0	4.0	4.0
D61-787	32.2	+10	42	21.3	38.3	1.0	1.0	1.0	4.0	4.0
D61-823	31.0	-1	35	21.4	37.9	1.0	1.0	3.0	3.0	2.0
D61-858	33.9	+5	40	22.2	36.9	1.0	1.0	1.0	4.0	3.0
D61-1076	33.1	+8	40	20.6-	38.6	1.0	1.0	1.0	3.0	3.0
D61-1513	34.0	+8	31	22.0	39.0	1.0	1.0	1.0	3.0	1.0
D61-5141	32.0	0	38	21.2	38.9	1.0	3.0	2.0	4.0	3.0
D62-730	34.7	+4	37	21.4	38.3	1.0	1.0	2.0	4.0	3.0
D62-6248	29.2-	-2	32	19.3-	41.2+	1.0	1.0	2.0	3.0	5.0
D62-6289	27.2-	-3	32	17.7-	43.7+	2.0	1.0	2.0	3.0	3.0
D62-6342	31.6	+11	40	18.2-	40.8+	1.0	1-0	1.0	1.0	5.0
D62-6346	29.3-	+9	44	19.3-	38.2	1.0	1.0	1.0	1.0	-
D62-6379	28.2-	+11	36	20.2-	39.9+	1.0	1.0	1.0	1.0	5.0
D62-6424	32.5	+1	34	21.7	38.3	1.0	1.0	2.0	4.0	4.0
D63-6117	34.1	+7	37	21.5	38.1	1.0	1.0	2.0	1.0	4.0
N59-6873	38.4+	+9	37	22.1	38.1	1.0	1.0	1.0	2.0	3.0
N59-6927	34.3	+8	34	21.1	39.2	1.0	1.0	1.0	2.0	3.0
N60-6407	32.6	+6	33	20.0-	39.8+	1.0	1.0	1.0	4.0	4.0
R61-496	33.2	+4	37	23.1+	37.1	1.0	1.0	3.0	4.0	1.0
R62-359	34.9	+9	38	22.4+	38.0	1.0	1.0	1.0	3.0	1.0
R62-550	34.5	+6	35	21.6	39.9+	1.0	1.0	1.0	4.0	1.0
R62-580	31.3	+10	37	21.7	38.8	1.0	1.0	1.0	4.0	3.0
R62-660*	32.6	+5	38	21.5	39.4+	1.0	1.0	1.0	4.0	4.0
Rebel 22	28.7-	+16	46	21.1	39.0	1.0	1.0	1.0	5.0	1.0
UD1141	31.7	+7	47	21.7	38.4	1.0	1.0	2.0	3.0	5.0
UD1823	32.5	+8	45	21.3	38.9	1.0	1.0	2.0	4.0	4.0
UD1831	29.8	+11	48	22.5+	37.5	1.0	3.0	1.0	2.0	2.0
UD1844	28.5-	+11	46	22.1	38.4	1.0	3.0	2.0	2.0	1.0
L.S.D.(.05)	4.0			0.7	0.9					
L.S.D.(.01)	5.3			0.9	1.2					

* Segregating for flower color

1/ Stoneville data

2/ Warsaw data

3/ Plymouth data

Table 24. - Seed yield, in bushels per acre, for the strains in Preliminary Group V, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.(B)	Stoneville, Miss.(B)
Hill	31.6	37.8	33.2	40.2	29.5	28.6
D59-693	30.8	39.1	40.6	36.2	26.1	33.2
D61-410	27.5-	35.6	33.6	35.0	31.1	28.9
D61-414	28.2-	30.8-	25.9	32.8-	12.8-	25.2
D61-415	32.5	39.5	25.9	34.8	29.6	33.1
D61-474	30.0	33.4	31.6	37.1	29.9	31.7
D61-739	27.0-	37.4	34.7	36.6	27.4	36.1+
D61-742	22.6-	35.5	36.6	35.0	35.7	36.1+
D61-759	25.0-	38.3	36.0	36.8	30.0	35.7+
D61-787	25.0-	34.2	31.4	36.1	32.6	33.7
D61-823	30.2	37.9	31.4	36.8	23.6	26.1
D61-858	26.0-	38.6	38.8	36.8	28.7	34.6
D61-1076	25.4-	39.7	31.9	38.9	32.8	29.8
D61-1513	30.9	40.9	32.0	35.1	31.4	33.8
D61-5141	30.5	37.4	33.7	38.0	31.0	21.6-
D62-730	31.4	39.2	39.4	38.6	31.5	28.2
D62-6248	29.2	35.3	22.7-	34.8	25.7	27.8
D62-6289	27.4-	27.8-	29.7	32.0-	21.3-	25.0
D62-6342	21.9-	35.3	34.8	35.2	32.8	30.0
D62-6346	23.8-	31.6-	30.0	33.8	27.0	29.4
D62-6379	20.0-	32.1-	19.6-	34.0	31.0	32.4
D62-6424	29.8	38.2	34.4	34.3	28.8	29.5
D63-6117	29.8	38.8	35.4	38.6	29.9	33.1
N59-6873	30.2	39.9	49.2+	36.5	36.8+	37.8+
N59-6927	27.6-	37.2	42.5+	35.3	31.5	31.9
N60-6407	30.2	41.3	28.1	36.0	30.3	29.9
R61-496	30.1	41.7	28.6	36.3	29.2	33.5
R62-359	26.0-	36.5	39.9	37.7	32.1	37.1+
R62-550	28.8	37.7	37.6	37.6	30.5	35.0
R62-580	24.4-	36.0	35.9	33.2-	31.7	27.0
R62-660	27.7-	37.0	34.4	35.4	27.4	33.9
Rebel 22	22.7-	29.0-	37.8	27.6-	24.6	30.5
UD1141	29.8	37.6	33.9	31.4-	26.0	31.5
UD1823	29.9	38.3	36.8	35.1	25.5	29.8
UD1831	29.6	41.2	23.8-	29.0-	25.4	29.6
UD1844	32.6	38.3	27.8	24.8-	18.5-	29.1
L.S.D. (.05)	3.9	4.6	8.9	6.3	7.3	7.0
C.V.	7%	6%	13%	9%	13%	11%

Table 25. - Oil percentages for the strains in Preliminary Group V, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.(B)	Stoneville, Miss.(B)
Hill	21.2	22.0	21.9	20.8	21.3	23.0
D59-693	21.3	21.8	21.0	20.0	20.7	21.9
D61-410	20.5	21.7	21.1	20.6	21.5	22.2
D61-414	21.6	20.9	20.9	20.8	21.0	22.7
D61-415	21.8	21.5	20.2	19.5	21.7	23.1
D61-474	21.4	21.7	21.7	21.1	21.6	23.0
D61-739	21.4	21.7	20.3	20.9	19.3	22.4
D61-742	20.8	20.7	20.4	20.5	19.8	22.1
D61-759	21.2	21.3	20.4	20.0	19.6	22.2
D61-787	20.8	21.6	21.0	20.9	21.4	22.1
D61-823	21.4	21.9	21.7	20.3	20.1	22.8
D61-858	22.0	22.9	22.1	21.1	20.4	24.4
D61-1076	20.4	21.0	19.9	20.1	20.4	21.9
D61-1513	21.2	23.0	21.4	21.9	21.2	23.2
D61-5141	19.9	20.8	21.4	21.1	21.0	22.9
D62-730	20.9	21.2	21.5	21.2	21.7	21.6
D62-6248	17.8	19.3	19.9	19.3	19.1	20.1
D62-6289	16.8	18.3	18.2	17.1	17.3	18.5
D62-6342	19.1	18.9	18.7	17.0	18.4	17.0
D62-6346	18.9	20.1	19.2	19.3	18.4	19.6
D62-6379	19.7	20.2	19.3	20.0	20.3	21.4
D62-6424	20.8	21.5	21.7	21.6	21.2	23.2
D63-6117	21.6	22.3	20.9	20.6	21.1	22.6
N59-6873	21.2	22.7	21.8	22.2	22.4	22.2
N59-6927	21.1	21.2	20.4	20.5	21.9	21.2
N60-6407	20.4	21.1	19.4	18.8	19.3	21.1
R61-496	22.6	23.4	23.9	22.4	22.0	24.0
R62-359	21.9	22.5	22.3	21.9	22.0	23.5
R62-550	21.9	21.8	21.9	20.6	21.8	21.6
R62-580	21.0	21.8	21.3	21.7	22.3	21.9
R62-660	21.2	22.3	21.2	20.8	20.6	22.8
Rebel 22	19.5	21.0	21.8	21.3	21.4	21.3
UD1141	22.3	22.2	21.0	21.8	21.1	21.7
UD1823	21.8	21.2	21.3	21.5	20.5	21.4
UD1831	22.1	23.6	22.0	22.1	--	23.1
UD1844	21.4	22.0	22.0	21.9	22.5	23.0

Table 26. - Protein percentages for the strains in Preliminary Group V, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.(B)	Stoneville, Miss.(B)
Hill	39.3	37.0	40.3	39.3	38.6	36.0
D59-693	39.4	38.2	41.2	40.5	39.6	38.4
D61-410	38.9	38.6	42.4	40.2	38.7	36.2
D61-414	39.2	39.8	41.7	40.0	39.4	36.5
D61-415	38.0	36.8	41.3	39.0	36.9	37.1
D61-474	38.8	38.4	40.1	40.2	38.3	36.1
D61-739	38.8	37.9	40.4	38.9	38.4	36.2
D61-742	39.6	38.2	40.9	39.4	38.1	37.5
D61-759	37.5	36.7	41.3	40.3	39.1	36.0
D61-787	38.3	37.7	40.8	38.7	37.7	36.4
D61-823	39.2	36.6	39.8	38.8	37.6	35.1
D61-858	36.5	35.9	39.0	38.7	37.1	34.4
D61-1076	39.1	38.3	40.7	38.5	38.4	36.5
D61-1513	39.0	38.5	41.2	38.4	38.1	38.9
D61-5141	39.6	40.3	40.5	38.8	37.7	36.3
D62-730	37.7	39.0	40.0	38.4	37.8	37.0
D62-6248	42.9	41.0	42.3	40.7	40.2	40.3
D62-6289	45.5	43.5	44.5	42.8	43.0	42.6
D62-6342	40.4	41.3	42.4	40.9	39.5	40.5
D62-6346	37.7	37.6	39.7	38.7	37.0	38.4
D62-6379	39.4	39.4	42.3	41.0	38.5	38.5
D62-6424	38.3	37.2	40.4	38.3	38.6	37.1
D63-6117	37.8	37.1	40.8	38.6	38.3	36.2
N59-6873	38.5	37.3	40.9	37.2	37.4	37.1
N59-6927	40.4	38.3	42.3	39.2	38.1	36.6
N60-6407	39.0	39.6	42.2	39.9	40.2	37.8
R61-496	37.0	36.6	38.3	37.8	37.7	35.2
R62-359	38.2	37.7	39.9	37.7	37.6	37.0
R62-550	40.2	38.9	42.6	40.1	38.4	38.9
R62-580	38.5	38.7	41.2	38.4	38.4	37.6
R62-660	39.8	37.2	42.5	40.0	39.6	37.3
Rebel 22	39.9	38.0	40.9	38.9	37.2	39.0
UD1141	37.6	38.7	41.5	37.7	37.5	37.5
UD1823	37.6	39.3	42.0	38.7	38.2	37.7
UD1831	39.3	37.1	40.2	37.0	--	35.0
UD1844	39.2	38.9	40.9	37.4	36.6	37.1

Table 27. - Plant height for the strains in Preliminary Group V, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.(B)	Stoneville, Miss.(B)
Hill	40	40	39	35	26	28
D59-693	36	33	36	34	27	28
D61-410	39	38	38	36	27	30
D61-414	36	32	36	25	20	22
D61-415	40	35	39	35	26	27
D61-474	38	36	36	33	22	28
D61-739	40	40	43	25	30	30
D61-742	36	37	38	33	26	29
D61-759	44	42	46	40	34	33
D61-787	49	44	47	38	40	34
D61-823	41	38	39	36	22	32
D61-858	43	44	44	44	31	34
D61-1076	44	41	42	43	32	35
D61-1513	36	35	31	30	26	27
D61-5141	45	44	45	46	25	25
D62-730	44	42	44	36	30	28
D62-6248	33	39	33	33	26	26
D62-6289	38	36	34	33	23	26
D62-6342	48	44	44	40	32	32
D62-6346	52	48	52	46	35	33
D62-6379	42	40	40	38	26	31
D62-6424	40	40	37	32	26	29
D63-6117	42	39	41	37	29	31
N59-6873	41	40	42	37	28	34
N59-6927	38	36	40	35	23	29
N60-6407	37	37	36	35	25	26
R61-496	40	42	41	39	31	28
R62-359	42	41	41	40	32	29
R62-550	42	36	42	38	22	28
R62-580	46	42	39	38	27	29
R62-660	44	42	42	41	29	30
Rebel 22	58	44	47	52	40	34
UD1141	50	47	56	51	37	42
UD1823	46	47	56	49	32	38
UD1831	51	46	56	55	41	38
UD1844	46	48	53	51	42	36

Table 28. - Seed quality scores for the strains in Preliminary Group V, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.(B)	Stoneville, Miss.(B)
Hill	3.4	2.5	3.0	1.7	3.0	2.0
D59-693	3.2	1.8	3.0	1.4	2.0	2.0
D61-410	3.2	2.8	3.0	1.5	2.5	2.0
D61-414	3.3	3.5	4.0	1.5	3.0	2.0
D61-415	3.3	2.0	3.0	1.7	2.0	2.0
D61-474	2.8	3.8	3.0	1.8	3.0	2.0
D61-739	3.4	1.2	1.5	1.4	2.5	2.0
D61-742	3.4	1.2	2.0	1.8	2.0	2.0
D61-759	3.2	1.5	3.0	1.5	3.0	2.0
D61-787	3.5	1.5	3.0	1.5	3.0	2.0
D61-823	3.3	3.5	3.5	1.7	3.0	2.0
D61-858	3.2	1.2	3.0	1.8	2.5	2.0
D61-1076	3.6	1.0	3.0	1.4	2.0	2.0
D61-1513	3.4	1.0	2.0	1.5	2.0	1.5
D61-5141	3.6	2.8	3.0	1.9	3.0	2.0
D62-730	3.4	1.8	3.0	1.7	2.0	1.5
D62-6248	3.2	3.0	4.0	1.8	2.5	2.0
D62-6289	3.4	2.8	3.0	1.8	3.0	2.0
D62-6342	3.7	1.2	3.0	1.9	3.0	2.0
D62-6346	3.7	1.2	2.0	-	2.0	2.0
D62-6379	3.4	1.5	2.5	1.9	3.0	2.0
D62-6424	3.4	1.8	3.0	1.4	3.0	2.0
D63-6117	3.4	1.2	2.0	1.5	2.5	2.0
N59-6873	3.4	1.0	2.0	1.8	3.0	2.0
N59-6927	3.2	2.0	3.0	1.8	3.5	2.0
N60-6407	3.3	1.5	3.0	1.7	3.0	2.0
R61-496	3.5	2.0	3.0	1.6	2.0	1.0
R62-359	3.4	1.0	1.5	1.4	3.0	2.0
R62-550	3.4	1.2	2.0	1.7	3.0	2.0
R62-580	3.5	1.0	2.0	1.7	3.0	2.0
R62-660	3.8	1.0	3.0	1.5	2.5	2.0
Rebel 22	3.8	1.8	2.0	2.3	4.0	2.0
UD1141	3.0	2.0	3.0	1.8	3.0	1.5
UD1823	3.4	1.2	2.5	1.7	3.0	1.0
UD1831	3.5	1.2	2.0	1.9	3.0	2.0
UD1844	3.4	1.8	2.5	2.2	3.5	2.0

UNIFORM GROUP VI

1964

	Variety or strain	Parentage	Generation Composited
1.	Hood	Roanoke x N45-745	F_6
2.	Lee	S-100 x CNS	F_6
3.	D59-268	Hill x D52-810	F_5
4.	N59-6937	Hill x D52-810	F_5
5.	N59-6972	Hill x D52-810	F_5
6.	D60-9647	FC 31745 x D49-2510	F_6
7.	D60-11,082	D49-2573 x Nansemond	F_6
8.	R54-171-1	D49-2573 x N45-1497	
9.	D61-1185	Hill(2) x D51-4877	F_5
10.	D61-2002	Hill x [D49-2491(2) x Tanner]	F_5
11.	N60-6195	Hill x D49-2491	F_5
12.	N60-6352	Hill x D49-2491	F_5

Background of strains used as parents:

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

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.

FC 31745 and Nansemond are farmer selections from southeastern Virginia.

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.

D51-4877 is a selection from Roanoke x N45-745 which was included in Uniform Group VII for the years 1954-1956.

D49-2491 is a sister strain to Lee.

Thirty-eight Uniform Group VI nurseries were planted. Results of 30 are summarized in tables 29 through 35, with table 29 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 and oil and protein percentages.

Seed yield differences among strains were significant at 18 of the 30 locations. The combined analysis of variance for mean seed yields by production regions showed significant differences among strains within all production regions except the West.

The three strains D59-268, N59-6937, and N59-6972, all from Hill x D52-810, have been tested 3 years. All 3 strains have yielded well. D59-268 and N59-6937 are later than Hood, while N59-6972 is 5 days earlier. N59-6972 appears to be about 2 days later in maturity than D59-693 in Uniform Group V. N59-6937 showed heavy purple stain development at Painter. D59-268 and N59-6937 showed considerable hilum color extension at Plymouth and Willard. D60-9647 is of Lee maturity and averages 10% higher in protein and 10% lower in oil than Lee. The 1964 performance of this strain appeared to be better than its 1963 performance. This strain appears to show hilum color diffusion more frequently than do most of the other strains. D60-11,082 and R54-171-1 have also been grown 2 years. Both mature later than Hood and are taller. Yields have been good.

Of the strains tested 1 year, N60-6195 yielded significantly less than Hood in the East, Upper and Central, and Delta regions. D61-1185 showed considerable purple stain development at Painter and hilum color extension at Plymouth and Willard. N60-6195 and N60-6352 are of approximately the same maturity as Lee. Neither appeared to have any particular advantage.

Table 29. - General summary of the performance for the strains in Uniform Group VI, 1964

	Hood	Lee	D59-268	N59-6937	N59-6972	D60-9647
Seed Yield - 1964						
East Coast	38.0	33.6-	32.7-	34.8-	38.4	34.1-
Southeast	27.5	31.8+	25.3	25.2	27.0	26.4
Upper & Central South	33.4	32.2	30.5	28.5-	34.4	31.3
Delta	37.4	34.1-	37.8	35.1	39.5	34.9
West	39.0	33.0	37.6	32.6	37.9	32.1
- 1963-64						
East Coast	35.8	34.1	33.3	34.9	37.2	32.7
Southeast	31.1	31.7	29.8	28.8	28.1	28.1
Upper & Central South	32.4	31.8	28.6	29.4	32.6	30.3
Delta	35.5	36.4	39.8	38.2	40.1	35.1
West	31.2	32.4	33.9	31.2	35.0	30.2
- 1962-64						
East Coast	35.0	34.2	33.2	35.2	37.3	
Southeast	32.2	32.3	31.7	30.4	29.7	
Upper & Central South	35.9	33.7	31.6	31.6	33.5	
Delta	38.7	39.7	45.0	42.2	42.3	
West	32.4	34.5	36.0	33.7	35.0	
Oil Content - 1964	21.3	21.1	21.9+	22.2+	22.9+	18.9-
- 1963-64	21.2	20.9	21.5	21.9	22.7	18.8
- 1962-64	21.3	20.9	21.5	22.0	22.8	
Protein Content - 1964	39.7	40.2	39.1	38.5-	39.0-	44.0+
- 1963-64	39.5	40.2	39.1	38.4	38.5	44.1
- 1962-64	39.3	40.4	39.2	38.6	38.5	
Seed Size	15.9	13.5-	14.7-	14.6-	13.9-	17.3
Maturity Index	10-9	+9	+6	+4	-5	+8
Height	32	32	32	33	32	33
Bacterial Pustule[1/]	1.0	1.0	1.0	1.0	1.0	1.0
Purple Stain[2/]	1.0	1.0	1.0	5.0	1.0	3.0
Phytophthora Rot[1/]	2.0	1.0	1.0	1.0	1.0	1.0
Mottled Seed[3/]	1.0	1.0	4.0	4.0	1.0	4.0
Shattering[1/]	2.0	1.0	1.0	2.0	1.6	1.0
Flower Color	P	P	W	W	W	P
Pubescence Color	G	T	G	T	G	T

1/ Stoneville data. 2/ Painter data. 3/ Plymouth and Willard data.

Table 29. - (continued)

	D60-11,082	R54-171-1	D61-1185	D61-2002	N60-6195	N60-6352
Seed Yield - 1964						
East Coast	36.6	34.6-	36.3	35.7	34.0-	32.9-
Southeast	24.9	28.5	23.2-	25.4	27.9	31.6+
Upper & Central South	34.8	30.4	33.1	29.3-	28.0-	29.0-
Delta	38.5	36.8	38.8	38.3	33.3-	34.5
West	36.1	36.5	35.7	33.0	33.0	32.0
- 1963-64						
East Coast	35.3	33.5				
Southeast	30.3	31.1				
Upper & Central South	32.6	30.7				
Delta	40.1	38.9				
West	34.0	34.3				
- 1962-64						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
Oil Content - 1964	20.1-	21.0	21.4	20.9	20.1-	20.5
- 1963-64	20.0	20.9				
- 1962-64						
Protein Content - 1964	40.4+	38.9-	38.1-	38.6-	41.0+	39.8
- 1963-64	40.4	38.9				
- 1962-64						
Seed Size	15.4	13.9-	13.9-	11.3-	12.7-	13.2-
Maturity Index	+5	+7	0	0	+7	+8
Height	34	38	37	33	30	32
Bacterial Pustule[1/]	1.0	1.0	1.0	1.0	1.0	1.0
Purple Stain[2/]	1.0	1.0	3.0	2.0	1.0	2.0
Phytophthora Rot[1/]	1.0	1.0	1.0	1.0	1.0	1.0
Mottled Seed[3/]	3.0	1.0	3.0	3.0	1.0	2.0
Shattering[1/]	1.0	2.0	1.0	1.0	1.0	1.0
Flower Color	W	W	P	W	P	W
Pubescence Color	G	G	T	T	T	T

Table 30. - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1964

Location	Hood	Lee	D59-268	N59-6937	N59-6972	D60-9647	D60-11,082
			East Coast				
Georgetown, Del.*	12.4	9.9	4.6	9.6	16.1	9.6	10.4
Linkwood, Md.	21.6	24.6	19.8	22.2	27.5+	23.7	23.9
Painter, Va.	38.1	33.4	22.1-	30.1-	41.2	32.6-	35.3
Warsaw, Va.	35.3	33.9	28.4-	34.6	38.0	30.8	36.3
Petersburg, Va.	33.6	27.1-	32.1	35.5	38.6	27.5-	37.1
Norfolk, Va.	39.6	36.1-	33.5-	39.4	36.1-	35.0-	37.8
Holland, Va.	42.0	35.9-	30.5-	34.0-	37.8	33.6-	38.2
Plymouth, N. C.	37.7	25.4-	30.1	34.9	35.7	32.1	30.6
Willard, N. C.	49.2	41.2	41.5	41.7	47.5	41.9	39.1
Clayton, N. C.	50.0	44.2	52.8	46.5	49.2	50.3	50.4
Hartsville, S. C.	33.0	33.9	36.7	28.9	32.7	33.4	37.5
Mean	38.0	33.6-	32.7-	34.8-	38.4	34.1-	36.6
			Southeast				
Quincy, Fla.	29.7	30.8	23.4-	24.0-	28.9	22.8-	23.5-
Fairhope, Ala.	30.0	39.1+	29.8	31.9	32.1	35.3	36.1+
Baton Rouge, La.	22.8	25.7	22.6	19.7	19.9	21.1	15.1-
Mean	27.5	31.8+	25.3	25.2	27.0	26.4	24.9
			Upper and Central South				
Milan, Tenn.	40.7	39.2	32.3	35.1	42.1	34.8	41.7
Jackson, Tenn.	43.2	40.6	46.6	40.7	46.3	44.8	53.0+
Belle Mina, Ala.	13.0	13.9	11.7	10.9	13.1	14.5	12.9
State College, Miss.	36.7	35.1	31.3	27.2	36.0	31.2	31.8
Mean	33.4	32.2	30.5	28.5-	34.4	31.3	34.8
			Delta				
Portageville, Mo.(A)	41.3	36.9-	37.1-	35.3-	42.4	37.4	45.0
Portageville, Mo.(B)	34.0	30.0-	37.1-	38.1+	37.8+	31.7	39.6+
Keiser, Ark.(A)	29.9	30.1	33.8	28.7	34.0	36.1	27.5
Keiser, Ark.(B)	29.8	27.6	35.5	30.1	33.4	26.2	30.7
Marianna, Ark.	32.7	23.6	24.8	25.8	30.3	29.9	29.6
Stoneville, Miss.(A)	41.8	40.9	37.7	37.3	42.0	36.2-	41.3
Stoneville, Miss.(B)	32.5	32.2	33.4	33.3	34.5	31.2	33.2
St. Joseph, La.	57.2	51.5-	63.1+	51.9	61.2	50.9-	61.0
Mean	37.4	34.1-	37.8	35.1	39.5	34.9	38.5
			West				
Stuttgart, Ark.	43.2	42.0	42.2	42.0	45.1	42.9	43.5
Curtis, La.*	10.4	17.8	11.5	10.6	13.7	16.7	12.1
Bixby, Okla.	47.9	30.7-	45.5	34.9-	42.1	29.4-	40.5-
Halfway, Texas*	28.6	33.4	30.5	29.6	36.2+	37.7+	34.3
Lubbock, Texas	25.8	27.0	25.1	20.8	26.6	24.1	24.3
Mean	39.0	33.0	37.6	32.6	37.9	32.1	36.1

* Not included in mean.

Table 30. - (continued)

Location	R54-171-1	D61-1185	D61-2002	N60-6195	N60-6352	L.S.D. (.05)	C.V.
			East Coast				
Georgetown, Del.*	9.7	18.5	12.6	13.3	8.6	4.5	23%
Linkwood, Md.	15.5-	25.6+	26.8+	23.0	22.9	3.9	10%
Painter, Va.	26.7-	39.7	41.5	31.5-	30.8-	4.2	7%
Warsaw, Va.	26.0-	38.6	36.0	33.8	30.7	5.5	10%
Petersburg, Va.	27.9	34.6	32.9	29.5	25.1-	6.0	11%
Norfolk, Va.	39.4	34.6	33.5-	36.8-	33.1-	2.2	4%
Holland, Va.	32.6-	40.6	38.2	36.6-	33.0-	4.6	7%
Plymouth, N. C.	37.7	37.8	29.5-	23.2-	33.9	8.3	15%
Willard, N. C.	50.9	37.2	40.1	40.8	38.8	N.S.	14%
Clayton, N. C.	52.2	45.4	43.2	49.6	46.2	N.S.	10%
Hartsville, S. C.	37.5	28.6	35.2	34.5	34.5	N.S.	13%
Mean	34.6-	36.3	35.7	34.0-	32.9-	3.2	
			Southeast				
Quincy, Fla.	32.7	22.6-	22.4-	26.1	27.7	3.9	9%
Fairhope, Ala.	30.2	28.2	33.9	31.4	38.6+	5.6	10%
Baton Rouge, La.	22.5	18.7	19.9	26.2	28.6+	4.6	12%
Mean	28.5	23.2-	25.4	27.9	31.6+	2.7	
			Upper and Central South				
Milan, Tenn.	38.6	40.7	39.9	37.6	38.1	N.S.	11%
Jackson, Tenn.	43.2	44.5	37.5	34.8-	37.3	7.9	11%
Belle Mina, Ala.	8.2-	12.6	9.4-	9.8-	10.4	2.5	13%
State College, Miss.	31.5	34.4	30.5	30.0	30.3	N.S.	12%
Mean	30.4	33.1	29.3-	28.0-	29.0-	4.0	
			Delta				
Portageville, Mo.(A)	37.4	38.7	42.9	37.8	35.1-	3.9	6%
Portageville, Mo.(B)	32.4	41.0+	39.0+	30.0-	29.4-	2.9	9%
Keiser, Ark.(A)	30.0	36.4	28.0	31.2	26.9	N.S.	21%
Keiser, Ark.(B)	33.3	34.7	32.9	26.5	28.6	N.S.	13%
Marianna, Ark.	31.6	30.0	26.2	28.6	29.3	N.S.	16%
Stoneville, Miss.(A)	40.4	41.1	42.5	35.2-	33.9-	5.5	8%
Stoneville, Miss.(B)	31.0	34.1	34.1	30.9	30.8	N.S.	7%
St. Joseph, La.	58.7	54.3	60.8	45.8-	61.6	5.4	6%
Mean	36.8	38.8	38.3	33.3-	34.5	3.0	
			West				
Stuttgart, Ark.	43.1	40.1	37.5	38.8	40.7	N.S.	7%
Curtis, La.*	10.2	16.2	9.4	16.9	16.0	N.S.	27%
Bixby, Okla.	44.1	39.6-	38.0-	35.6-	30.9-	6.7	10%
Halfway, Texas*	37.2+	25.8	21.9	34.3	29.6	7.3	16%
Lubbock, Texas	22.3	27.3	23.4	24.5	24.5	N.S.	12%
Mean	36.5	35.7	33.0	33.0	32.0	N.S.	

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

Table 31. - Chemical composition and seed size for the strains in Uniform Group VI, 1964

Location	Hood	Lee	D59-268	N59-6937	N59-6972	D60-9647
			Oil Percentage			
Linkwood, Md.	20.3	20.6	20.7	21.6	21.4	17.9
Warsaw, Va.	20.8	20.6	21.6	21.6	22.5	18.0
Plymouth, N. C.	20.8	21.5	21.8	20.8	19.6	18.3
Clayton, N. C.	22.4	20.7	23.0	22.8	23.8	19.7
Portageville, Mo.	21.2	20.7	22.2	21.6	22.5	18.5
Keiser, Ark.(B)	21.6	21.7	22.6	23.2	23.3	19.9
Stoneville, Miss.(A)	22.6	22.7	22.6	23.6	25.1	20.2
Stoneville, Miss.(B)	21.0	21.6	21.6	22.3	23.7	19.5
Stuttgart, Ark.	21.8	20.4	22.0	22.6	23.6	19.0
Bixby, Okla.	20.0	20.0	21.2	21.6	23.2	17.6
Mean	21.3	21.1	21.9+	22.2+	22.9+	18.9-
			Protein Percentage			
Linkwood, Md.	40.3	39.1	38.6	38.1	40.1	42.2
Warsaw, Va.	39.6	41.0	38.8	37.8	39.4	44.1
Plymouth, N. C.	42.0	41.4	41.8	40.2	41.2	46.8
Clayton, N. C.	40.2	40.6	39.2	39.1	38.0	45.7
Portageville, Mo.	38.4	39.2	37.8	38.7	39.0	43.6
Keiser, Ark.(B)	38.1	38.5	36.9	36.0	37.7	40.3
Stoneville, Miss.(A)	39.4	39.8	40.5	38.6	38.0	44.0
Stoneville, Miss.(B)	38.1	38.8	38.0	36.7	36.5	42.0
Stuttgart, Ark.	39.5	42.5	39.4	39.8	40.4	46.4
Bixby, Okla.	41.0	41.2	39.7	39.6	39.3	45.2
Mean	39.7	40.2	39.1	38.5-	39.0-	44.0+
			Grams per 100 Seeds			
Linkwood, Md.	15.1	14.5	15.3	15.6	15.4	15.5
Warsaw, Va.	17.6	14.6	15.8	16.8	17.3	18.0
Plymouth, N. C.	17.4	13.1	14.2	14.0	14.5	19.2
Clayton, N. C.	18.2	13.4	15.4	15.3	14.5	18.3
Keiser, Ark.(B)	14.3	12.7	13.7	13.3	10.0	15.7
Stoneville, Miss.(A)	14.0	12.3	13.4	13.2	12.4	17.2
Stoneville, Miss.(B)	12.9	12.4	12.6	12.6	13.0	15.6
Stuttgart, Ark.	15.7	15.3	16.3	16.3	14.7	19.7
Bixby, Okla.	17.6	13.3	15.3	14.7	13.7	16.2
Mean	15.9	13.5-	14.7-	14.6-	13.9-	17.3

Table 31. - (continued)

Location	D60-11,082	R54-171-1	D61-1185	D61-2002	N60-6195	N60-6352	L.S.D. (.05)
			Oil Percentage				
Linkwood, Md.	18.1	19.5	20.8	20.5	20.2	19.8	
Warsaw, Va.	20.1	19.3	21.0	20.5	20.1	19.9	
Plymouth, N. C.	19.3	20.6	21.2	20.6	19.9	20.4	
Clayton, N. C.	21.0	20.9	22.1	22.4	21.1	21.3	
Portageville, Mo.	20.0	21.6	20.8	18.7	20.2	20.6	
Keiser, Ark.(B)	21.2	22.0	21.9	20.9	20.8	20.7	
Stoneville, Miss.(A)	21.6	22.9	21.9	22.1	19.4	21.1	
Stoneville, Miss.(B)	21.1	21.0	22.0	22.1	20.7	21.3	
Stuttgart, Ark.	19.7	21.3	21.7	20.7	19.5	20.7	
Bixby, Okla.	19.2	20.8	20.3	20.4	18.7	19.2	
Mean	20.1-	21.0	21.4	20.9	20.1-	20.5-	0.6
			Protein Percentage				
Linkwood, Md.	39.4	39.4	36.6	38.7	40.8	39.2	
Warsaw, Va.	40.4	39.4	37.3	38.3	41.0	40.6	
Plymouth, N. C.	42.9	40.3	40.9	40.1	42.6	40.2	
Clayton, N. C.	41.5	40.5	39.9	38.9	39.5	39.4	
Portageville, Mo.	40.0	38.9	37.9	39.0	40.1	39.5	
Keiser, Ark.(B)	38.0	35.8	35.9	36.3	38.8	38.1	
Stoneville, Miss.(A)	40.4	38.1	38.4	38.5	42.1	39.6	
Stoneville, Miss.(B)	38.4	37.5	35.8	37.0	40.1	38.7	
Stuttgart, Ark.	41.9	40.0	39.4	39.6	43.3	41.6	
Bixby, Okla.	41.0	39.0	39.0	39.8	41.8	41.1	
Mean	40.4+	38.9-	38.1-	38.6-	41.0+	39.8	0.7
			Grams per 100 Seeds				
Linkwood, Md.	15.2	11.7	15.0	10.8	15.2	14.4	
Warsaw, Va.	17.2	15.2	15.5	13.6	15.0	14.3	
Plymouth, N. C.	15.7	15.4	13.0	10.0	12.2	13.0	
Clayton, N. C.	17.4	17.0	16.1	15.5	12.8	13.8	
Keiser, Ark.(B)	14.0	12.7	11.7	9.7	11.3	12.3	
Stoneville, Miss.(A)	13.8	13.2	12.2	10.2	10.9	11.6	
Stoneville, Miss.(B)	13.8	11.6	12.7	10.3	11.6	12.1	
Stuttgart, Ark.	16.0	14.3	15.0	11.0	13.0	14.7	
Bixby, Okla.	15.1	14.1	14.1	10.9	11.9	12.9	
Mean	15.4	13.9-	13.9-	11.3-	12.7-	13.2-	0.9

Table 32. - Relative maturity data, days earlier (-) or later (+) than Hood, for the strains in Uniform Group VI, 1964

Location	Date Planted	Hood Matured	Lee	D59-268	N59-6937	N59-6972
			East Coast			
Georgetown, Del.*	5-21	10-29	+1	0	+2	-4
Linkwood, Md.	6-5	10-20	+8	+8	+8	+1
Plymouth, N. C.	5-14	10-15	+4	+4	-2	-6
Willard, N. C.	5-11	10-13	+9	+8	+2	-6
Clayton, N. C.	5-7	10-16	+7	+5	0	-9
Hartsville, S. C.	5-20	10-10	+12	+10	0	-3
Mean		10-15	+8	+7	+2	-5
			Southeast			
Tallassee, Ala.	5-14	9-27	+17	+11	+5	-4
Quincy, Fla.	7-7	10-14	+4	+8	+4	-2
Jay, Fla.	6-14	10-2	+7	+6	-3	-9
Fairhope, Ala.	7-2	10-10	+9	+5	+8	0
Baton Rouge, La.	6-5	10-9	+10	+7	+5	-4
Mean		10-6	+9	+7	+4	-4
			Upper and Central South			
Jackson, Tenn.	5-29	10-15	+13	+11	+5	-1
Belle Mina, Ala.	6-2	10-12	+13	+7	+11	0
State College, Miss.	5-8	9-30	+12	0	+4	-13
Mean		10-9	+13	+6	+7	-5
			Delta			
Portageville, Mo.(A)	5-18	10-17	+5	+6	-1	-6
Portageville, Mo.(B)	5-19	10-18	+6	+5	+3	-5
Keiser, Ark.(A)	4-30	10-4	+20	+8	+3	-2
Keiser, Ark.(B)	5-8	10-22	+12	+5	+8	-7
Marianna, Ark.	5-15	10-15	+8	+3	+3	-9
Stoneville, Miss.(A)	5-14	10-7	+6	+2	+1	-6
Stoneville, Miss.(B)	7-6	10-26	0	+2	0	-6
St. Joseph, La.	5-18	10-5	+15	+7	+9	0
Mean		10-14	+9	+5	+3	-5
			West			
Stuttgart, Ark.	5-27	10-14	+13	+11	+7	-6
Curtis, La.	5-21	10-7	+12	+7	+10	-3
Bixby, Okla.	5-19	10-24	+6	0	+1	-8
Mean		10-15	+10	+6	+6	-6

* Not included in mean.

Table 32. - (continued)

Location	D60-9647	D60-11,082	R54-171-1	D61-1185	D61-2002	N60-6195	N60-6352
			East Coast				
Georgetown, Del.*	+5	0	+4	-5	-7	0	+1
Linkwood, Md.	+9	+7	+9	+1	+1	+7	+7
Plymouth, N. C.	+4	-2	+7	-2	-2	0	+4
Willard, N. C.	+9	+5	+10	-5	-1	+5	+9
Clayton, N. C.	+7	+5	+10	-6	-6	+3	+8
Hartsville, S. C.	+11	+8	+12	-3	0	+8	+7
Mean	+8	+5	+10	-3	-2	+5	+7
			Southeast				
Tallassee, Ala.	+11	+8	+10	+1	+5	+13	+14
Quincy, Fla.	+6	+5	+11	-2	-4	+6	+9
Jay, Fla.	+3	+5	-8	-3	-3	+5	+6
Fairhope, Ala.	+5	+9	+8	+5	+5	+5	+5
Baton Rouge, La.	+10	+8	+9	+6	+7	+14	+14
Mean	+7	+7	+6	+1	+2	+9	+10
			Upper and Central South				
Jackson, Tenn.	+16	+11	+12	+2	+5	+3	+11
Belle Mina, Ala.	+16	+3	+3	0	0	+11	+11
State College, Miss.	+6	+4	+6	-5	0	+6	+1
Mean	+13	+6	+7	-1	+2	+7	+8
			Delta				
Portageville, Mo.(A)	+8	+3	+5	-4	-3	+5	+5
Portageville, Mo.(B)	+6	+3	+3	-1	-4	+4	+3
Keiser, Ark.(A)	+20	+1	+8	+2	+3	+15	+20
Keiser, Ark.(B)	+11	+7	+5	-1	0	+3	+11
Marianna, Ark.	+8	+6	+6	0	0	+6	+6
Stoneville, Miss.(A)	+6	0	+5	-2	0	+4	+5
Stoneville, Miss.(B)	0	-1	+2	-6	-6	0	0
St. Joseph, La.	+9	+10	+10	+9	+10	+19	+19
Mean	+9	+4	+6	0	0	+7	+9
			West				
Stuttgart, Ark.	+13	+5	+15	-2	+1	+12	+21
Curtis, La.	+7	+11	+5	+8	+10	+12	+12
Bixby, Okla.	+6	-4	0	0	-2	-2	-6
Mean	+9	+4	+7	+2	+3	+7	+9

Table 33. - Plant height for the strains in Uniform Group VI, 1964

Location	Hood	Lee	D59-268	N59-6937	N59-6972	D60-9647
			East Coast			
Georgetown, Del.*	34	32	24	33	32	35
Linkwood, Md.	39	39	37	41	35	39
Painter, Va.	34	40	37	39	38	36
Warsaw, Va.	38	39	38	40	38	41
Petersburg, Va.	40	39	39	39	35	37
Norfolk, Va.	38	41	36	36	33	38
Holland, Va.	40	40	41	41	39	41
Plymouth, N. C.	37	39	37	41	40	39
Willard, N. C.	35	33	32	33	35	33
Clayton, N. C.	32	31	28	29	29	31
Hartsville, S. C.	33	33	29	35	33	31
Mean	37	37	35	37	36	37
			Southeast			
Tallassee, Ala.	22	33	29	34	30	27
Quincy, Fla.	18	17	16	15	20	16
Jay, Fla.	26	26	23	27	26	26
Fairhope, Ala.	16	17	17	21	15	16
Baton Rouge, La.	28	24	28	26	26	24
Mean	22	23	23	25	23	22
			Upper and Central South			
Jackson, Tenn.	42	48	48	52	48	44
Belle Mina, Ala.	33	34	32	35	31	32
State College, Miss.	38	30	34	35	35	34
Mean	38	37	38	41	38	37
			Delta			
Portageville, Mo.(A)	38	40	39	39	37	44
Portageville, Mo.(B)	36	37	33	34	35	40
Keiser, Ark.(A)	37	33	33	37	33	39
Keiser, Ark.(B)	34	35	31	34	34	37
Marianna, Ark.	36	34	35	32	32	39
Stoneville, Miss.(A)	37	34	35	37	34	37
Stoneville, Miss.(B)	29	29	33	29	28	30
St. Joseph, La.	34	34	35	36	36	36
Mean	35	35	34	35	34	38
			West			
Stuttgart, Ark.	33	31	30	32	33	36
Curtis, La.	23	26	29	25	25	22
Bixby, Okla.	32	32	34	33	35	36
Mean	29	30	31	30	31	31

*Not included in mean.

Table 33. - (continued)

Location	D60-11,082	R54-171-1	D61-1185	D61-2002	N60-6195	N60-6352
			East Coast			
Georgetown, Del.*	38	42	36	33	31	32
Linkwood, Md.	41	44	45	42	36	39
Painter, Va.	45	43	43	42	36	39
Warsaw, Va.	43	43	44	44	39	40
Petersburg, Va.	40	42	42	38	35	38
Norfolk, Va.	39	44	40	37	34	37
Holland, Va.	41	52	47	41	39	39
Plymouth, N. C.	43	47	45	41	37	39
Willard, N. C.	37	39	41	33	29	33
Clayton, N. C.	33	37	34	33	31	32
Hartsville, S. C.	36	42	37	35	33	33
Mean	40	43	42	39	35	37
			Southeast			
Tallassee, Ala.	30	35	36	34	28	31
Quincy, Fla.	19	19	16	18	12	13
Jay, Fla.	27	30	25	22	21	24
Fairhope, Ala.	24	23	22	23	15	16
Baton Rouge, La.	22	34	26	25	22	33
Mean	24	28	25	24	20	23
			Upper and Central South			
Jackson, Tenn.	50	48	52	50	44	46
Belle Mina, Ala.	37	38	37	36	29	34
State College, Miss.	36	44	36	33	32	33
Mean	41	43	42	40	35	38
			Delta			
Portageville, Mo.(A)	40	47	46	41	37	38
Portageville, Mo.(B)	37	40	46	36	35	37
Keiser, Ark.(A)	35	40	46	37	31	34
Keiser, Ark.(B)	36	40	42	34	33	36
Marianna, Ark.	37	41	41	33	36	33
Stoneville, Miss.(A)	38	43	44	37	34	37
Stoneville, Miss.(B)	29	33	35	29	29	29
St. Joseph, La.	36	42	40	36	30	32
Mean	36	41	43	35	33	35
			West			
Stuttgart, Ark.	38	40	41	34	28	32
Curtis, La.	23	30	28	25	23	36
Bixby, Okla.	40	36	38	31	32	31
Mean	34	35	36	30	28	33

Table 34. - Lodging scores for the strains in Uniform Group VI, 1964

Location	Hood	Lee	D59-268	N59-6937	N59-6972	D60-9647
			East Coast			
Georgetown, Del.	2.8	3.2	1.7	2.5	2.0	3.7
Linkwood, Md.	3.5	3.3	3.3	3.1	2.8	3.4
Painter, Va.	2.7	3.7	3.2	2.7	3.0	3.0
Warsaw, Va.	2.8	2.8	1.5	2.2	2.7	2.9
Petersburg, Va.	2.0	3.0	1.0	2.0	2.0	3.0
Norfolk, Va.	5.0	5.0	4.0	4.0	3.0	3.0
Holland, Va.	2.0	3.0	2.0	1.7	2.3	1.3
Plymouth, N. C.	3.0	4.0	3.3	3.0	3.0	4.0
Willard, N. C.	3.0	2.0	2.0	1.7	2.0	4.0
Clayton, N. C.	3.7	3.7	2.0	2.3	2.3	3.3
Hartsville, S. C.	3.0	2.1	1.3	1.8	2.1	3.0
			Southeast			
Tallassee, Ala.	1.0	2.0	1.0	1.3	1.3	1.7
Quincy, 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	2.0	2.0	2.0	2.0	2.0
			Upper and Central South			
Milan, Tenn.	5.0	5.0	5.0	3.0	5.0	5.0
Jackson, Tenn.	1.0	1.0	2.0	1.0	2.0	2.0
Belle Mina, Ala.	1.3	2.0	1.0	1.0	1.0	1.3
State College, Miss.	2.0	3.0	2.0	3.0	2.0	2.0
			Delta			
Portageville, Mo.(A)	2.7	2.8	2.7	2.3	2.5	2.8
Portageville, Mo.(B)	1.5	1.8	1.2	1.2	1.0	2.5
Keiser, Ark.(A)	2.7	2.0	1.0	3.0	1.3	2.0
Keiser, Ark.(B)	1.3	2.0	1.0	1.0	1.0	1.7
Marianna, Ark.	2.3	2.7	1.7	2.0	2.0	2.0
Stoneville, Miss.(A)	2.3	3.0	1.7	2.3	2.7	2.7
Stoneville, Miss.(B)	3.0	2.7	2.3	3.0	2.7	3.0
St. Joseph, La.	4.0	4.0	3.0	3.0	3.0	3.0
			West			
Stuttgart, Ark.	1.0	1.3	1.0	1.0	1.0	2.0
Curtis, La.	2.0	2.0	2.0	2.0	2.0	2.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	2.0

Table 34. - (continued)

Location	D60-11,082	R54-171-1	D61-1185	D61-2002	N60-6195	N60-6352
			East Coast			
Georgetown, Del.	2.7	3.5	2.5	3.0	3.3	3.5
Linkwood, Md.	3.4	3.2	3.4	3.4	3.2	3.4
Painter, Va.	3.5	3.5	3.0	3.3	3.0	3.0
Warsaw, Va.	2.5	2.8	2.8	2.8	2.5	2.7
Petersburg, Va.	2.0	3.0	3.0	3.0	2.0	3.0
Norfolk, Va.	3.0	4.0	4.0	4.0	4.0	4.0
Holland, Va.	2.3	3.0	2.0	3.3	2.0	2.7
Plymouth, N. C.	3.3	3.3	3.0	3.7	3.7	4.0
Willard, N. C.	2.7	2.7	2.0	2.0	1.7	2.7
Clayton, N. C.	3.0	3.7	2.7	3.3	2.7	3.3
Hartsville, S. C.	2.3	2.8	2.4	2.0	1.8	2.6
			Southeast			
Tallassee, Ala.	1.0	2.3	2.3	2.0	1.0	1.3
Quincy, 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	2.0	2.0	2.0	2.0	3.0
			Upper and Central South			
Milan, Tenn.	5.0	5.0	5.0	4.0	5.0	5.0
Jackson, Tenn.	3.0	3.0	3.0	3.0	2.0	2.0
Belle Mina, Ala.	1.3	1.0	1.3	2.0	1.3	2.0
State College, Miss.	3.0	4.0	3.0	2.0	3.0	2.0
			Delta			
Portageville, Mo.(A)	2.7	3.3	2.5	2.7	2.5	2.5
Portageville, Mo.(B)	1.7	1.5	1.8	1.7	1.2	1.7
Keiser, Ark.(A)	5.0	2.7	3.7	2.7	1.3	2.0
Keiser, Ark.(B)	1.3	2.0	1.3	1.3	1.0	2.0
Marianna, Ark.	2.7	3.0	2.7	2.7	2.7	2.7
Stoneville, Miss.(A)	3.0	3.0	2.7	2.0	2.0	3.0
Stoneville, Miss.(B)	3.0	3.0	2.3	2.3	3.0	3.0
St. Joseph, La.	3.0	4.0	4.0	3.0	2.0	3.0
			West			
Stuttgart, Ark.	1.3	1.0	1.3	1.3	1.0	1.3
Curtis, La.	2.0	2.0	2.0	2.0	2.0	3.0
Bixby, Okla.	2.0	2.0	1.0	2.0	1.0	2.0

Table 35. - Seed quality scores for the strains in Uniform Group VI, 1964

Location	Hood	Lee	D59-268	N59-6937	N59-6972	D60-9647
			East Coast			
Georgetown, Del.	2.8	3.7	3.5	4.2	2.5	4.2
Linkwood, Md.	2.0	2.0	2.0	2.3	2.0	2.0
Painter, Va.	1.0	1.7	2.2	3.0	1.3	3.5
Warsaw, Va.	1.5	1.5	1.5	2.0	1.0	2.5
Petersburg, Va.	1.0	2.0	3.0	4.0	1.0	4.3
Norfolk, Va.	1.0	2.0	2.0	3.0	2.0	5.0
Holland, Va.	1.0	1.0	1.0	1.0	1.0	1.5
Plymouth, N. C.	1.5	1.5	2.0	1.5	2.0	1.5
Willard, N. C.	2.0	1.0	2.0	2.0	2.0	2.0
Clayton, N. C.	3.0	1.5	2.0	2.0	2.5	1.5
Hartsville, S. C.	2.0	3.0	4.0	4.0	4.0	5.0
			Southeast			
Quincy, Fla.	2.0	3.0	3.0	4.0	2.0	4.0
Jay, Fla.	1.0	1.0	2.0	3.0	1.0	3.0
Fairhope, Ala.	1.7	1.0	1.2	2.7	3.2	2.3
Baton Rouge, La.	3.0	2.0	3.0	3.0	3.0	3.0
			Upper and Central South			
Milan, Tenn.	1.0	2.0	2.0	3.0	2.0	2.0
Jackson, Tenn.	3.0	2.0	2.0	4.0	2.0	4.0
State College, Miss.	2.0	2.0	2.0	2.0	2.0	2.0
			Delta			
Portageville, Mo.(A)	1.5	1.5	1.5	1.8	1.3	2.0
Portageville, Mo.(B)	1.5	1.8	1.5	2.0	1.3	2.3
Keiser, Ark.(A)	2.3	3.3	3.3	4.0	2.0	4.0
Keiser, Ark.(B)	2.7	3.0	2.7	4.0	3.3	3.3
Marianna, Ark.	2.3	2.0	2.3	3.3	2.0	2.7
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	1.0	1.3	2.0	2.0	1.0	2.0
St. Joseph, La.	4.0	2.0	3.0	3.0	4.0	3.0
			West			
Stuttgart, Ark.	2.3	2.0	2.0	3.0	2.3	3.0
Curtis, La.	2.0	2.0	3.0	2.0	3.0	2.0
Bixby, Okla.	1.0	1.0	2.0	2.0	2.0	1.0

Table 35. - (continued)

Location	D60-11,082	R54-171-1	D61-1185	D61-2002	N60-6195	N60-6352
			East Coast			
Georgetown, Del.	3.2	3.2	2.8	3.5	3.3	3.5
Linkwood, Md.	2.6	2.0	2.0	2.0	2.0	2.0
Painter, Va.	1.7	1.3	2.2	2.3	1.7	2.5
Warsaw, Va.	1.5	1.5	1.5	1.2	1.8	2.0
Petersburg, Va.	3.0	1.0	2.0	2.3	2.0	3.3
Norfolk, Va.	2.0	1.0	3.0	3.0	2.0	2.0
Holland, Va.	1.5	1.0	2.0	2.0	1.5	1.5
Plymouth, N. C.	2.0	1.0	1.5	3.0	1.5	1.5
Willard, N. C.	2.0	1.0	2.0	2.0	1.5	1.5
Clayton, N. C.	2.0	1.5	2.5	2.0	1.5	1.5
Hartsville, S. C.	4.0	2.0	3.0	4.0	3.0	3.0
			Southeast			
Quincy, Fla.	4.0	2.0	4.0	3.0	3.0	3.0
Jay, Fla.	2.0	1.0	2.0	2.0	1.0	2.0
Fairhope, Ala.	1.8	1.7	3.3	2.5	2.5	1.5
Baton Rouge, La.	2.0	1.0	3.0	3.0	1.0	2.0
			Upper and Central South			
Milan, Tenn.	1.0	1.0	2.0	3.0	2.0	2.0
Jackson, Tenn.	3.0	2.0	3.0	4.0	2.0	3.0
State College, Miss.	2.0	2.0	2.0	2.0	2.0	2.0
			Delta			
Portageville, Mo.(A)	1.5	1.3	1.5	1.5	1.5	1.5
Portageville, Mo.(B)	1.3	1.8	1.8	1.5	1.8	1.8
Keiser, Ark.(A)	3.0	4.0	2.7	2.7	3.0	4.0
Keiser, Ark.(B)	3.7	3.3	2.0	2.7	3.0	3.3
Marianna, Ark.	3.0	2.0	2.3	2.7	2.0	2.7
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	1.7	2.0	2.0	2.0	1.7
St. Joseph, La.	2.0	1.0	3.0	3.0	2.0	2.0
			West			
Stuttgart, Ark.	1.7	1.7	2.3	2.0	2.0	2.7
Curtis, La.	3.0	2.0	2.0	3.0	2.0	2.0
Bixby, Okla.	1.0	1.0	2.0	2.0	2.0	2.0

PRELIMINARY GROUP VI

1964

Eight Preliminary Group VI nurseries were planted. The parentage for the strains included is reported in table 36. Performance data are summarized in tables 37 through 42. Differences in seed yield were significant at 5 of the 7 locations where yield data were complete. The combined analysis of variance for seed yield data showed no strain to have yielded significantly better than Hood or Lee. There were 23 strains which yielded significantly less than Hood. Fifteen of these strains yielded significantly less than Lee.

Five strains produced seed having lower protein percentage than Hood. Only D61-3791 had a higher oil percentage. This is a D49-2491 backcross line selected for higher oil content and slightly earlier maturity. Nineteen strains had higher protein percentage than Hood. All but 3 of these had an oil percentage significantly below that for Hood.

Thirteen strains selected from Arksoy x D49-2491 were included. Six of these strains (D62-6872, D62-6880, D62-6913, D62-7009, D62-7062, and D62-7134) flowered when nights were shortened by using fluorescent light as does Arksoy. These averaged 2 inches shorter, had a slightly higher oil percentage, and lower protein percentage than did the 7 strains which gave the same light reaction as Lee or D49-2491. Five of the thirteen strains produced mean yields significantly lower than Lee.

The variety Hinn, released for production on the High Plains of Texas by the High Plains Research Foundation, is very susceptible to bacterial pustule, wildfire, and Phytophthora rot. Five strains were very susceptible to target spot. All 5 had as one parent D59-2205, which is highly susceptible to target spot, but was used as a parent to contribute high protein percentage. Twelve strains showed a considerable amount of hilum color extension at Plymouth.

Among the more promising strains are D61-994, R62-395, R62-144, D61-3791, D62-6913, and D62-6959.

Table 36. - Parentage of the strains in Preliminary Group VI, 1964

	Variety or strain	Parentage	Generation Composited
1.	Hood		
2.	Lee		
3.	D61-808	Hill(2) x D51-4877	F_5
4.	D61-994	Hill(2) x D51-4877	F_5
5.	D61-2065	D52-810 x PI 215,693	F_5
6.	D61-2086	D52-810 x PI 215,693	F_5
7.	D61-2694	D49-2491(4) x PI 174,862	F_5
8.	D61-3791	D49-2491(6) x L3-2010	F_4
9.	D61-5323	Lee x PI 200,532	F_7
10.	D62-6375	PI 166,147 x Hill	F_5
11.	D62-6872	Arksoy x D49-2491	F_6
12.	D62-6880	Arksoy x D49-2491	F_6
13.	D62-6913	Arksoy x D49-2491	F_6
14.	D62-6923	Arksoy x D49-2491	F_6
15.	D62-6959	Arksoy x D49-2491	F_6
16.	D62-6981	Arksoy x D49-2491	F_6
17.	D62-6983	Arksoy x D49-2491	F_6
18.	D62-7009	Arksoy x D49-2491	F_6
19.	D62-7051	Arksoy x D49-2491	F_6
20.	D62-7062	Arksoy x D49-2491	F_6
21.	D62-7098	Arksoy x D49-2491	F_6
22.	D62-7134	Arksoy x D49-2491	F_6
23.	D62-7207	Arksoy x D49-2491	F_6
24.	N62-115	D58-1899 x D59-2205	F_4
25.	N62-136	D58-1899 x D59-2205	F_4
26.	N62-166	D58-1899 x D59-2205	F_4
27.	N62-239	D58-1899 x D59-2205	F_4
28.	N62-263	D58-1899 x D59-2205	F_4
29.	N62-272	D58-1899 x D59-2205	F_4
30.	N62-327	D58-1899 x D59-2205	F_4
31.	N62-357	D58-1899 x D59-2205	F_4
32.	R62-144	Lee x Dortchsoy 110	F_5
33.	R62-395	R54-168 x Hill	F_5
34.	R62-428	R54-168 x Hill	F_5
35.	R62-860	Lee x L49-4196-12	F_5
36.	Hinn		

Table 37. - General summary of performance for the strains in Preliminary Group VI, 1964

Strain	Yield	Maturity Index	Ht.	Percent Oil	Percent Protein	Shatter 2/	B.P. 2/	T.S. 2/	P.R. 3/	Hilum Diff. 4/
Hood	33.0	10-17	35	21.3	39.2	2.0	1.0	1.0	2.0	1.0
Lee	31.7	+5	36	21.2	39.7	1.0	1.0	1.0	1.0	1.0
D61-808	30.6	-1	41	21.3	38.3-	1.0	1.0	1.0	1.0	1.0
D61-994	32.8	-3	43	22.1	37.5-	1.0	1.0	1.0	1.0	1.0
D61-2065	30.2-	+3	36	21.0	39.5	1.0	1.0	1.0	1.0	1.0
D61-2086	31.4	+5	35	21.0	39.4	1.0	1.0	1.0	1.0	1.0
D61-2694	27.7-	+5	34	17.9-	43.1+	1.0	1.0	1.5	1.0	1.0
D61-3791	31.9	+3	35	22.3+	38.2-	1.0	1.0	1.0	1.0	1.0
D61-5323	29.8-	+5	38	18.7-	41.7+	1.0	1.0	1.5	1.0	1.0
D62-6375	27.0-	+3	36	19.6-	40.3+	1.0	1.0	1.5	1.0	5.0
D62-6872	28.1-	0	38	19.9-	41.0+	1.0	1.0	2.0	1.0	4.0
D62-6880	30.0-	+3	40	20.9	39.5	1.0	1.0	1.0	1.0	1.0
D62-6913	30.8	+3	38	21.0	39.9	1.0	1.0	1.0	1.0	2.0
D62-6923	25.5-	+7	43	20.2-	40.7+	1.0	1.0	1.5	1.0	4.0
D62-6959	30.8	+3	41	19.7-	41.5+	1.0	1.0	2.0	1.0	1.0
D62-6981	30.5	+6	35	20.3-	40.4+	1.0	1.0	1.0	1.0	4.0
D62-6983 1/	30.3-	+4	39	20.3-	40.7+	1.0	1.0	1.0	1.0	5.0
D62-7009	27.4-	+3	38	21.3	40.0	1.0	1.0	1.0	1.0	2.0
D62-7051	25.2-	+4	42	20.1-	40.1+	1.0	1.0	1.5	1.0	5.0
D62-7062	29.5-	+3	37	21.0	40.2+	1.0	1.0	1.0	1.0	3.0
D62-7098	28.3-	0	38	19.6-	40.4+	1.0	1.0	1.0	1.0	4.0
D62-7134	30.8	+2	36	21.1	40.0	1.0	1.0	2.0	1.0	4.0
D62-7207	30.6	+5	35	20.0-	40.3+	1.0	1.0	1.5	1.0	4.0
N62-115 1/	29.2-	+2	35	19.9-	42.9+	1.0	1.0	4.0	1.0	2.0
N62-136	29.7-	+2	33	20.8	41.4+	1.0	1.0	2.0	1.0	1.0
N62-166	28.3-	-2	33	19.5-	43.8+	1.0	1.0	2.0	1.0	1.0
N62-239	24.3-	+3	38	21.3	41.7+	1.0	1.0	3.0	1.0	1.0
N62-263	27.8-	+2	34	20.4-	42.0+	1.0	1.0	1.5	1.0	2.0
N62-272	28.8-	+2	33	20.4-	41.5+	1.0	1.0	3.0	2.0	1.0
N62-327	25.6-	+2	37	19.3-	42.4+	1.0	1.0	3.5	1.0	1.0
N62-357 1/	25.0-	0	33	19.0-	43.1+	1.0	1.0	3.0	1.0	1.0
R62-144	31.9	0	38	21.4	38.5	1.0	1.0	1.0	2.5	1.0
R62-395	32.8	+4	32	22.3	38.9	1.0	1.0	1.0	2.0	3.0
R62-428	29.9-	+3	35	21.6	37.9-	1.0	1.0	1.0	1.0	2.0
R62-860	26.0-	+7	39	21.0	38.7	1.0	1.0	1.0	1.0	2.0
Hinn	25.4-	-3	40	20.8	37.8-	1.0	4.0	2.0	4.0	5.0
L.S.D.(.05)	2.6			0.6	0.9					
L.S.D.(.01)	3.4			0.8	1.1					

1/ Segregating for pubescence color
2/ Stoneville data
3/ Stoneville and Keiser data
4/ Warsaw and Plymouth data.

Table 38. - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Hood	22.8	37.5	39.5	32.3	23.9	42.1	32.9
Lee	24.6	31.0-	25.8-	34.7	31.6+	44.5	30.0
D61-808	23.6	31.7-	34.0	31.6	30.5	31.9	30.7
D61-994	26.6+	37.6	35.0	36.7	32.1+	32.6	29.0
D61-2065	23.8	26.5-	29.6-	30.8	31.4+	37.7	31.5
D61-2086	26.8+	30.8-	29.8-	34.6	31.5+	37.4	29.1
D61-2694	22.6	26.6-	22.0-	31.3	27.4	35.9	28.0
D61-3791	24.0	30.2-	26.4-	38.8	34.6+	38.9	30.6
D61-5323	21.4	26.6-	32.6	33.8	34.0+	31.7-	28.4
D62-6375	18.7-	25.3-	17.9-	35.5	33.5+	29.7-	28.1
D62-6872	21.8	29.5-	25.8-	32.5	32.2+	28.7-	26.0
D62-6880	22.6	28.4-	31.8-	36.0	29.1	31.1-	31.1
D62-6913	25.6	29.1-	27.7-	38.2	31.1+	33.0	31.1
D62-6923	18.2-	16.5-	24.6-	26.8	27.1	33.1	32.3
D62-6959	26.5+	29.0-	29.6-	37.3	27.3	34.7	31.1
D62-6981	24.0	28.6-	31.6-	34.4	29.5	32.5	32.6
D62-6983	28.6+	31.4-	30.4-	36.9	25.7	30.4-	28.8
D62-7009	21.4	22.1-	26.6-	32.2	32.3+	29.7-	27.8
D62-7051	18.4-	24.3-	22.4-	31.7	20.6	29.6-	29.0
D62-7062	24.0	30.4-	25.8-	33.7	28.2	34.5	30.0
D62-7098	24.4	28.1-	26.5-	32.9	26.0	30.6-	29.5
D62-7134	24.0	31.5-	28.6-	38.3	29.2	35.7	28.4
D62-7207	28.5+	33.0	27.2-	31.7	30.9+	35.1	27.9
N62-115	27.2+	32.9	25.6-	32.8	30.6+	27.1-	28.4
N62-136	25.4	30.2-	33.2	34.0	27.2	31.2-	27.0
N62-166	22.3	29.1-	29.1-	31.7	24.6	31.9	29.9
N62-239	19.9	24.4-	21.8-	27.1	25.9	22.1-	28.8
N62-263	21.6	28.3-	30.1-	30.7	28.8	27.6-	27.9
N62-272	24.7	27.6-	29.8-	34.6	26.7	29.2-	29.0
N62-327	19.4	26.2-	23.2-	28.3	29.0	24.4-	28.8
N62-357	23.8	28.2-	27.2-	26.5	25.8	17.4-	26.3
R62-144	28.2+	35.7	30.6-	34.6	33.2+	33.1	27.6
R62-395	26.9+	34.0	30.6-	43.0	28.8	37.4	29.7
R62-428	18.8-	27.4-	31.8-	31.1	39.4+	31.1-	29.9
R62-860	16.7-	27.7-	20.8-	31.3	29.1	29.4-	27.2
Hinn	24.9	30.1-	29.0-	29.1	13.8-	27.9-	23.0
L.S.D.(.05)	3.5	5.0	7.5	N.S.	6.7	10.4	N.S.
C.V.	7%	8%	13%	13%	11%	16%	9%

Table 39. - Oil percentages for the strains in Preliminary Group VI, 1964

Strain	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Hood	20.4	20.5	21.2	21.9	22.2	21.4
Lee	20.6	19.7	20.7	21.4	22.8	21.7
D61-808	20.7	20.6	21.1	21.3	21.5	22.3
D61-994	22.1	21.4	21.6	21.6	22.5	23.6
D61-2065	20.5	20.9	19.4	21.8	22.0	21.2
D61-2086	20.1	20.0	20.6	21.3	22.1	21.7
D61-2694	18.3	16.5	17.1	18.2	18.2	18.8
D61-3791	21.7	21.3	21.9	23.2	23.5	22.4
D61-5323	17.9	18.4	18.2	18.7	19.9	19.1
D62-6375	19.2	18.9	19.5	19.7	20.1	20.0
D62-6872	19.6	19.1	19.8	19.8	20.1	20.8
D62-6880	20.0	20.5	20.3	20.8	22.0	21.6
D62-6913	20.8	20.2	20.1	21.3	21.7	21.7
D62-6923	19.4	19.8	19.3	19.7	21.6	21.3
D62-6959	19.9	19.1	18.5	19.5	20.3	20.6
D62-6981	19.6	19.9	19.4	20.8	21.3	20.8
D62-6983	19.9	19.4	20.2	19.9	20.8	21.7
D62-7009	21.2	21.1	20.2	20.9	21.9	22.2
D62-7051	18.8	19.5	19.1	20.2	21.7	21.0
D62-7062	20.2	20.7	20.4	20.9	21.3	22.2
D62-7098	18.7	19.1	19.1	19.4	20.6	20.9
D62-7134	20.5	20.2	20.6	21.0	22.2	22.0
D62-7207	19.2	18.7	19.8	19.5	21.8	20.9
N62-115	19.8	18.6	19.9	20.1	20.5	20.2
N62-136	20.3	18.8	21.0	21.5	21.1	22.0
N62-166	18.6	17.7	19.1	19.9	20.4	21.0
N62-239	20.8	20.6	21.4	22.5	21.0	21.5
N62-263	20.1	19.0	20.3	21.1	20.8	21.0
N62-272	20.1	18.9	20.7	20.9	20.6	21.4
N62-327	19.2	18.1	18.3	20.6	18.8	20.8
N62-357	18.6	18.1	18.3	19.6	18.5	20.9
R62-144	21.2	20.8	21.5	21.1	21.5	22.5
R62-395	21.5	21.4	22.7	23.5	23.0	21.9
R62-428	20.2	21.0	21.2	22.5	22.7	21.8
R62-860	20.1	20.3	20.7	20.6	22.5	21.8
Hinn	20.7	20.2	20.4	19.8	21.3	22.1

Table 40. - Protein percentages for the strains in Preliminary Group VI, 1964

Strain	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Hood	39.9	42.0	38.4	37.7	39.3	37.7
Lee	40.9	41.4	39.8	37.9	39.9	38.1
D61-808	37.3	40.5	38.7	37.4	39.5	36.6
D61-994	36.7	40.6	37.3	36.2	39.1	35.2
D61-2065	39.6	41.5	39.8	37.2	40.5	38.3
D61-2086	40.4	40.0	40.0	38.0	40.3	37.6
D61-2694	42.5	44.7	43.8	42.1	43.7	41.7
D61-3791	39.5	40.1	38.2	35.2	39.0	37.2
D61-5323	41.3	44.0	41.2	40.0	43.2	40.3
D62-6375	39.9	42.2	39.1	39.4	42.6	38.7
D62-6872	42.6	42.7	40.7	39.4	41.4	39.2
D62-6880	39.1	42.0	39.6	38.2	39.7	38.2
D62-6913	39.8	43.6	39.3	38.1	41.0	37.7
D62-6923	39.3	42.7	41.1	40.0	41.4	39.4
D62-6959	41.5	44.1	41.3	39.6	42.2	40.0
D62-6981	39.9	42.8	39.9	39.2	41.5	39.2
D62-6983	41.5	42.9	40.5	39.3	41.5	38.6
D62-7009	39.3	41.9	39.8	38.4	41.0	39.3
D62-7051	40.2	42.6	40.5	39.0	40.0	38.0
D62-7062	41.1	42.0	39.7	38.2	41.5	38.4
D62-7098	40.9	43.0	40.4	38.1	41.0	38.8
D62-7134	39.9	43.2	40.3	37.7	41.0	38.1
D62-7207	41.5	42.4	40.0	39.9	39.2	38.9
N62-115	42.6	45.4	41.7	41.2	45.1	41.5
N62-136	42.8	44.9	40.7	38.0	42.7	39.2
N62-166	45.4	46.4	43.3	41.1	45.7	40.9
N62-239	41.9	44.2	41.5	38.9	43.4	40.3
N62-263	42.5	45.8	40.7	40.4	42.9	39.8
N62-272	41.7	44.4	40.3	39.3	43.5	39.5
N62-327	42.8	44.3	42.9	40.4	44.4	39.5
N62-357	43.9	45.0	43.5	40.5	45.2	40.4
R62-144	37.8	40.7	38.6	36.4	39.8	37.8
R62-395	38.9	42.0	37.6	36.4	41.3	37.4
R62-428	39.0	40.7	37.5	34.6	38.8	36.9
R62-860	38.5	41.3	39.0	37.3	39.4	36.7
Hinn	37.6	40.1	37.3	38.3	39.1	34.5

Table 41. - Plant height for the strains in Preliminary Group VI, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)	Jay, Fla.
Hood	38	39	42	38	33	37	32	24
Lee	44	42	37	38	36	35	30	26
D61-808	48	46	48	42	37	42	34	33
D61-994	48	46	46	50	41	43	35	31
D61-2065	42	41	41	39	35	35	30	26
D61-2086	40	38	40	39	36	36	28	25
D61-2694	40	44	35	34	33	35	28	26
D61-3791	42	40	38	38	35	32	28	23
D61-5323	41	39	44	40	38	37	33	33
D62-6375	43	44	34	40	35	32	30	27
D62-6872	51	40	42	43	36	38	31	26
D62-6880	48	46	43	40	38	40	32	33
D62-6913	46	48	40	34	36	38	30	34
D62-6923	52	47	44	48	42	44	34	33
D62-6959	46	47	43	39	40	43	35	31
D62-6981	39	37	38	36	33	35	32	26
D62-6983	46	42	39	42	39	39	31	30
D62-7009	46	40	41	43	37	35	31	30
D62-7051	51	49	48	45	37	42	33	31
D62-7062	44	41	41	39	36	36	29	31
D62-7098	46	44	43	39	36	36	32	29
D62-7134	42	41	40	38	33	35	32	27
D62-7207	40	39	39	36	32	35	31	27
N62-115	40	40	40	38	33	35	29	28
N62-136	40	35	38	37	34	31	30	22
N62-166	41	36	37	37	27	37	28	23
N62-239	42	43	40	41	36	39	29	30
N62-263	40	37	38	36	33	31	29	28
N62-272	40	34	37	34	31	34	28	25
N62-327	42	36	41	39	37	36	33	31
N62-357	38	36	41	34	28	33	28	24
R62-144	48	41	44	45	37	41	26	25
R62-395	47	36	36	33	23	31	26	24
R62-428	42	38	42	41	33	30	29	24
R62-860	49	42	47	46	33	36	32	28
Hinn	44	40	43	45	39	49	31	32

Table 42. - Seed quality scores for the strains in Preliminary Group VI, 1964

Strain	Linkwood, Md.	Warsaw, Va.	Ply-mouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.(A)	Stone-ville, Miss.(B)	Jay, Fla.
Hood	2.0	1.0	2.0	1.3	3.5	2.0	1.5	1.0
Lee	2.0	1.5	1.5	1.9	3.5	1.5	1.0	2.0
D61-808	2.0	1.2	2.0	1.7	4.0	1.5	2.0	1.0
D61-994	2.0	1.2	3.0	1.7	4.5	2.0	2.0	2.0
D61-2065	2.0	2.0	1.5	1.6	3.0	2.0	1.5	1.0
D61-2086	3.0	1.2	1.5	1.8	3.5	2.0	1.5	2.0
D61-2694	3.0	1.5	1.5	1.7	3.5	2.0	1.0	2.0
D61-3791	2.0	1.5	1.5	1.4	4.0	2.0	1.0	1.0
D61-5323	2.0	2.0	1.5	1.5	4.5	2.0	2.0	2.0
D62-6375	3.0	2.5	2.0	2.2	4.0	2.0	2.0	2.0
D62-6872	2.0	2.0	2.0	1.9	5.0	2.0	2.0	2.0
D62-6880	2.0	1.2	1.5	1.6	5.0	2.0	2.0	1.0
D62-6913	2.0	2.0	2.0	1.4	5.0	2.0	1.0	2.0
D62-6923	2.0	2.0	1.5	1.9	4.5	2.0	1.0	2.0
D62-6959	2.0	1.5	1.5	1.8	4.5	2.0	1.0	2.0
D62-6981	2.0	1.2	2.0	1.5	4.5	2.0	1.5	3.0
D62-6983	2.0	1.5	1.5	1.7	4.0	2.0	2.0	2.0
D62-7009	2.0	1.5	1.5	1.7	3.5	2.0	2.0	2.0
D62-7051	2.0	1.5	1.5	1.8	4.5	2.0	2.0	3.0
D62-7062	2.0	1.5	1.5	1.5	4.0	2.0	2.0	2.0
D62-7098	3.0	2.0	1.5	1.8	4.5	2.0	2.0	2.0
D62-7134	2.5	2.0	1.5	1.4	5.0	2.0	2.0	2.0
D62-7207	2.0	2.0	1.5	1.5	3.5	2.0	1.5	1.0
N62-115	2.0	1.2	1.5	1.8	3.5	2.0	2.0	2.0
N62-136	2.0	1.0	1.0	1.5	3.5	2.0	1.5	1.0
N52-166	2.0	1.0	3.0	1.6	4.5	2.0	1.5	2.0
N62-239	2.0	1.2	1.0	1.5	3.5	2.0	2.0	1.0
N62-263	2.0	1.5	1.0	2.0	4.5	2.0	1.0	1.0
N62-272	3.0	1.5	1.5	1.7	4.0	2.0	2.0	2.0
N62-327	3.0	1.0	2.0	1.7	4.0	2.0	1.5	1.0
N62-357	2.0	1.2	2.0	1.7	4.5	2.0	2.0	1.0
R62-144	2.0	1.0	2.0	1.5	4.0	2.0	1.0	2.0
R62-395	2.0	1.2	2.0	1.4	4.0	2.0	1.0	2.0
R62-428	2.0	1.5	2.0	1.4	3.5	2.0	1.5	2.0
R62-860	2.5	1.5	1.5	1.8	3.5	2.0	2.0	2.0
Hinn	3.0	2.0	2.0	2.2	5.0	2.0	2.0	3.0

UNIFORM GROUP VII

1964

	Variety or strain	Parentage	Generation Composited
1.	Bragg	Jackson x D49-2491	F_6
2.	Jackson	Volstate(2) x Palmetto	F_4
3.	Lee	S-100 x CNS	F_6
4.	D57-1501	Jackson x D49-2491	F_6
5.	N58-5850	N51-1971 x D49-2491	F_5
6.	D60-8107	D51-4877 x D55-4168	F_5
7.	D60-12,327	D51-5427 x D49-2491	F_6
8.	F59-1362	Jackson x D49-2491	F_5
9.	F59-1851	D51-5091 x Jackson	F_5
10.	Ga59-895	Jackson x D49-2491	F_7
11.	F59-1505	Jackson x D49-2491	F_5
12.	N60-5174	D55-4110 x N56-4071	F_5

Background of strains used as parents:

D49-2491 is a sister strain to Lee selected from S-100 x CNS.

N51-1971 is a selection from Roanoke x Ogden which was included in Uniform Group VI for the years 1954-1956.

D55-4168 is a high protein strain selected from Ogden x Biloxi.

D51-5427 is a subline of N45-1497, a high oil line selected from Ralsoy x Ogden.

D51-5091 is a rather tall selection from Roanoke x N45-745 which was included in Uniform Group VII nursery for the years 1954-1957. D51-4877 is a rather short type included for the years 1954-1956.

D55-4110 is a high protein selection from Ogden x CNS which was included in Uniform Group VII for the years 1958 and 1959.

N56-4071 is a selection from N46-1703 x D49-2525 which was included in Preliminary Group VI in 1958.

Twenty-six Uniform Group VII nurseries were planted. Results of 23 of these plantings are summarized in tables 43 through 49, with table 43 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 and oil and protein percentages.

Seed yield differences among strains were significant at 15 of the 23 locations. The combined analysis of variance for the mean seed yields by production areas showed significant differences among strains within each production area.

The two strains D57-1501 and N58-5850 have been grown 3 years. Both have yielded as well or slightly better than Bragg but not sufficiently better to consider for release. D57-1501 has excellent lodging resistance. Neither D57-1501 or N58-5850 holds its seed quite as well or has quite the field resistance to Phytophthora rot as Lee or Bragg.

Of the strains grown two years, D60-12,327 carries the Arksoy type resistance to Phytophthora rot and has given excellent performance in plantings on clay. Its 2-year meanyield is below that for Lee and Bragg in all production areas. None of these plantings have been under conditions favoring development of Phytophthora rot. In the Delta and West tests, D60-12,327 has exceeded Jackson in yield by 5%.

D60-8107 has averaged 11% higher in protein and 12% lower in oil than Bragg. Seed yield has been fairly similar to that of Jackson. Seed holding is also similar to that of Jackson. F59-1362 has given good production but does not appear to be superior to Bragg. F59-1851 has yielded somewhat better than Bragg and does not hold its seed as well. Ga59-895 has yielded less than Bragg on the basis of the 1964 data and the 2-year means.

F59-1505 produced excellent yields in all production areas and has good seed holding qualities. N60-5174 did not yield quite as well as D60-8107 but has somewhat higher protein percentage.

Table 43. - General summary of performance for the strains in Uniform Group VII, 1964

	Bragg	Jackson	Lee	D57-1501	N58-5850	D60-8107
Seed Yield - 1964						
East Coast	41.0	39.6	39.4	42.2	41.8	39.5
Southeast	33.6	31.2	32.9	34.0	34.0	29.3-
Delta & West	38.6	35.2	40.6	39.2	40.7	36.3
- 1963-64						
East Coast	40.0	39.6	39.1	40.8	40.5	38.4
Southeast	29.9	28.7	30.4	32.4	31.6	27.3
Delta & West	39.7	35.3	39.3	40.3	41.2	36.6
- 1962-64						
East Coast	40.5	39.2	40.3	41.2	40.8	
Southeast	32.0	30.0	30.0	33.2	31.6	
Delta & West	41.9	38.0	41.5	42.7	43.2	
Oil Percentage - 1964	21.5	22.0+	21.6	22.2+	22.1+	19.2-
- 1963-64	21.7	21.8	21.4	21.9	22.0	19.1
- 1962-64	21.8	21.9	21.5	22.9	22.2	
Protein Percentage - 1964	40.0	39.4-	41.4+	39.5	40.3	44.6+
- 1963-64	39.9	39.1	41.0	39.2	39.9	44.3
- 1962-64	40.0	39.1	41.0	39.3	40.0	
Seed Size	15.5	14.7	13.3-	12.9-	15.0	14.3-
Maturity Index	10-28	+2	-8	-4	0	-7
Height	39	38	30	33	36	36
Shattering[1/]	1.0	3.0	1.0	1.5	1.8	3.0
Bacterial Pustule[2/]	1.0	3.0	1.0	1.0	1.0	1.0
Target Spot[3/]	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora Rot[2/]	1.0	2.5	1.0	2.0	2.0	1.0
Flower Color	W	W	P	P	P	P
Pubescence Color	T	G	T	T	G	T

1/ Tallassee, Gainesville, Stoneville data.
2/ Stoneville data.
3/ Stoneville and Gainesville data.

Table 43. - (Continued)

	D60-12,327	F59-1362	F59-1851	Ga59-895	F59-1505	N60-5174
Seed Yield - 1964						
East Coast	36.9	38.8	39.3	34.7-	43.9	36.6-
Southeast	29.9-	33.4	34.3	31.9	34.8	30.1-
Delta & West	35.6	35.1	40.7	33.5	41.3	33.5
- 1963-64						
East Coast	35.6	39.9	39.4	35.1		
Southeast	27.2	31.1	31.4	29.1		
Delta & West	37.1	36.2	39.3	33.6		
- 1962-64						
East Coast						
Southeast						
Delta & West						
Oil Percentage - 1964	21.1	21.8	21.7	21.4	21.0-	19.0-
- 1963-64	21.1	21.8	21.7	21.5		
- 1962-64						
Protein Percentage - 1964	40.5	39.5	39.2-	40.3	39.5	45.9+
- 1963-64	40.3	39.4	39.2	40.2		
- 1962-64						
Seed Size	14.1-	13.6-	13.8-	16.2	17.2+	15.9
Maturity Index	-4	0	0	+3	0	+3
Height	34	39	35	44	39	34
Shattering[1/]	1.3	1.0	1.8	1.0	1.0	1.0
Bacterial Pustule[2/]	1.0	1.0	1.0	1.0	1.0	1.0
Target Spot[3/]	1.0	1.0	2.0	1.0	1.0	1.0
Phytophthora Rot[2/]	1.0	2.0	2.5	2.5	1.5	2.0
Flower Color	P	P	W	P	P	P
Pubescence Color	G	T	G	T	T	G

Table 44. - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1964

Location	Bragg	Jackson	Lee	D57-1501	N58-5850	D60-8107	D60-12,327
East Coast							
Rocky Mount, N. C.	34.5	34.0	34.9	35.3	31.2	31.0	31.1
Clayton, N. C.	43.9	46.5	44.3	46.7	44.8	44.0	40.5
Willard, N. C.	44.2	42.3	39.6	47.9	42.2	38.1	39.4
Florence, S.C.(A)	47.6	44.4	47.4	48.3	52.9+	53.0+	44.8
Florence, S.C.(B)	39.6	38.7	40.5	38.7	44.7+	40.9	34.8
Hartsville, S. C.	35.9	31.9-	29.6-	36.3	34.8	29.7-	30.4-
Mean	41.0	39.6	39.4	42.2	41.8	39.5	36.9
Southeast							
Blackville, S. C.	41.5	34.1-	39.5	39.4	38.7	37.3	34.8-
Tallassee, Ala.	57.9	48.6	50.6	47.4	54.2	39.7	41.1
Tifton, Ga.	29.9	28.7	32.7	35.4+	33.8+	30.8	28.2
Gainesville, Fla.	28.0	24.0	18.4-	26.6	28.8	19.6-	17.7-
Zellwood, Fla.	24.5	20.1	23.8	26.2	28.2	26.1	18.4-
Marianna, Fla.	29.0	32.3	31.7	30.2	31.1	22.1	29.6
Quincy, Fla.	33.9	34.2	33.2	31.8	31.7	27.9-	30.2-
Jay, Fla.	38.2	40.1	39.9	44.2	39.4	38.0	41.6
Fairhope, Ala.	32.2	28.2	31.2	38.7+	33.6	30.6	33.9
Baton Rouge, La.	20.7	21.8	27.6+	20.6	20.2	20.9	23.3
Mean	33.6	31.2	32.9	34.0	34.0	29.3-	29.9-
Upper and Central South							
Clemson, S. C.	46.8	46.7	48.4	50.0	48.3	46.7	41.6-
State College,Miss.*	20.1	27.4	22.6	23.7	19.8	22.4	18.5
Delta and West							
Stoneville, Miss.(A)	38.9	38.9	39.2	36.3	42.9	44.5	36.8
Stoneville, Miss.(B)	34.3	30.5	33.8	32.6	35.1	31.4	31.1
St. Joseph, La.	40.1	32.9	46.6	45.8	45.4	31.7	37.4
Stuttgart, Ark.	41.1	38.5	42.7	41.9	39.2	37.5	37.1
Curtis, La.*	19.6	14.4	16.0	14.4	20.5	9.9	16.9
College Station,Texas*	36.6	37.4	42.2	45.4	35.0	33.3	33.3
Mean	38.6	35.2	40.6	39.2	40.7	36.3	35.6

* Not included in mean.

(+) - 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	F59-1362	F59-1851	Ga59-895	F59-1505	N60-5174	L.S.D. (.05)	C.V.
			East Coast				
Rocky Mount, N. C.	40.2+	28.5-	28.3-	37.4	28.9-	5.5	10%
Clayton, N. C.	43.1	36.2	35.6	44.1	39.0	N.S.	12%
Willard, N. C.	41.2	40.9	36.7	60.8+	40.3	8.2	11%
Florence, S. C.(A)	40.3-	51.6	42.8	47.2	43.7	5.3	7%
Florence, S. C.(B)	38.9	44.4	39.3	38.9	36.4	5.0	7%
Hartsville, S. C.	28.8-	34.3	25.1-	35.2	31.0-	2.8	5%
Mean	38.8	39.3	34.7-	43.9	36.6-	4.2	
			Southeast				
Blackville, S. C.	38.0	38.2	35.8-	37.4	33.2-	4.7	7%
Tallassee, Ala.	40.6	52.6	50.6	61.3	43.3	N.S.	17%
Tifton, Ga.	31.6	35.8+	28.3	33.6+	27.6	3.4	6%
Gainesville, Fla.	24.4	25.7	20.8-	30.5	28.5	5.8	14%
Zellwood, Fla.	21.3	29.2	26.5	29.2	24.3	5.2	12%
Marianna, Fla.	35.9	33.0	34.8	33.6	32.1	N.S.	15%
Quincy, Fla.	34.3	32.8	30.9-	29.5-	31.2	3.4	6%
Jay, Fla.	44.4	42.3	39.6	41.1	36.8	N.S.	7%
Fairhope, Ala.	35.7	36.7	29.2	34.5	29.4	5.3	10%
Baton Rouge, La.	27.9+	17.3	23.0	17.3	14.9-	4.5	12%
Mean	33.4	34.3	31.9	34.8	30.1-	3.0	
			Upper and Central South				
Clemson, S. C.	45.1	48.1	39.8-	49.9	46.5	4.4	6%
State College, Miss.*	26.0	24.0	17.4	26.8	14.3	N.S.	31%
			Delta and West				
Stoneville, Miss.(A)	36.6	43.3	30.6-	45.1+	30.9-	6.0	9%
Stoneville, Miss.(B)	31.7	31.4	29.4	32.2	28.7	N.S.	8%
St. Joseph, La.	28.7-	48.4	36.5	48.6	36.9	8.8	13%
Stuttgart, Ark.	43.3	39.8	37.7	39.2	37.6	N.S.	7%
Curtis, La.*	17.8	16.4	22.5	22.9	13.7	N.S.	26%
College Station, Texas*	42.4	39.4	35.0	37.5	30.8	N.S.	15%
Mean	35.1	40.7	33.5	41.3	33.5	5.5	

Table 45. - Chemical composition and seed size for the strains in Uniform Group VII, 1964

Location	Bragg	Jackson	Lee	D57-1501	N58-5850	D60-8107	D60-12,327
			Oil Percentage				
Clayton, N. C.	21.5	21.4	21.9	21.8	21.4	19.2	21.1
Hartsville, S. C.	20.8	21.2	21.1	21.9	22.0	20.1	20.5
Blackville, S. C.	20.4	22.2	21.8	22.2	22.2	19.7	20.2
Tallassee, Ala.	21.6	21.9	21.4	22.5	22.1	19.0	21.0
Gainesville, Fla.	22.5	23.1	22.5	22.6	23.6	20.3	21.4
Jay, Fla.	21.8	22.5	22.1	22.6	22.3	19.2	21.7
Stoneville, Miss.(A)	23.4	23.3	22.3	23.1	23.1	20.2	22.3
Stoneville, Miss.(B)	21.5	22.1	21.6	22.1	21.8	18.8	20.6
Stuttgart, Ark.	20.4	21.2	20.9	21.5	20.3	17.9	20.7
St. Joseph, La.	20.8	21.0	20.5	21.4	21.8	17.3	21.6
Mean	21.5	22.0+	21.6	22.2+	22.1+	19.2-	21.1
			Protein Percentage				
Clayton, N. C.	39.7	39.3	40.4	39.7	41.0	45.1	40.4
Hartsville, S. C.	39.9	39.2	40.5	39.3	39.1	43.8	40.2
Blackville, S. C.	40.4	39.8	41.6	39.1	41.0	45.5	40.6
Tallassee, Ala.	39.6	40.4	40.9	39.7	40.8	44.8	40.9
Gainesville, Fla.	42.0	39.9	43.7	40.9	41.2	44.5	41.7
Jay, Fla.	40.7	40.6	41.9	40.2	40.9	44.9	40.6
Stoneville, Miss.(A)	38.4	37.0	40.3	37.8	39.2	43.0	39.4
Stoneville, Miss.(B)	38.2	37.3	39.7	37.8	38.4	43.3	39.4
Stuttgart, Ark.	41.0	40.6	43.6	40.5	42.1	46.5	41.9
St. Joseph, La.	39.9	40.2	41.0	39.7	39.5	44.1	40.2
Mean	40.0	39.4-	41.4+	39.5	40.3	44.6+	40.5
			Grams per 100 Seeds				
Clayton, N. C.	16.3	15.5	13.8	12.6	15.0	16.8	14.4
Hartsville, S. C.	16.5	14.8	12.9	13.6	14.3	15.3	14.6
Blackville, S. C.	18.1	16.8	15.0	14.4	16.8	15.7	16.1
Tallassee, Ala.	16.0	16.1	12.0	12.3	15.3	13.0	14.0
Gainesville, Fla.	13.7	12.9	12.2	12.0	13.3	12.9	11.5
Jay, Fla.	17.0	17.1	14.3	15.3	16.3	15.7	16.2
Stoneville, Miss.(A)	13.7	13.4	12.6	12.8	14.8	13.0	12.6
Stoneville, Miss.(B)	12.0	12.4	12.7	11.4	12.4	12.2	12.3
Stuttgart, Ark.	16.7	16.0	14.7	13.7	17.0	16.7	15.7
St. Joseph, La.	15.3	12.3	12.5	11.3	15.0	11.3	13.5
Mean	15.5	14.7	13.3-	12.9-	15.0	14.3-	14.1-

Table 45. - (continued)

Location	F59-1362	F59-1851	Ga59-895	F59-1505	N60-5174	L.S.D. (.05)
			Oil Percentage			
Clayton, N. C.	21.8	20.8	21.3	21.1	18.3	
Hartsville, S. C.	21.0	20.7	20.5	20.3	18.3	
Blackville, S. C.	22.0	21.8	20.9	21.1	18.6	
Tallassee, Ala.	22.7	21.5	22.1	21.5	19.1	
Gainesville, Fla.	22.3	22.7	20.8	20.6	20.3	
Jay, Fla.	21.5	22.0	21.1	21.6	19.8	
Stoneville, Miss.(A)	23.8	23.5	23.0	22.3	19.7	
Stoneville, Miss.(B)	21.3	21.6	21.7	21.1	18.8	
Stuttgart, Ark.	20.3	20.1	20.5	20.3	17.9	
St. Joseph, La.	21.1	22.0	22.5	20.4	19.2	
Mean	21.8	21.7	21.4	21.0-	19.0-	0.5
			Protein Percentage			
Clayton, N. C.	39.1	40.7	40.5	39.7	46.7	
Hartsville, S. C.	39.0	39.5	40.1	40.3	46.3	
Blackville, S. C.	39.9	38.9	40.6	40.6	46.1	
Tallassee, Ala.	40.4	40.7	39.7	39.9	46.3	
Gainesville, Fla.	41.0	40.5	43.1	40.8	46.8	
Jay, Fla.	40.5	39.2	42.4	40.8	46.8	
Stoneville, Miss.(A)	38.1	37.3	37.8	37.2	45.6	
Stoneville, Miss.(B)	37.5	37.2	38.2	36.8	44.4	
Stuttgart, Ark.	40.6	40.3	41.7	40.0	46.3	
St. Joseph, La.	39.0	38.1	38.8	38.9	43.6	
Mean	39.5	39.2-	40.3	39.5	45.9+	0.6
			Grams per 100 Seeds			
Clayton, N. C.	14.5	14.1	16.2	17.5	15.5	
Hartsville, S. C.	14.1	14.8	16.4	18.5	15.6	
Blackville, S. C.	15.5	15.8	18.2	19.9	17.3	
Tallassee, Ala.	13.0	14.3	18.0	20.0	18.7	
Gainesville, Fla.	11.7	12.6	11.9	14.5	17.3	
Jay, Fla.	16.0	15.0	20.0	18.3	13.6	
Stoneville, Miss.(A)	12.2	13.0	14.8	15.3	13.9	
Stoneville, Miss.(B)	12.2	10.4	12.8	14.0	13.8	
Stuttgart, Ark.	14.3	14.7	17.7	18.7	18.0	
St. Joseph, La.	12.5	13.5	15.5	15.5	15.3	
Mean	13.6-	13.8-	16.2	17.2+	15.9	0.9

Table 46. - Relative maturity data, days earlier (-) or later (+) than Bragg, for the strains in Uniform Group VII, 1964

Location	Date Planted	Bragg Matured	Jackson	Lee	D57-1501	N58-5850	D60-8107
			East Coast				
Rocky Mount, N. C.	5-15	11-5	0	-18	-8	-4	-15
Clayton, N. C.	5-7	11-1	0	-6	-6	0	-8
Willard, N. C.	5-11	10-28	+2	-6	-2	0	-2
Florence, S. C.(A)	6-1	11-13	+3	-12	-9	-4	-8
Florence, S. C.(B)	6-17	11-16	+3	-13	-8	-5	-9
Hartsville, S. C.	5-20	10-27	+4	-6	-3	0	-4
Mean		11-5	+2	-10	-6	-2	-6
			Southeast				
Blackville, S. C.	6-1	10-30	+3	-11	-6	+2	-7
Tallassee, Ala.	5-14	10-24	+6	-8	-7	0	-11
Tifton Ga.	6-1	10-18	0	-4	-1	+2	-2
Gainesville, Fla.	6-12	10-18	0	-8	-3	+2	-7
Marianna, Fla.	6-17	10-26	0	-5	-7	+5	-9
Quincy, Fla.	7-7	10-24	+3	-4	0	0	-5
Jay, Fla.	6-14	10-17	+4	-8	-5	+2	-6
Fairhope, Ala.	7-2	10-28	+2	-8	0	-4	-4
Baton Rouge, La.	6-5	10-22	+8	-4	-2	-2	-10
Mean		10-23	+3	-7	-3	0	-7
			Upper and Central South				
Clemson, S. C.	5-25	10-30	+2	-12	-3	+4	-4
State College, Miss.	5-8	10-20	-1	-8	-3	-1	-7
Mean		10-25	0	-10	-3	+2	-6
			Delta and West				
Stoneville, Miss.(A)	5-15	10-26	+1	-10	-4	+1	-3
Stoneville, Miss.(B)	7-7	10-30	0	-4	-1	-1	-2
St. Joseph, La.	5-18	10-24	+6	-4	-3	+3	-15
Stuttgart, Ark.	5-27	11-8	-3	-12	-11	+7	-12
Curtis, La.	5-21	10-20	+9	-2	-2	+4	-12
Mean		10-28	+3	-6	-4	+3	-9

Table 46. - (continued)

Location	D60-12,327	F59-1362	F59-1851	Ga59-895	F59-1505	N60-5174
			East Coast			
Rock Mount, N. C.	-8	-8	-4	0	0	-4
Clayton, N. C.	-3	+2	-1	+2	0	0
Willard, N. C.	0	0	+2	0	+2	+2
Florence, S. C.(A)	-8	-4	+5	+6	-5	-2
Florence, S. C.(B)	-6	+1	-1	+3	-3	-2
Hartsville, S. C.	-4	-1	+4	+2	+2	+7
Mean	-5	-2	0	+2	0	0
			Southeast			
Blackville, S. C.	-6	+1	+4	+3	+2	+5
Tallassee, Ala.	-10	+1	+1	+3	-3	+5
Tifton, Ga.	-5	0	+2	+13	0	+7
Gainesville, Fla.	-8	+3	0	+3	0	+8
Marianna, Fla.	-8	+5	-6	+7	0	+2
Quincy, Fla.	-4	+2	-1	-4	+1	+1
Jay, Fla.	-5	+2	+1	+5	-2	+4
Fairhope, Ala.	-8	-4	0	0	-4	0
Baton Rouge, La.	+3	+2	-4	+2	+2	+4
Mean	-6	+1	0	+4	0	+4
			Upper and Central South			
Clemson, S. C.	-4	+2	+4	+3	0	+6
State College, Miss.	-1	0	-1	+1	-1	+9
Mean	-3	+1	+2	+2	0	+8
			Delta and West			
Stoneville, Miss.(A)	-2	0	+1	+3	0	+2
Stoneville, Miss.(B)	-2	+1	-1	+1	+1	+1
St. Joseph, La.	+1	0	+1	+3	+1	+4
Stuttgart, Ark.	-11	-5	-2	+1	-3	+3
Curtis, La.	+2	-1	-2	+4	+2	+3
Mean	-2	-1	0	+2	0	+3

Table 47. - Plant height for the strains in Uniform Group VII, 1964

Location	Bragg	Jackson	Lee	D57-1501	N58-5850	D60-8107
			East Coast			
Rocky Mount, N. C.	50	52	37	43	41	44
Clayton, N. C.	41	40	32	34	34	39
Willard, N. C.	47	46	33	37	41	42
Florence, S. C.(A)	50	52	37	41	47	44
Florence, S. C.(B)	47	47	39	36	45	45
Hartsville, S. C.	44	44	36	39	39	43
Mean	47	47	36	38	41	43
			Southeast			
Blackville, S. C.	42	42	35	37	39	40
Tallassee, Ala.	45	41	36	35	38	37
Tifton, Ga.	32	35	25	27	32	33
Gainesville, Fla.	27	28	23	21	25	27
Zellwood, Fla.	24	25	23	23	28	27
Marianna, Fla.	35	37	31	35	36	38
Quincy, Fla.	24	20	15	15	21	19
Jay, Fla.	36	36	28	33	33	36
Fairhope, Ala.	22	22	21	22	23	16
Baton Rouge, La.	33	30	26	25	26	18
Mean	32	32	26	27	30	29
			Upper and Central South			
Clemson, S. C.	48	47	35	41	43	45
State College, Miss.	39	45	30	33	36	38
Mean	44	46	33	37	40	42
			Delta and West			
Stoneville, Miss.(A)	46	45	36	43	44	43
Stoneville, Miss.(B)	38	30	30	33	37	37
St. Joseph, La.	48	48	34	42	48	48
Stuttgart, Ark.	46	42	33	36	41	43
Curtis, La.	37	27	24	24	28	20
Mean	43	38	31	36	40	38

Table 47. - (continued)

Location	D60-12,327	F59-1362	F59-1851	Ga59-895	F59-1505	N60-5174
			East Coast			
Rocky Mount, N. C.	42	47	45	51	52	48
Clayton, N. C.	36	37	35	43	39	39
Willard, N. C.	40	43	40	49	46	39
Florence, S.C.(A)	42	49	40	54	49	43
Florence, S. C.(B)	42	48	42	50	48	46
Hartsville, S. C.	42	49	41	55	45	39
Mean	41	46	41	50	47	42
			Southeast			
Blackville, S. C.	38	43	39	46	38	37
Tallassee, Ala.	36	41	36	48	42	37
Tifton, Ga.	30	38	34	39	36	27
Gainesville, Fla.	23	30	25	36	29	25
Zellwood, Fla.	27	28	26	31	27	19
Marianna, Fla.	37	42	36	43	38	34
Quincy, Fla.	16	23	19	26	22	17
Jay, Fla.	31	38	33	38	36	32
Fairhope, Ala.	22	21	18	33	23	16
Baton Rouge, La.	18	27	28	43	34	27
Mean	28	33	29	38	33	27
			Upper and Central South			
Clemson, S. C.	43	49	43	51	48	43
State College, Miss.	36	38	39	46	41	35
Mean	40	44	41	49	45	39
			Delta and West			
Stoneville, Miss.(A)	43	46	44	48	46	41
Stoneville, Miss.(B)	37	40	36	40	39	35
St. Joseph, La.	42	48	48	48	48	40
Stuttgart, Ark.	38	43	40	50	47	41
Curtis, La.	20	25	27	40	33	25
Mean	36	40	39	45	43	36

Table 48. - Lodging scores for the strains in Uniform Group VII, 1964

Location	Bragg	Jackson	Lee	D57-1501	N58-5850	D60-8107
			East Coast			
Rocky Mount, N. C.	4.0	3.0	3.7	3.0	4.0	3.7
Clayton, N.C.	3.3	2.0	3.7	2.7	3.7	3.0
Willard, N. C.	3.3	3.3	2.3	2.3	3.7	3.3
Florence, S. C.(A)	2.0	2.0	3.0	1.0	3.0	2.0
Florence, S. C. (B)	3.0	1.0	4.0	1.0	4.0	2.0
Hartsville, S. C.	2.8	2.8	2.3	1.5	3.2	3.5
			Southeast			
Blackville, S. C.	3.0	2.0	2.0	1.7	3.0	1.7
Tallassee, Ala.	3.0	2.7	3.0	1.0	3.0	2.0
Tifton, Ga.	2.3	2.3	2.0	1.0	2.7	2.7
Gainesville, Fla.	1.0	1.3	1.7	1.0	1.3	1.0
Zellwood, Fla.	3.0	2.3	2.7	2.7	2.0	1.7
Marianna, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	3.0	2.0	2.0	1.0	3.0	1.0
			Upper and Central South			
Clemson, S. C.	2.8	2.3	1.5	1.0	3.5	2.0
State College, Miss.	2.0	2.0	3.0	1.0	2.0	2.0
			Delta and West			
Stoneville, Miss.(A)	3.0	3.0	3.0	2.0	3.0	2.0
Stoneville, Miss.(B)	3.0	3.0	2.7	2.3	3.0	3.0
St. Joseph, La.	5.0	3.0	3.0	3.0	3.0	4.0
Stuttgart, Ark.	2.3	1.0	1.3	1.0	2.0	1.0
Curtis, La.	2.0	2.0	2.0	2.0	3.0	2.0

Table 48. - (continued)

Location	D60-12,327	F59-1362	F59-1851	Ga59-895	F59-1505	N60-5174
			East Coast			
Rocky Mount, N. C.	3.3	3.3	3.7	4.3	3.7	4.0
Clayton, N. C.	2.7	3.0	3.0	3.3	3.0	3.7
Willard, N. C.	2.7	3.3	3.3	3.7	3.7	3.7
Florence, S. C.(A)	2.0	2.0	2.0	3.0	1.0	3.0
Florence, S. C.(B)	3.0	4.0	2.0	3.0	3.0	3.0
Hartsville, S. C.	2.1	2.6	3.5	3.9	3.1	2.2
			Southeast			
Blackville, S. C.	2.3	2.3	2.3	4.0	2.7	2.7
Tallassee, Ala.	2.0	3.0	2.7	4.0	3.0	2.3
Tifton, Ga.	2.0	2.3	2.3	3.3	2.7	2.7
Gainesville, Fla.	1.0	1.3	1.3	2.7	1.7	1.0
Zellwood, Fla.	2.0	2.3	2.0	4.0	3.0	1.0
Marianna, Fla.	1.0	2.0	1.0	3.0	2.0	1.0
Quincy, 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	3.0	2.0	3.0	3.0	2.0
			Upper and Central South			
Clemson, S. C.	1.7	2.7	2.7	3.2	2.8	2.2
State College, Miss.	2.0	2.0	2.0	3.0	2.0	3.0
			Delta and West			
Stoneville, Miss.(A)	2.0	3.0	3.0	3.0	3.3	3.0
Stoneville, Miss.(B)	2.0	3.0	3.0	3.3	3.0	3.0
St. Joseph, La.	5.0	4.0	5.0	3.0	3.0	4.0
Stuttgart, Ark.	1.0	1.0	2.0	2.0	2.0	2.0
Curtis, La.	2.0	3.0	2.0	2.0	3.0	2.0

Table 49. - Seed quality scores for the strains in Uniform Group VII, 1964

Location	Bragg	Jackson	Lee	D57-1501	N58-5850	D60-8107
			East Coast			
Rocky Mount, 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	1.5
Willard, N. C.	1.0	1.0	1.5	1.0	1.0	1.5
Hartsville, S. C.	3.0	2.0	3.0	3.0	2.0	4.0
			Southeast			
Blackville, S. C.	2.0	1.7	2.7	2.2	2.0	2.8
Tallassee, Ala.	1.0	2.0	1.0	1.0	1.0	1.0
Gainesville, Fla.	1.3	1.0	1.3	1.0	1.0	1.0
Zellwood, Fla.	1.3	2.3	1.0	1.0	1.0	1.0
Quincy, Fla.	2.0	2.0	3.0	3.0	4.0	4.0
Jay, Fla.	2.0	2.0	2.0	2.0	1.0	2.0
Fairhope, Ala.	1.2	2.3	1.0	1.7	2.2	1.7
Baton Rouge, La.	1.0	2.0	1.0	1.0	1.0	1.0
			Upper and Central South			
Clemson, S. C.	1.8	1.0	1.8	1.8	1.7	2.0
State College, Miss.	2.0	2.0	2.0	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
St. Joseph, La.	1.0	3.0	2.0	2.0	1.0	2.0
Stuttgart, Ark.	2.0	1.7	2.3	2.0	2.0	1.7
Curtis, La.	1.0	3.0	2.0	1.0	1.0	2.0

Table 49. - (continued)

Location	D60-12,327	F59-1362	F59-1851	Ga59-895	F59-1505	N60-5174
		East Coast				
Rocky Mount, N. C.	1.0	1.0	1.0	1.0	1.0	1.0
Clayton, N. C.	1.5	1.0	2.0	1.0	1.0	1.0
Willard, N. C.	1.0	1.5	1.0	1.5	1.5	1.0
Hartsville, S. C.	2.0	3.0	3.0	3.0	3.0	1.0
		Southeast				
Blackville, S. C.	2.3	2.5	1.7	2.0	2.3	1.5
Tallassee, Ala.	2.0	2.0	2.0	1.0	1.0	1.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Zellwood, Fla.	2.3	1.3	1.3	2.0	1.0	1.0
Quincy, Fla.	2.0	2.0	3.0	2.0	2.0	3.0
Jay, Fla.	1.0	2.0	1.0	2.0	2.0	1.0
Fairhope, Ala.	2.0	1.5	1.3	1.2	1.5	1.8
Baton Rouge, La.	1.0	2.0	1.0	1.0	2.0	1.0
		Upper and Central South				
Clemson, S. C.	1.8	2.5	1.7	1.5	2.0	1.2
State College, Miss.	2.0	2.0	2.0	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
St. Joseph, La.	1.0	3.0	2.0	2.0	1.0	1.0
Stuttgart, Ark.	2.3	2.0	1.7	2.0	2.0	1.7
Curtis, La.	1.0	1.0	2.0	2.0	2.0	1.0

PRELIMINARY GROUP VII

1964

Eight Preliminary Group VII nurseries were planted. The parentage for the strains included is reported in table 50. Performance data are summarized in tables 51 through 56. Differences in seed yield were significant at 5 of the 6 locations where yield data were complete. The combined analysis of variance for seed yield data showed yields for Bragg, D60-8758, F60-2244, and F60-2252 to be above that for Jackson. None of the experimental strains yielded significantly better than Bragg. Six strains yielded significantly less than Jackson and 27 strains yielded significantly less than Bragg.

Twenty-five strains were significantly lower in oil percentage than Jackson and 27 were significantly higher. One strain, D62-7666, was significantly lower in oil than Jackson without being any higher in protein. Four strains, D60-8758, F62-1989, N62-86, and N62-241, were equal to Jackson in oil percentage and significantly higher in protein percentage. Ten strains were 10 to 18% higher in protein percentage than Jackson. Six of these produced seed yields within the range of experimental error of the yield of Jackson.

Twenty strains had excellent seed holding qualities. All experimental strains were resistant to bacterial pustule. Nine strains were highly susceptible to target spot. Ten strains showed considerable color diffusion from the hilum in the planting at Willard.

The two highest-yielding strains, F60-2244 and F60-2252, were from the cross D51-4877 x D51-5091. F60-2244 shattered as much as Jackson. D60-8758 had high oil percentage along with moderately high protein, but it also shattered as much as Jackson. Rebel 4 gave good performance but resembled Lee in all aspects.

D62-7666, a selection from Laredo x D49-2491 considered to have the Laredo type reaction to root-knot nematodes, gives a combination of agronomic qualities much superior to Laredo.

The strains which would appear to merit advancing to Uniform Group VII are F60-2252, F61-1864, D61-5264, F62-1895, and F62-2184.

Table 50. - Parentage of strains in Preliminary Group VII, 1964

	Variety or strain	Parentage	Generation Composited
1.	Jackson		
2.	Bragg		
3.	D60-7938	D55-4090 x D55-4159	F_5
4.	D60-8391	D51-4877 x D55-4168	F_5
5.	D60-8498	D51-4877 x D55-4168	F_5
6.	D60-8758	D51-4877 x D55-4168	F_5
7.	D61-4269	D49-2491(6) x Barchet	F_4
8.	D61-5264	Lee x PI 200,532	F_7
9.	D61-5306	Lee x PI 200,532	F_7
10.	D61-5331	Lee x PI 200,532	F_7
11.	D62-7666	Laredo x D49-2491	F_8
12.	F59-1283	Jackson x D49-2491	F_5
13.	F60-2244	D51-4877 x D51-5091	F_6
14.	F60-2252	D51-4877 x D51-5091	F_6
15.	F61-1864	Palmetto x D49-2491	F_7
16.	F62-1576	F57-871 x F57-868	F_5
17.	F62-1630	F57-871 x F57-868	F_5
18.	F62-1770	F57-871 x F57-873	F_5
19.	F62-1895	F57-871 x F57-873	F_5
20.	F62-1989	F57-873 x F57-868	F_5
21.	F62-2184	F57-873 x F57-868	F_5
22.	F62-2578	F57-871 x F57-879	F_5
23.	N62-14	D58-1899 x D59-2205	F_5
24.	N62-37	D58-1899 x D59-2205	F_4
25.	N62-86	D58-1899 x D59-2205	F_4
26.	N62-129	D58-1899 x D59-2205	F_4
27.	N62-153	D58-1899 x D59-2205	F_4
28.	N62-188	D58-1899 x D59-2205	F_4
29.	N62-241	D58-1899 x D59-2205	F_4
30.	N62-247	D58-1899 x D59-2205	F_4
31.	N62-260	D58-1899 x D59-2205	F_4
32.	N62-280	D58-1899 x D59-2205	F_4
33.	N62-308	D58-1899 x D59-2205	F_4
34.	N62-315	D58-1899 x D59-2205	F_4
35.	Rebel 4		
36.	Rebel 5		

NOTE: F57-868, -869, -871, -873, and -879 were F_3 lines from D49-2491(2) x Biloxi.

Table 51. - General summary of performance for the strains in Preliminary Group VII, 1964

Strain	Seed Yield	Maturity Index	Ht.	Percent Oil	Percent Protein	Shatter[2]	B.P.[3]	T.S.[2]	Hilum Diffusion[4]
Jackson	33.1	10-26	39	21.8	39.3	3.0	3.0	1.0	1.0
Bragg	38.3+	-3	39	21.9	39.4	1.0	1.0	1.0	1.0
D60-7938	31.5	-4	39	18.9-	45.6+	1.5	1.0	1.0	3.0
D60-8391	30.0	-9	31	19.0-	46.3+	3.0	1.0	1.3	3.0
D60-8498	32.8	-11	39	20.1-	45.5+	1.5	1.0	1.0	4.0
D60-8758	36.8+	-5	38	21.9	41.2+	3.0	1.0	1.0	4.0
D61-4269	33.1	0	36	21.0	40.2	1.0	1.0	1.0	1.0
D61-5264	34.5	0	35	20.2-	39.2	1.0	1.0	1.3	3.0
D61-5306	30.7	+1	37	19.1-	39.6	1.0	1.0	2.0	1.0
D61-5331	29.3-	+2	38	19.9-	39.7	1.0	1.0	1.0	3.0
D62-7666	29.7	-2	32	18.4-	39.1	2.0	1.0	1.5	5.0
F59-1283	34.9	+3	41	20.7-	40.7+	1.0	1.0	1.3	2.0
F60-2244	38.5+	-2	40	21.0	39.3	3.0	1.0	1.3	1.0
F60-2252	37.9+	0	42	21.9	38.7	1.5	1.0	1.0	1.0
F61-1864	34.7	-2	33	20.9-	41.2+	1.2	1.0	2.0	1.0
F62-1576	31.1	0	35	19.7-	42.3+	1.5	1.0	1.3	3.0
F62-1630	31.4	-2	35	20.3-	42.0+	1.0	1.0	1.3	1.0
F62-1770	33.9	-1	34	20.7-	41.4+	1.0	1.0	1.3	1.0
F62-1895	34.1	0	36	20.9-	41.6+	1.0	1.0	1.5	1.0
F62-1989	32.2	-2	35	21.4	41.4+	1.5	1.0	1.5	1.0
F62-2184	34.3	-2	36	21.0	41.6+	1.5	1.0	1.0	1.0
F62-2578	28.2-	+1	34	20.0-	42.1+	1.0	1.0	1.0	1.0
N62-14	27.5-	-10	34	19.2-	45.8+	2.0	1.0	3.5	1.0
N62-37	32.9	-11	32	20.9-	43.8+	3.0	1.0	2.5	1.0
N62-86	32.7	-6	36	21.7	42.7+	2.5	1.0	3.0	1.0
N62-129	30.5	-10	35	21.0	42.4+	1.2	1.0	2.5	1.0
N62-153	31.8	-13	31	17.5-	46.4+	2.0	1.0	3.0	1.0
N62-188[1]	29.1-	-13	30	19.3-	46.1+	3.0	1.0	3.5	1.0
N62-241	31.0	-12	34	21.8	40.9+	2.0	1.0	3.5	1.0
N62-247	28.4-	-10	32	18.6-	45.9+	1.0	1.0	4.0	1.0
N62-260	31.6	-9	33	20.9-	42.7+	2.0	1.0	3.0	4.0
N62-280[1]	30.9	-9	33	20.7-	43.8+	2.0	1.0	2.0	1.0
N62-308	29.0-	-12	33	19.2-	44.9+	1.8	1.0	4.0	1.0
N62-315	29.2-	-8	32	20.6-	43.0+	1.8	1.0	3.5	1.0
Rebel 4	36.3	-9	32	21.2	41.1+	1.2	1.0	1.0	1.0
Rebel 5	32.4	0	39	20.1-	42.4+	1.0	1.0	1.0	5.0
L.S.D.(.05)	3.7			0.9	1.3				
L.S.D.(.01)	4.9			1.1	1.7				

1/ Segregating for pubescence color
2/ Stoneville and Gainesville data
3/ Stoneville data
4/ Willard data

Table 52. - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1964

Strain	Willard, N.C.	Blackville, S.C.	Tallassee, Ala.	Gainesville, Fla.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Jackson	34.4	35.9	45.9	27.3	24.8	30.4
Bragg	40.2	43.9+	50.0	37.1+	25.4	32.9
D60-7938	31.6	34.3	39.8	24.3	28.2	30.7
D60-8391	30.4	33.3	37.8	26.5	23.3	29.0
D60-8498	32.8	38.9	39.1	30.1	25.1	30.8
D60-8758	38.0	36.4	47.3	31.0	33.9+	34.1
D61-4269	34.7	36.6	48.7	22.6	26.8	29.2
D61-5264	38.9	36.7	46.6	28.4	25.7	31.0
D61-5306	38.2	34.1	32.0-	29.7	23.1	27.2
D61-5331	29.4	27.8-	44.2	19.9-	26.3	28.1
D62-7666	30.6	32.1	45.6	24.0	22.2	23.8
F59-1283	38.6	32.8	50.7	30.4	27.0	29.8
F60-2244	43.6+	44.2+	49.7	33.0+	28.5	32.0
F60-2252	45.4+	37.1	51.7	33.5+	30.4	29.2
F61-1864	37.7	32.8	49.0	32.3+	30.4	26.2
F62-1576	33.1	33.6	47.6	25.1	24.6	22.4
F62-1630	36.7	33.4	43.2	25.4	23.1	26.6
F62-1770	43.7+	35.6	45.6	28.1	23.9	26.7
F62-1895	39.6	32.7	49.0	28.0	26.1	29.4
F62-1989	35.8	35.9	45.3	25.6	23.2	27.8
F62-2184	40.2	34.9	49.7	25.8	28.1	27.0
F62-2578	31.1	31.3	34.0-	27.1	21.3	24.4
N62-14	32.8	29.3-	34.0-	22.9	17.1-	28.9
N62-37	40.6	34.0	43.6	26.6	23.9	29.1
N62-86	39.0	33.7	40.2	27.7	23.8	31.9
N62-129	34.3	33.7	37.4	25.5	24.6	27.3
N62-153	35.4	32.2	39.5	27.6	25.1	30.9
N62-188	34.0	35.7	36.8	18.7-	18.8	30.6
N62-241	35.8	33.8	37.4	23.8	23.9	31.4
N62-247	34.2	29.7-	39.1	23.2	18.5	26.1
N62-260	33.3	33.9	41.2	26.8	24.2	30.4
N62-280	34.2	32.3	39.5	20.7-	25.9	32.6
N62-308	36.4	33.8	33.7-	24.4	18.4	27.5
N62-315	32.2	34.3	34.7-	24.4	16.0-	34.0
Rebel 4	42.4+	39.2	52.8	21.4-	30.4	31.7
Rebel 5	40.9+	37.4	42.9	20.6-	28.6	24.1
L.S.D.(.05)	6.5	5.3	10.0	4.8	7.8	N.S.
C.V.	9%	8%	11%	9%	16%	11%

Table 53. - Oil percentages for the strains in Preliminary Group VII, 1964

Strain	Willard, N.C.	Blackville, S.C.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Jackson	21.9	21.6	22.1	21.7
Bragg	21.6	21.7	21.9	22.2
D60-7938	18.3	18.9	19.6	18.8
D60-8391	19.4	19.2	17.4	19.8
D60-8498	19.5	20.0	19.6	21.2
D60-8758	21.6	21.8	22.2	21.8
D61-4269	20.5	20.5	21.8	21.1
D61-5264	20.1	19.9	20.4	20.3
D61-5306	19.1	18.2	19.5	19.4
D61-5331	19.8	19.5	20.3	20.0
D62-7666	18.8	18.4	18.3	18.1
F59-1283	20.8	20.3	20.9	20.6
F60-2244	20.8	21.9	20.6	20.6
F60-2252	20.8	22.1	22.5	22.0
F61-1864	20.3	20.4	21.2	21.7
F62-1576	19.0	19.2	20.1	20.6
F62-1630	19.4	20.3	20.9	20.7
F62-1770	19.7	20.4	20.9	21.6
F62-1895	20.2	20.2	21.6	21.5
F62-1989	21.0	20.4	22.4	21.9
F62-2184	20.7	21.0	21.6	20.7
F62-2578	20.6	19.7	20.2	19.6
N62-14	19.9	19.0	18.0	19.9
N62-37	21.3	21.0	20.2	21.1
N62-86	21.6	21.7	21.5	22.0
N62-129	20.8	20.8	20.2	22.0
N62-153	17.2	17.0	17.2	18.4
N62-188	19.3	19.1	18.3	20.4
N62-241	22.0	21.9	21.7	21.4
N62-247	19.0	17.9	17.8	19.6
N62-260	21.3	20.2	20.1	21.8
N62-280	20.7	20.4	20.9	20.8
N62-308	19.5	19.3	17.7	20.1
N62-315	21.1	21.0	18.7	21.4
Rebel 4	21.4	21.0	20.8	21.6
Rebel 5	19.8	19.9	20.5	20.2

Table 54. - Protein percentages for the strains in Preliminary Group VII, 1964

Strain	Willard, N.C.	Blackville, S.C.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Jackson	40.4	40.0	40.3	36.4
Bragg	40.2	39.3	41.2	36.9
D60-7938	47.6	46.4	44.3	43.9
D60-8391	47.9	47.1	48.0	42.0
D60-8498	47.8	46.0	46.3	42.0
D60-8758	43.3	41.4	41.4	38.5
D61-4269	40.6	41.0	40.7	38.4
D61-5264	39.8	39.5	39.9	37.7
D61-5306	41.1	40.3	39.7	37.4
D61-5331	40.5	41.0	39.1	38.0
D62-7666	39.8	39.7	40.4	36.5
F59-1283	41.2	42.1	41.5	38.0
F60-2244	40.4	38.7	40.1	37.9
F60-2252	40.7	39.1	39.3	35.8
F61-1864	41.7	41.9	42.0	39.1
F62-1576	43.4	43.3	43.7	38.7
F62-1630	43.6	42.3	43.4	38.7
F62-1770	42.4	42.3	42.3	38.4
F62-1895	42.3	43.0	42.5	38.5
F62-1989	41.9	41.9	42.4	39.2
F62-2184	42.0	42.1	43.4	38.7
F62-2578	42.1	44.0	43.0	39.3
N62-14	45.9	47.1	48.3	41.8
N62-37	44.6	43.6	46.0	40.9
N62-86	42.3	43.3	44.4	40.8
N62-129	42.3	42.8	44.8	39.6
N62-153	47.9	47.1	48.1	42.5
N62-188	46.4	46.2	48.2	43.6
N62-241	41.0	40.6	43.4	38.5
N62-247	45.8	46.1	48.5	43.3
N62-260	42.5	42.3	45.8	40.1
N62-280	44.3	43.5	45.8	41.5
N62-308	44.8	44.7	47.7	42.4
N62-315	41.9	42.9	46.6	40.7
Rebel 4	42.5	41.6	41.0	39.4
Rebe 5	44.2	43.3	42.5	39.4

Table 55. - Plant height for the strains in Preliminary Group VII, 1964

Strain	Willard, N.C.	Blackville, S.C.	Tallassee, Ala.	Gainesville, Fla.	Jay, Fla.	Stoneville, Miss.(A)	Stoneville Miss.(B)
Jackson	46	38	39	34	34	48	36
Bragg	45	35	42	32	33	50	39
D60-7938	41	46	37	34	30	48	36
D60-8391	34	38	32	23	22	37	28
D60-8498	42	38	44	33	34	47	37
D60-8758	45	38	38	32	30	48	38
D61-4269	37	41	37	34	29	39	36
D61-5264	37	34	40	30	30	40	36
D61-5306	42	40	38	32	31	41	36
D61-5331	41	39	40	33	34	44	34
D62-7666	34	41	34	25	28	36	29
F59-1283	42	40	47	38	32	53	38
F60-2244	45	38	44	34	35	49	38
F60-2252	48	36	51	36	34	50	38
F61-1864	35	38	34	27	29	38	33
F62-1576	38	41	37	30	30	38	34
F62-1630	36	42	36	31	30	38	33
F62-1770	35	34	36	33	30	37	33
F62-1895	40	36	40	34	31	38	34
F62-1989	39	37	37	32	29	37	33
F62-2184	35	49	37	32	29	37	33
F62-2578	37	35	36	30	29	37	32
N62-14	35	38	36	29	30	38	32
N62-37	39	38	31	26	25	37	31
N62-86	41	36	38	31	32	40	33
N62-129	42	36	38	29	33	37	31
N62-153	33	35	34	25	27	36	28
N62-188	34	35	31	24	25	36	28
N62-241	37	37	34	27	31	39	30
N62-247	34	34	34	26	29	35	31
N62-260	36	34	35	27	31	38	31
N62-280	38	34	33	26	29	41	33
N62-308	37	34	35	28	27	38	31
N62-315	31	36	33	24	27	38	32
Rebel 4	34	36	36	25	26	38	30
Rebel 5	43	35	42	37	31	49	38

Table 56. - Seed quality scores for the strains in Preliminary Group VII, 1964

Strain	Willard, N.C.	Blackville, S.C.	Tallassee, Ala.	Gainesville, Fla.	Jay, Fla.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Jackson	1.0	1.0	1.0	1.0	1.0	2.0	1.5
Bragg	1.0	1.3	1.0	1.0	2.0	2.0	2.0
D60-7938	1.5	1.5	1.0	1.0	1.0	2.0	2.0
D60-8391	1.5	1.0	1.0	1.0	3.0	2.0	2.0
D60-8498	2.0	1.0	1.0	1.0	2.0	2.0	2.0
D60-8758	1.5	1.0	1.0	1.5	3.0	2.0	2.0
D61-4269	1.0	1.0	1.0	1.0	2.0	2.0	2.0
D61-5264	1.5	1.0	1.0	1.0	2.0	2.0	2.0
D61-5306	1.0	1.3	1.0	1.0	2.0	2.0	2.0
D61-5331	1.5	2.0	1.0	1.0	2.0	2.0	2.0
D62-7666	3.0	1.8	1.0	1.0	4.0	2.0	2.0
F59-1283	1.0	1.8	1.0	1.0	2.0	2.0	2.0
F60-2244	1.0	1.0	2.0	1.0	1.0	2.0	1.5
F60-2252	1.0	1.0	1.0	1.0	1.0	2.0	2.0
F61-1864	1.5	1.3	1.0	1.0	2.0	2.0	2.0
F62-1576	1.5	2.0	1.0	1.0	1.0	2.0	2.0
F62-1630	1.5	1.8	1.0	1.0	1.0	2.0	2.0
F62-1770	1.5	1.5	1.0	1.0	1.0	2.0	2.0
F62-1895	1.0	2.5	1.0	1.0	1.0	2.0	2.0
F62-1989	1.5	1.8	1.0	1.0	1.0	2.0	2.0
F62-2184	1.5	1.0	1.0	1.0	1.0	2.0	2.0
F62-2578	1.5	1.0	1.0	1.0	1.0	2.0	2.0
N62-14	1.0	1.0	1.0	2.0	1.0	2.0	1.5
N62-37	1.0	1.3	1.0	1.5	1.0	2.0	2.0
N62-86	1.0	1.5	1.0	1.0	1.0	2.0	2.0
N62-129	1.5	1.5	2.0	1.0	1.0	2.0	2.0
N62-153	1.0	1.0	1.0	1.0	1.0	2.0	2.0
N62-188	1.5	1.5	1.0	2.5	1.0	2.0	2.0
N62-241	1.5	1.5	1.0	2.0	1.0	2.0	2.0
N62-247	1.5	1.3	1.0	1.0	1.0	2.0	2.0
N62-260	1.5	1.8	1.0	1.0	2.0	2.0	2.0
N62-280	1.5	1.3	1.0	1.0	1.0	2.0	2.0
N62-308	1.5	1.8	1.0	1.5	1.0	2.0	2.0
N62-315	1.0	1.5	1.0	1.0	1.0	2.0	2.0
Rebel 4	1.5	1.5	1.0	1.5	2.0	2.0	2.0
Rebel 5	2.0	1.5	1.0	1.0	3.0	2.0	2.0

UNIFORM GROUP VIII

1964

	Vareity or strain	Parentage
1.	Bienville	Pelican #2 x Ogden
2.	Jackson	Volstate(2) x Palmetto
3.	Hampton	Majos x Lee
4.	Hardee	D49-772 x Improved Pelican
5.	Stuart	Majos x Lee
6.	Coker 240	Majos x Lee
7.	La59-7-21	Pelican #2 x Ogden
8.	F59-2008	D49-2491(2) x Improved Pelican
9.	La59-72-11	Pelican #2 x Ogden
10.	F61-3118	D51-5091 x Jackson
11.	F61-3132	D51-5091 x Jackson
12.	La61-55-3	Pelican #2 x Ogden

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.

D49-2491 is a selection from S-100 x CNS closely related to Lee.

D51-5091 is a tall selection from Roanoke x N45-745 which was included in Uniform Group VII nursery for the years 1954-1957.

Twenty Uniform Group VIII nurseries were planted. Results of 17 of these plantings are summarized in tables 57 through 63, with table 57 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 and oil and protein percentages.

Seed yield differences among strains were significant at 14 of the 17 locations. The combined analysis of variance of mean seed yields showed significant differences among strains within each production area.

Hampton has given the most consistent production of the named varieties. In addition to surpassing Jackson in yield, it is also superior in seed holding. Bienville has demonstrated superiority over other varieties at Baton Rouge. Hampton has shown consistently superior performance over Stuart. In the late planting at Florence, Hartsville, and Blackville, or at regular plantings at Live Oak and Gainesville where a late-maturing type is suited, Hardee had yielded better than Stuart. Coker 240 is 2 days later than Hampton but yielded less than Hampton in every comparison.

La59-7-21 has been grown 3 years. It has yielded slightly better than Bienville in the Southeast but has not yielded as well as Hampton. The 2-year mean yields for F59-2008 are rather mediocre.

The two strains F61-3118 and F61-3132 produced excellent seed yields in the Southeast. Both are rather tall types with fair seed holding.

Table 57. - General summary of performance for the strains in Uniform Group VIII, 1964

	Bienville	Jackson	Hampton	Hardee	Stuart	Coker 240
Seed Yield - 1964						
Southeast	32.6	31.5	34.4	33.3	28.6-	29.2-
West	38.7	32.3-	36.1	29.6-	22.0-	23.6-
- 1963-64						
Southeast	31.0	30.4	33.7	30.8	28.8	--
West	34.1	30.8	34.5	28.9	25.4	--
- 1962-64						
Southeast	32.5	31.7	35.2	32.1	30.7	--
West	34.5	32.0	35.8	30.8	31.2	--
Oil Percentage - 1964	21.7	22.2	22.1	21.0-	19.7-	19.2-
- 1963-64	21.3	21.7	21.9	21.2	19.8	--
- 1962-64	21.6	22.0	22.3	21.5	20.3	--
Protein Percentage - 1964	40.3	39.3-	37.7-	40.3	40.8	41.5+
- 1963-64	40.6	39.7	38.2	40.4	41.0	--
- 1962-64	40.4	39.4	38.1	40.4	40.9	--
Seed Size	14.4	14.7	15.1	13.8	16.8+	14.6
Maturity Index	11-1	-2	0	+6	+5	+2
Height	37	36	34	43	38	34
Bacterial Pustule[1/]	3.5	3.0	1.0	1.0	1.0	1.0
Target Spot[2/]	1.0	1.0	1.0	1.0	4.0	1.0
Shattering[2/]	3.0	3.0	1.0	1.0	1.0	1.0
Flower Color	P	W	P	W	W	P
Pubescence Color	T	G	G	G	G	T

1/ Stoneville data
2/ Gainesville data

Table 57. - (continued)

	La59-7-21	F59-2008	La59-72-11	F61-3118	F61-3132	La61-55-3
Seed Yield - 1964						
Southeast	33.8	31.3	32.6	35.1+	34.9	33.1
West	37.2	28.5-	37.3	31.2-	31.3-	34.3
- 1963-64						
Southeast	32.3	29.9	31.3			
West	34.0	28.5	33.6			
- 1962-64						
Southeast	34.0					
West	35.2					
Oil Percentage - 1964	22.1	21.6	22.2	22.0	22.1	21.4
- 1963-64	21.4	21.5	21.1			
- 1962-64	21.8					
Protein Percentage - 1964	40.5	39.1-	40.0	39.2-	39.0-	40.6
- 1963-64	41.0	39.2	40.5			
- 1962-64	40.7					
Seed Size	14.3	12.2-	14.5	15.4+	15.2	14.4
Maturity Index	-5	0	-5	+3	0	0
Height	32	37	30	44	40	37
Bacterial Pustule[1/]	3.0	1.0	3.0	1.0	1.0	3.0
Target Spot[2/]	1.0	2.0	1.0	1.0	1.0	1.0
Shattering[2/]	2.0	1.0	2.5	1.5	2.0	2.5
Flower Color	W	P	P	W	W	P
Pubescence Color	G	T	G	G	G	T

Table 58. - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1964

Location	Bienville	Jackson	Hampton	Hardee	Stuart	Coker 240	La59-7-21
			Southeast				
Florence, S. C. (A)	47.4	42.5-	53.4+	53.6+	42.5-	46.5	52.7+
Florence, S. C. (B)	45.1	44.0	44.9	40.5	35.9-	38.0-	44.7
Hartsville, S. C. (A)	25.6	27.8	28.5	27.0	18.6	21.7	27.7
Hartsville, S. C. (B)	19.7	20.7	23.9+	22.3+	19.7	20.0	20.0
Blackville, S. C.	35.7	37.0	35.0	37.0	28.1-	33.7	37.4
Tallassee, Ala.	32.0	30.0	36.1	32.7	31.1	31.1	30.9
Tifton, Ga.	27.3	24.0	38.4+	27.2	30.3	29.2	30.1
Live Oak, Fla.	17.3	19.3	17.2	22.4	20.1	17.6	22.5
Gainesville, Fla.	26.4	23.9	23.9	31.0	23.1	20.0	20.4
Marianna, Fla.	38.6	38.4	37.1	40.4	33.8	35.1	40.9
Quincy, Fla.	30.9	35.4+	35.8+	32.4	35.5+	31.7	35.5+
Jay, Fla.	43.2	40.9	43.9	36.5-	34.9-	38.6	44.4
Fairhope, Ala.	28.5	32.4	35.1+	37.6+	29.1	29.3	28.9
Baton Rouge, La.	38.6	25.2-	28.1-	25.9-	18.5-	17.0-	37.7
Mean	32.6	31.5	34.4	33.3	28.6-	29.2-	33.8
			West				
Stoneville, Miss.(A)	26.2	26.2	35.9+	24.1	19.7-	24.4	27.3
St. Joseph, La.	51.1	45.6-	44.5-	38.8-	27.7-	29.3-	46.6-
Curtis, La.	16.4	13.9	12.6	15.1	8.5	11.5	17.7
College Station, Texas*	35.8	40.3	42.9	25.9	27.4	35.8	37.9
Mean	38.7	32.3-	36.1	29.6-	22.0-	23.6-	37.2

* Not included in mean

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

Table 58. - (continued)

Location	F59-2008	La59-72-11	F61-3118	F61-3132	La61-55-3	L.S.D. (.05)	C.V.
			Southeast				
Florence, S. C. (A)	49.2	47.6	53.4+	53.2+	48.1	4.8	6%
Florence, S. C. (B)	39.6-	43.7	47.7	46.7	43.3	4.7	7%
Hartsville, S.C.(A)	22.5	24.1	37.0	33.2	27.0	4.5	10%
Hartsville, S.C.(B)	19.9	23.0+	22.7+	24.1+	19.3	1.9	5%
Blackville, S. C.	32.1	34.6	39.3	38.9	34.0	4.2	7%
Tallassee, Ala.	36.1	32.7	34.5	35.6	37.9	N.S.	15%
Tifton, Ga.	28.2	29.1	32.9+	37.0+	33.0+	5.2	10%
Live Oak, Fla.	18.5	14.8	21.0	21.5	19.6	N.S.	15%
Gainesville, Fla.	27.9	23.2	31.4	36.5+	26.6	6.7	15%
Marianna, Fla.	36.1	39.6	33.8	37.9	34.1	N.S.	11%
Quincy, Fla.	34.3+	36.0+	32.4	34.1+	37.8+	2.6	5%
Jay, Fla.	34.6-	41.3	44.9	38.9	38.0	5.8	9%
Fairhope, Ala.	32.7	28.2	30.6	25.5	31.1	5.8	11%
Baton Rouge, La.	26.6-	38.2	30.0-	25.5-	33.1-	3.9	8%
Mean	31.3	32.6	35.1+	34.9	33.1	2.5	
			West				
Stoneville, Miss.(A)	21.5	27.7	33.7+	28.9	28.6	6.4	14%
St. Joseph, La.	37.2-	46.2-	30.0-	39.5-	41.1-	4.3	6%
Curtis, La.	15.7	16.0	12.6	13.9	17.1	3.6	15%
College Station,Texas*	34.3	41.9	26.2	33.8	39.0	5.6	10%
Mean	28.5-	37.3	31.2-	31.3-	34.3	4.7	

Table 59. - Chemical composition and seed size for the strains in Uniform Group VIII, 1964

Location	Bienville	Jackson	Hampton	Hardee	Stuart	Coker 240
			Oil Percentage			
Hartsville, S. C.	20.1	21.2	20.7	19.7	18.6	18.1
Blackville, S. C.	20.8	21.9	21.1	19.5	18.9	18.5
Tallassee, Ala.	21.6	20.7	21.6	21.0	20.6	19.5
Live Oak, Fla.	22.6	23.8	22.7	22.9	20.5	19.4
Gainesville, Fla.	22.7	22.6	23.3	22.9	20.3	20.5
Quincy, Fla.	21.8	23.0	22.8	21.3	20.4	19.7
Jay, Fla.	21.1	21.3	21.5	19.5	17.9	18.8
Baton Rouge, La.	22.8	22.9	23.3	20.9	20.6	19.3
Mean	21.7	22.2	22.1	21.0-	19.7-	19.2-
			Protein Percentage			
Hartsville, S. C.	40.6	38.9	38.0	40.8	42.4	42.2
Blackville, S. C.	41.6	39.1	38.5	40.1	41.5	41.7
Tallassee, Ala.	41.7	42.2	39.3	40.6	40.4	41.6
Live Oak, Fla.	40.0	38.8	39.1	40.3	42.2	42.3
Gainesville, Fla.	40.2	40.1	37.4	40.8	40.7	41.5
Quincy, Fla.	39.9	39.3	37.4	41.0	40.1	41.3
Jay, Fla.	41.9	39.8	38.8	41.9	42.5	42.4
Baton Rouge, La.	36.6	35.8	33.1	36.7	36.8	38.7
Mean	40.3	39.3-	37.7-	40.3	40.8	41.5+
			Grams per 100 Seeds			
Hartsville, S. C.	14.2	14.2	13.9	13.3	15.5	13.8
Blackville, S. C.	16.0	15.9	15.1	15.1	16.7	15.2
Tallassee, Ala.	14.0	14.7	15.3	13.0	19.7	14.3
Live Oak, Fla.	14.0	14.9	14.8	13.9	17.4	15.6
Gainesville, Fla.	12.8	11.9	13.3	14.4	17.9	13.2
Quincy, Fla.	16.0	16.0	17.0	17.0	17.0	17.0
Jay, Fla.	17.0	17.0	18.1	13.4	17.0	16.3
Baton Rouge, La.	11.3	13.0	13.0	10.3	13.5	11.5
Mean	14.4	14.7	15.1	13.8	16.8+	14.6

Table 59. - (continued)

Location	La59-7-21	F59-2008	La59-72-11	F61-3118	F61-3132	La61-55-3	L.S.D. (.05)
			Oil Percentage				
Hartsville, S. C.	20.4	20.7	20.9	21.1	21.0	20.3	
Blackville, S. C.	21.5	20.2	21.5	21.0	21.2	20.5	
Tallassee, Ala.	20.9	21.6	20.8	22.0	21.6	21.1	
Live Oak, Fla.	23.2	22.4	24.3	22.7	23.2	23.0	
Gainesville, Fla.	22.2	23.0	22.1	23.6	23.3	22.0	
Quincy, Fla.	23.5	22.7	23.0	21.9	22.3	22.4	
Jay, Fla.	22.3	21.2	22.2	21.3	21.5	19.5	
Baton Rouge, La.	23.1	20.7	23.0	22.7	22.9	22.7	
Mean	22.1	21.6	22.2	22.0	22.1	21.4	0.6
			Protein Percentage				
Hartsville, S. C.	41.4	40.9	40.7	39.4	38.8	41.1	
Blackville, S. C.	41.3	39.8	41.0	39.0	39.1	41.8	
Tallassee, Ala.	44.0	40.0	42.3	40.4	40.3	41.0	
Live Oak, Fla.	40.8	40.2	39.3	39.2	39.4	40.9	
Gainesville, Fla.	40.4	38.7	40.6	39.6	39.1	40.3	
Quincy, Fla.	40.0	38.9	40.0	39.7	39.2	40.0	
Jay, Fla.	40.3	39.8	40.2	40.3	40.8	42.7	
Baton Rouge, La.	35.9	34.5	35.5	36.0	35.4	37.3	
Mean	40.5	39.1-	40.0	39.2-	39.0-	40.6	0.7
			Grams per 100 Seeds				
Hartsville, S. C.	13.8	11.8	14.1	14.3	14.3	13.3	
Blackville, S. C.	15.1	12.0	14.4	15.4	15.7	15.3	
Tallassee, Ala.	13.7	11.7	14.0	15.7	15.3	15.0	
Live Oak, Fla.	14.9	11.5	15.1	14.9	14.7	15.5	
Gainesville, Fla.	10.9	12.2	12.5	16.8	15.6	12.6	
Quincy, Fla.	17.0	16.0	16.0	17.0	17.0	16.0	
Jay, Fla.	17.2	12.7	17.3	16.5	16.3	15.6	
Baton Rouge, La.	12.0	9.5	12.5	12.5	12.3	11.5	
Mean	14.3	12.2-	14.5	15.4+	15.2	14.4	1.0

Table 60. - Relative maturity, days earlier (-) or later (+) than Bienville, for the strains in Uniform Group VIII, 1964

Location	Date Planted	Bienville Matured	Jackson	Hampton	Hardee	Stuart
			Southeast			
Florence, S.C.(A)	6-1	11-9	+7	+2	+11	+11
Florence, S.C.(B)	6-17	11-10	+7	+6	+9	+11
Hartsville, S.C.(A)	5-20	11-8	-7	-2	+7	+2
Hartsville, S.C.(B)	6-22	11-6	-5	-1	+9	+7
Blackville, S.C.	6-19	11-7	-3	-4	+5	+4
Tallassee, Ala.	5-15	10-25	-4	0	+8	+8
Tifton, Ga.	6-1	10-30	-9	+7	+7	+7
Gainesville, Fla.	6-12	10-25	-7	-7	+4	+4
Marianna, Fla.	6-17	11-3	-6	+2	+4	+3
Quincy, Fla.	7-7	10-31	-4	-3	+5	+2
Jay, Fla.	7-14	10-25	-1	-2	+2	+3
Fairhope, Ala.	7-2	10-28	+2	0	+6	+4
Baton Rouge, La.	6-5	10-28	+2	0	+7	+8
Mean		11-1	-2	0	+6	+6
			West			
St. Joseph, La.	5-18	10-30	0	0	+3	0
Curtis, La.	5-21	10-28	+1	+2	+5	+7
Mean		10-29	0	+1	+4	+4

Table 60. - (continued)

Location	Coker 240	La59-7-21	F59-2008	La59-72-11	F61-3118	F61-3132	La61-55-3
			Southeast				
Florence, S.C.(A)	+8	-3	-3	-3	+10	+11	0
Florence, S.C.(B)	+9	-4	0	-6	+8	+8	+1
Hartsville, S.C.(A)	-4	-6	-4	-7	+1	-3	0
Hartsville, S.C.(B)	-2	-2	-1	-2	-1	-3	-2
Blackville, S. C.	-2	-5	-5	-7	+2	-1	-2
Tallassee, Ala.	+1	-4	+1	-4	+4	0	0
Tifton, Ga.	+9	-10	+7	-5	+7	+7	+7
Gainesville, Fla.	+1	-6	+3	-7	+1	-1	0
Marianna, Fla.	-5	-7	0	-8	-4	-3	-4
Quincy, Fla.	-1	-8	0	-8	+1	+1	-1
Jay, Fla.	-1	-8	-4	-7	0	-1	-2
Fairhope, Ala.	+2	0	+2	0	+4	+2	+2
Baton Rouge, La.	+8	-3	+2	-3	+7	-3	-1
Mean	+2	-5	0	-5	+3	+1	0
			West				
St. Joseph, La.	+2	-5	-1	-3	-6	-10	-4
Curtis, La.	+5	-2	+3	-5	+5	-4	-3
Mean	+4	-4	+1	-4	0	-7	-4

Table 61. - Plant height for the strains in Uniform Group VIII, 1964

Location	Bienville	Jackson	Hampton	Hardee	Stuart	Coker 240
			Southeast			
Florence, S.C.(A)	52	53	47	53	46	46
Florence, S.C.(B)	48	47	44	46	45	43
Hartsville, S.C.(A)	48	46	41	50	47	42
Hartsville, S.C.(B)	36	35	35	39	38	37
Blackville, S. C.	38	38	34	43	38	36
Tallassee, Ala.	42	40	39	50	42	37
Tifton, Ga.	32	32	36	43	37	33
Live Oak, Fla.	24	23	23	29	27	25
Gainesville, Fla.	37	35	33	42	37	32
Marianna, Fla.	35	38	34	39	40	37
Quincy, Fla.	19	23	18	24	26	19
Jay, Fla.	38	35	35	40	36	37
Fairhope, Ala.	23	23	22	35	27	22
Baton Rouge, La.	42	28	30	63	45	36
Mean	37	35	34	43	38	34
			West			
St. Joseph, La.	46	46	44	58	44	36
Curtis, La.	36	27	28	40	38	30
Mean	41	37	36	49	41	33

Table 61. - (continued)

Location	La59-7-21	F59-2008	La59-72-11	F61-3118	F61-3132	La61-55-3
			Southeast			
Florence, S.C.(A)	44	45	43	53	46	48
Florence, S.C.(B)	43	44	40	54	41	45
Hartsville, S.C.(A)	37	43	36	51	49	43
Hartsville, S.C.(B)	33	39	31	40	40	37
Blackville, S.C.	33	37	32	46	36	34
Tallassee, Ala.	34	41	33	53	48	42
Tifton, Ga.	25	38	26	42	39	37
Live Oak, Fla.	19	29	21	29	29	25
Gainesville, Fla.	28	38	27	40	41	37
Marianna, Fla.	36	34	34	44	41	40
Quincy, Fla.	18	24	18	30	26	23
Jay, Fla.	30	37	30	43	37	38
Fairhope, Ala.	19	28	15	32	26	25
Baton Rouge, La.	38	35	36	47	52	36
Mean	31	37	30	43	39	36
			West			
St. Joseph, La.	36	48	36	60	50	48
Curtis, La.	35	30	31	41	43	34
Mean	36	39	34	51	47	41

Table 62. - Lodging scores for the strains in Uniform Group VIII, 1964

Location	Bienville	Jackson	Hampton	Hardee	Stuart	Coker 240
			Southeast			
Florence, S.C.(A)	2.0	1.0	1.0	3.0	2.0	3.0
Florence, S.C.(B)	3.0	2.0	3.0	4.0	3.0	3.0
Hartsville, S.C.(A)	4.0	2.3	2.2	4.4	3.7	2.6
Hartsville, S.C.(B)	3.4	1.8	2.4	2.3	3.3	2.3
Blackville, S.C.	3.3	2.0	2.3	3.0	3.0	2.7
Tallassee, Ala.	3.0	1.0	2.3	3.0	1.7	2.0
Tifton, Ga.	2.0	2.0	2.0	3.0	2.7	1.7
Live Oak, Fla.	1.7	1.0	1.0	1.0	1.7	1.0
Gainesville, Fla.	2.7	2.0	2.0	2.7	2.7	2.0
Marianna, Fla.	3.0	1.0	2.0	2.0	2.0	2.0
Quincy, Fla.	1.0	1.0	1.0	1.0	2.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	3.0	2.0	2.0	4.0	3.0	3.0
			West			
St. Joseph, La.	4.0	4.0	5.0	4.0	3.0	3.0
Curtis, La.	2.0	2.0	2.0	3.0	3.0	2.0

Table 62. - (continued)

Location	La59-7-21	F59-2008	La59-72-11	F61-3118	F61-3132	La61-55-3
			Southeast			
Florence, S.C.(A)	3.0	5.0	3.0	4.0	2.0	4.0
Florence, S.C.(B)	4.0	5.0	4.0	4.0	3.0	4.0
Hartsville, S.C.(A)	3.0	4.8	3.0	4.1	4.1	3.9
Hartsville, S.C.(B)	3.9	4.1	3.4	2.8	3.0	3.3
Blackville, S.C.	3.0	3.7	3.0	3.7	3.3	3.3
Tallassee, Ala.	2.0	4.0	1.7	3.0	3.0	3.3
Tifton, Ga.	1.7	3.7	1.7	3.7	3.3	3.0
Live Oak, Fla.	1.0	2.3	1.0	1.3	1.7	2.3
Gainesville, Fla.	1.7	3.0	1.3	2.3	3.0	2.7
Marianna, Fla.	1.0	3.0	2.0	2.0	2.0	2.0
Quincy, 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.	3.0	4.0	3.0	3.0	3.0	3.0
			West			
St. Joseph, La.	4.0	5.0	5.0	5.0	5.0	4.0
Curtis, La.	3.0	3.0	2.0	3.0	3.0	3.0

Table 63. - Seed quality scores for the strains in Uniform Group VIII, 1964

Location	Bienville	Jackson	Hampton	Hardee	Stuart	Coker 240
			Southeast			
Hartsville, S.C.(A)	2.0	2.0	2.0	3.0	2.0	2.0
Blackville, S.C.	1.3	1.3	1.2	1.3	1.2	1.3
Tallassee, Ala.	1.0	2.0	1.0	1.0	1.0	1.0
Live Oak, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	2.0	2.0	2.0	2.0	2.0	2.0
Jay, Fla.	1.0	1.0	1.0	2.0	1.0	2.0
Fairhope, Ala.	1.2	1.7	1.5	1.2	1.3	1.5
Baton Rouge, La.	1.0	1.0	1.0	1.0	1.0	2.0
			West			
St. Joseph, La.	1.0	1.0	1.0	2.0	1.0	1.0
Curtis, La.	2.0	3.0	3.0	1.0	3.0	3.0

Table 63. - (continued)

Location	La59-7-21	F59-2008	La59-72-11	F61-3118	F61-3132	La61-55-3
			Southeast			
Hartsville, S. C.(A)	2.0	3.0	2.0	2.0	2.0	2.0
Blackville, S. C.	1.3	1.8	1.0	1.2	1.0	1.2
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Live Oak, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	2.0	2.0	2.0	2.0	3.0	2.0
Jay, Fla.	1.0	2.0	1.0	1.0	1.0	2.0
Fairhope, Ala.	1.5	1.0	1.7	1.5	1.7	1.5
Baton Rouge, La.	1.0	1.0	1.0	1.0	1.0	1.0
			West			
St. Joseph, La.	1.0	2.0	1.0	1.0	2.0	1.0
Curtis, La.	2.0	1.0	1.0	3.0	3.0	1.0

PRELIMINARY GROUP VIII

1964

Eight Preliminary Group VIII nurseries were planted. The parentage for the strains included is reported in table 64. Performance data are summarized in tables 65 through 70. Differences in seed yield were significant at 4 of the 6 locations where yield data were complete. Baton Rouge data were not included in the combined analysis of variance of seed yield data, because of the high coefficient of variability. Differences among strains were significant on the basis of the combined analysis of variance of seed yields from 5 locations. All strains ranked below the two check varieties in yield with 31 of the 34 strains yielding significantly less than Bienville and 15 strains yielding significantly less than Hampton. Two of the better yielding lines were Co61-207 with a mean yield of 34.5 bushels and Co61-211 with a mean yield of 33.4 bushels. Both are sublines of Hampton which had a mean yield of 34.7 bushels. Both strains were also tested in Preliminary VIII in 1963. The other strain yielding within the range of experimental error of Bienville was F60-2318, which appears to be too early for this group.

Fourteen strains were the result of intercrossing F_3 lines of the backcross D49-2491 x (D49-2491 x Biloxi). It was anticipated that Biloxi should contribute genes for late maturity and also higher protein. Thirteen of the 14 strains were significantly higher in protein percentage than Bienville but only 8 were significantly lower in oil percentage. F62-1051, F62-1086, F62-1091, F62-1346 are perhaps the most promising of this group.

All experimental strains held their seed well. Eleven strains were given target spot scores higher than a score of 2. Five strains were rated very susceptible.

Among the more promising strains are F59-2043, F61-2886, F62-1051, and F62-1091.

Table 64. - Parentage of strains in Preliminary Group VIII, 1964

	Variety or strain	Parentage	Generation Composited
1.	Bienville		
2.	Hampton		
3.	Co58-102	Rogue in Yelnanda	
4.	Co61-207	Majos x Lee (Hampton subline)	
5.	Co61-211	Majos x Lee (Hampton subline)	
6.	Co61-220	Majos x Lee (Stuart subline)	
7.	Co61-222	Majos x Lee (Coker 220 subline)	
8.	Co61-231	Majos x Lee (Coker 240 subline)	
9.	Co61-517	Jackson x (Majos x Lee)	
10.	F59-2043	D49-2491(2) x Improved Pelican	F_5
11.	F59-2051	D49-2491(2) x Improved Pelican	F_5
12.	F59-2069	D49-2491(2) x Improved Pelican	F_5
13.	F60-2179	F55-1 x D51-4969	F_5
14.	F60-2318	D49-2491(2) x Improved Pelican	F_6
15.	F61-1231	Jackson x D49-2491	F_{10}
16.	F61-2886	D49-2491(2) x Improved Pelican	F_7
17.	F61-2892	D49-2491(2) x Improved Pelican	F_7
18.	F61-2917	D49-2491(2) x Improved Pelican	F_7
19.	F61-2939	D49-2491(2) x Improved Pelican	F_7
20.	F61-2989	D49-2491(2) x Improved Pelican	F_7
21.	F61-3069	Improved Pelican x D51-5052	F_7
22.	F62-1023	F57-871 x F57-879	F_5
23.	F62-1051	F57-871 x F57-879	F_5
24.	F62-1072	F57-871 x F57-879	F_5
25.	F62-1084	F57-871 x F57-879	F_5
26.	F62-1086	F57-871 x F57-879	F_5
27.	F62-1091	F57-871 x F57-879	F_5
28.	F62-1128	F57-871 x F57-879	F_5
29.	F62-1346	F57-869 x F57-879	F_5
30.	F62-1353	F57-869 x F57-879	F_5
31.	F62-1407	F57-869 x F57-879	F_5
32.	F62-1411	F57-869 x F57-879	F_5
33.	F62-1481	F57-869 x F57-879	F_5
34.	F62-2013	F57-873 x F57-868	F_5
35.	F62-2128	F57-873 x F57-868	F_5
36.	F62-2621	D49-2491(3) x Biloxi	

Table 65. - General summary of performance for the strains in Preliminary Group VIII, 1964

Strain	Seed Yield	Maturity Index	Ht.	Percent Oil	Percent Protein	Shatter	Target Spot
Bienville	37.2	11-1	37	21.9	40.4	3.5	1.5
Hampton	34.7	0	34	22.5	37.6-	1.0	1.0
Co58-102	29.3-	+2	39	21.3	41.2	1.0	4.0
Co61-207	34.5	+1	34	21.8	38.3-	1.0	1.5
Co61-211	33.4	+2	36	21.6	37.6-	1.0	1.0
Co61-220	28.4-	+6	36	19.9-	40.8	1.0	3.0
Co61-222	27.9-	+2	33	21.0-	39.8	1.0	2.5
Co61-231	30.4-	+2	36	20.1-	40.7	1.0	1.5
Co61-517	32.3-	+2	38	20.4-	40.4	1.5	3.0
F59-2043	32.6-	+5	40	20.3-	41.1	1.0	1.0
F59-2051	32.7-	-1	34	20.8-	41.8+	1.0	2.5
F59-2069	32.0-	-2	38	21.0-	41.2	1.0	1.5
F60-2179	26.3-	+4	36	19.3-	42.4+	1.0	1.0
F60-2318	34.2	-8	36	21.1	40.5	1.0	1.5
F61-1231	32.7-	-4	35	22.1	40.1	2.0	1.5
F61-2886	32.0-	+4	40	20.7-	41.1	1.0	1.0
F61-2892	30.8-	+3	40	19.7-	41.3	1.0	3.5
F61-2917	30.3-	-2	34	20.8-	40.6	1.0	1.5
F61-2939	29.3-	-4	38	20.7-	41.5+	1.0	1.0
F61-2989	27.2-	-1	35	20.5-	41.6+	1.0	1.5
F61-3069	28.8-	+3	43	20.6-	40.3	1.0	2.5
F62-1023	30.3-	+2	35	21.0-	41.9+	1.0	1.0
F62-1051	32.8-	-3	35	21.1	41.8+	1.0	1.0
F62-1072	30.1-	-2	35	20.8-	41.6+	1.0	1.0
F62-1084	30.1-	-4	34	20.8-	43.4+	1.0	2.0
F62-1086	30.6-	-3	34	20.6-	44.0+	1.5	1.5
F62-1091	32.4-	0	34	21.2	42.9+	1.0	1.5
F62-1128	30.1-	-1	32	20.9-	42.7+	1.0	1.5
F62-1346	32.0-	-4	33	21.8	41.7+	2.0	1.5
F62-1353	31.6-	-3	32	21.3	41.2	2.0	2.5
F62-1407	30.6-	-2	35	20.4-	42.5+	1.0	2.3
F62-1411	30.5-	+5	34	20.4-	41.9+	1.5	1.0
F62-1481	32.5-	0	35	20.4-	42.9+	1.0	3.0
F62-2013	32.3-	-2	35	21.3	43.0+	2.0	2.3
F62-2128	28.5-	-1	33	21.2	41.7+	2.0	2.0
F62-2621	27.5-	0	34	21.2	41.8+	1.0	1.8
L.S.D.(.05)	4.2			0.9	1.0		
L.S.D.(.01)	5.6			1.2	1.4		

Table 66. - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1964

Strain	Florence, S.C.	Blackville, S.C.	Live Oak, Fla.	Gainesville, Fla.	Jay, Fla.	Baton Rouge,* La.
Bienville	44.9	32.3	28.3	31.0	44.5	37.5
Hampton	34.9	37.5+	28.8	33.5	44.1	25.2
Co58-102	25.2-	33.2	21.8-	26.7	39.8	23.1
Co61-207	34.8	39.4+	25.0	28.4	45.1	31.0
Co61-211	32.4-	36.2	23.5-	29.8	45.2	23.8
Co61-220	30.7-	31.5	23.7-	23.3	32.6-	15.1
Co61-222	26.9-	31.6	19.3-	25.1	36.5	26.0
Cl61-231	26.9-	36.7	24.8	30.6	33.0	26.7
Co61-517	34.1-	30.9	24.3	33.0	39.1	23.1
F59-2043	36.9	26.8-	28.9	33.4	36.9-	25.2
F59-2051	35.9	31.7	24.9	33.2	38.0-	17.3
F59-2069	35.2	31.3	27.0	29.4	37.3-	19.5
F60-2179	31.7-	26.5-	20.7-	27.0	25.8-	15.1
F60-2318	34.5-	39.3+	29.3	29.5	38.7-	20.2
F61-1231	30.0-	32.3	28.5	33.8	39.1	19.4
F61-2886	34.8	32.4	27.2	29.4	36.2-	20.2
F61-2892	33.1-	30.3	25.4	30.9	34.4	25.2
F61-2917	32.4-	34.5	23.9-	25.0	35.5-	21.6
F61-2939	32.8-	29.3	22.1	31.3	31.2-	19.4
F61-2989	31.7-	30.7	19.1-	18.7	35.9-	15.9
F61-3069	21.7-	30.4	24.0	31.1	36.6-	13.0
F62-1023	30.7-	32.6	26.9	22.7	38.7-	25.2
F62-1051	35.9	35.0	27.6	24.9	40.9	25.2
F62-1072	33.8-	32.6	25.9	24.7	33.3-	26.7
F62-1084	31.7-	30.7	25.4	28.7	34.1-	25.9
F62-1086	30.5-	34.7	27.0	24.0	36.7-	23.8
F62-1091	35.5	33.9	25.2	27.5	39.8	20.2
F62-1128	35.2	33.5	24.3	21.4	36.2-	24.5
F62-1346	34.5-	34.3	27.3	24.5	39.5	24.5
F62-1353	30.3-	36.4	31.5	24.4	35.5-	24.5
F62-1407	32.1-	31.1	26.2	28.4	33.0-	20.9
F62-1411	26.5-	31.9	31.0	24.3	38.7-	23.8
F62-1481	34.5-	31.5	29.6	31.0	36.2-	20.9
F62-2013	32.4-	33.2	24.2	34.4	37.3-	25.9
F62-2128	16.9-	31.3	28.1	29.6	36.5-	30.3
F62-2621	25.2-	27.8	23.8-	26.4	34.4-	32.4
L.S.D.(.05)	10.3	5.2	4.4	N.S.	5.8	N.S.
C.V.	16%	8%	8%	18%	8%	24%

* Not included in mean.

Table 67. - Oil percentages for the strains in Preliminary Group VIII, 1964

Strain	Blackville, S.C.	Live Oak, Fla.	Gainesville, Fla.	Jay, Fla.
Bienville	20.9	23.4	22.8	20.4
Hampton	21.0	23.7	23.4	21.8
Co58-102	20.0	22.6	22.5	19.9
Co61-207	19.5	23.0	22.9	21.6
Co61-211	21.4	22.7	20.7	21.7
Co61-220	18.9	20.8	21.3	18.5
Co61-222	19.5	22.1	21.4	21.0
Co61-231	18.8	20.7	20.9	19.8
Co61-517	17.7	22.4	22.3	19.2
F59-2043	19.8	21.1	21.2	19.0
F59-2051	19.3	22.3	21.4	20.3
F59-2069	20.5	21.9	21.7	19.7
F60-2179	17.8	20.9	20.6	17.9
F60-2318	19.3	22.1	22.3	20.8
F61-1231	21.1	22.7	22.8	21.6
F61-2886	19.8	21.7	22.7	18.7
F61-2892	17.1	20.9	21.6	19.1
F61-2917	20.0	22.1	21.1	19.9
F61-2839	18.6	22.0	22.4	19.9
F61-2989	20.3	21.0	21.4	19.3
F61-3069	19.2	21.4	22.0	19.6
F62-1023	20.2	22.3	21.3	20.1
F62-1051	20.9	22.0	21.4	20.1
F62-1072	20.2	22.9	21.6	18.5
F62-1084	20.0	22.0	21.0	20.2
F62-1086	20.4	22.0	20.3	19.7
F62-1091	20.8	21.9	21.3	20.6
F62-1128	20.2	22.3	21.0	20.1
F62-1346	20.9	22.8	22.3	21.2
F62-1353	20.2	22.4	21.6	21.1
F62-1407	18.8	22.3	21.8	18.8
F62-1411	19.5	21.7	21.1	19.3
F62-1481	19.6	21.2	22.1	18.8
F62-2013	20.6	21.8	22.0	20.6
F62-2128	19.9	22.5	21.9	20.5
F62-2621	20.0	22.2	21.9	20.7

Table 68. - Protein percentages for the strains in Preliminary Group VIII, 1964

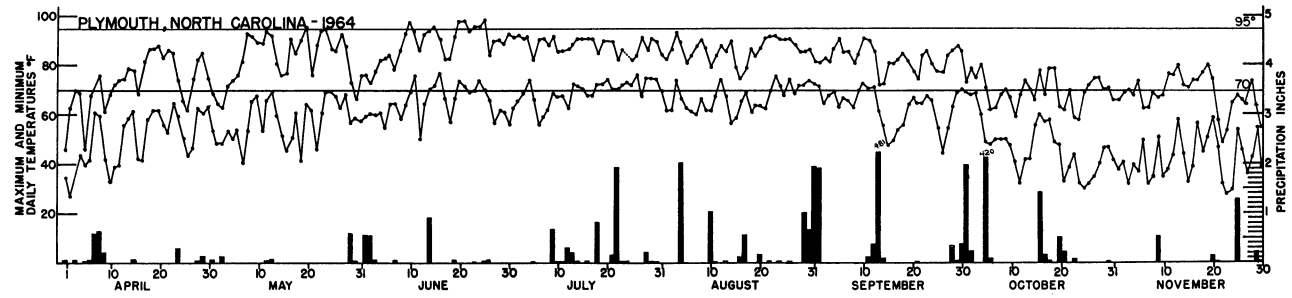
Strain	Blackville, S.C.	Live Oak, Fla.	Gainesville, Fla.	Jay, Fla.
Bienville	40.7	39.4	40.0	41.5
Hampton	38.2	37.2	36.7	38.3
Co58-102	41.5	40.9	40.0	42.5
Co61-207	38.4	37.8	38.1	39.0
Co61-211	36.7	38.6	37.7	37.5
Co61-220	41.5	39.8	40.2	41.8
Co61-222	40.8	39.8	39.4	39.3
Co61-231	40.9	39.9	40.4	41.6
Co61-517	40.0	40.0	40.2	41.4
F59-2043	42.3	37.5	42.4	42.1
F59-2051	41.8	42.4	40.8	42.3
F59-2069	41.5	40.0	41.0	42.4
F60-2179	43.4	40.7	42.4	43.1
F60-2318	40.8	39.9	40.2	40.9
F61-1231	39.9	40.1	39.5	40.7
F61-2886	41.6	40.7	40.2	41.7
F61-2892	41.1	40.7	42.0	41.3
F61-2917	41.3	40.3	40.2	40.4
F61-2939	42.0	41.1	41.0	41.7
F61-2989	41.6	41.1	41.7	42.0
F61-3069	40.5	40.1	39.9	40.5
F62-1023	42.2	40.1	42.9	42.5
F62-1051	41.8	41.6	41.6	42.2
F62-1072	41.9	39.3	42.2	43.0
F62-1084	44.1	42.7	43.0	43.8
F62-1086	45.7	42.1	44.0	44.2
F62-1091	42.7	41.7	42.8	44.3
F62-1128	42.2	41.6	43.5	43.6
F62-1346	41.8	41.2	41.9	41.9
F62-1353	41.5	40.2	41.4	41.5
F62-1407	43.5	40.1	42.4	43.9
F62-1411	41.7	40.1	42.7	43.1
F62-1481	42.7	41.6	42.4	44.7
F62-2013	43.0	43.3	42.6	43.0
F62-2128	42.3	40.5	41.5	42.3
F62-2621	42.1	41.7	40.9	42.3

Table 69. - Plant height for the strains in Preliminary Group VIII, 1964

Strain	Florence, S.C.	Blackville, S.C.	Live Oak, Fla.	Gainesville, Fla.	Jay, Fla.	Baton Rouge, La.
Bienville	44	37	34	37	32	39
Hampton	39	40	28	33	32	28
Co58-102	43	40	33	44	37	39
Co61-207	41	32	31	33	34	32
Co61-211	42	43	29	35	31	33
Co61-220	41	40	31	35	33	28
Co61-222	42	34	29	31	31	30
Co61-231	42	38	30	36	32	34
Co61-517	43	36	34	41	37	36
F59-2043	46	36	36	44	36	32
F59-2051	42	32	31	35	32	30
F59-2069	42	39	33	38	36	38
F60-2179	42	40	30	36	32	31
F60-2318	44	41	33	32	31	36
F61-1231	39	35	32	38	32	36
F61-2886	46	36	37	43	39	38
F61-2892	46	37	35	43	38	41
F61-2917	41	38	28	31	32	33
F61-2939	43	36	35	39	35	30
F61-2989	41	33	32	37	34	37
F61-3069	45	36	42	46	44	37
F62-1023	43	36	30	32	32	30
F62-1051	43	35	31	32	32	35
F62-1072	43	34	33	33	34	28
F62-1084	41	37	28	33	32	28
F62-1086	41	34	31	32	31	34
F62-1091	40	33	31	33	31	30
F62-1128	43	30	27	31	29	34
F62-1346	42	36	27	30	32	26
F62-1353	41	34	26	31	30	26
F62-1407	42	34	32	33	34	35
F62-1411	42	38	29	30	30	28
F62-1481	44	33	32	33	34	35
F62-2013	46	35	29	35	32	26
F62-2128	33	33	31	34	33	29
F62-2621	39	40	29	34	28	32

Table 70. - Seed quality scores for the strains in Preliminary Group VIII, 1964

Strain	Blackville, S.C.	Live Oak, Fla.	Gainesville, Fla.	Jay, Fla.	Baton Rouge, La.
Bienville	1.8	1.0	1.0	1.0	1.0
Hampton	1.8	1.0	1.0	1.0	1.0
Co58-102	2.3	1.0	1.0	1.0	1.0
Co61-207	5.0	1.0	2.0	1.0	1.0
Co61-211	4.5	1.0	1.0	1.0	1.0
Co61-220	3.5	1.0	1.0	2.0	2.0
Co61-222	2.0	1.0	1.0	1.0	1.0
Co61-231	3.8	1.0	1.0	1.0	1.0
Co61-517	3.8	1.0	1.0	2.0	1.0
F59-2043	4.0	1.0	1.0	2.0	1.0
F59-2051	5.0	1.0	1.0	2.0	1.0
F59-2069	2.3	1.0	1.0	2.0	1.0
F60-2179	1.0	1.0	1.0	2.0	2.0
F60-2318	2.0	1.0	1.0	1.0	2.0
F61-1231	2.3	1.0	1.0	2.0	1.0
F61-2886	3.0	1.0	1.0	2.0	1.0
F61-2892	1.8	1.0	1.0	2.0	1.0
F61-2917	2.8	1.0	1.0	1.0	1.0
F61-2939	2.8	1.0	1.0	3.0	1.0
F61-2989	3.0	1.0	1.0	2.0	1.0
F61-3069	1.5	1.0	1.0	1.0	1.0
F62-1023	3.3	1.0	1.0	2.0	1.0
F62-1051	2.0	1.0	1.0	2.0	1.0
F62-1072	1.5	1.0	1.0	2.0	2.0
F62-1084	1.8	1.0	1.0	2.0	1.0
F62-1086	2.0	1.0	1.0	2.0	2.0
F62-1091	2.3	1.0	1.0	2.0	1.0
F62-1128	1.5	1.0	1.0	2.0	1.0
F62-1346	3.3	1.0	1.0	1.0	1.0
F62-1353	2.0	1.0	1.0	2.0	1.0
F62-1407	3.5	1.0	1.0	1.0	1.0
F62-1411	1.8	1.0	1.0	2.0	1.0
F62-1481	2.3	1.0	1.0	1.0	1.0
F62-2013	1.8	1.0	1.0	2.0	1.0
F62-2128	2.3	1.0	1.0	1.0	1.0
F62-2621	4.0	1.0	1.0	1.0	1.0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AUGUST
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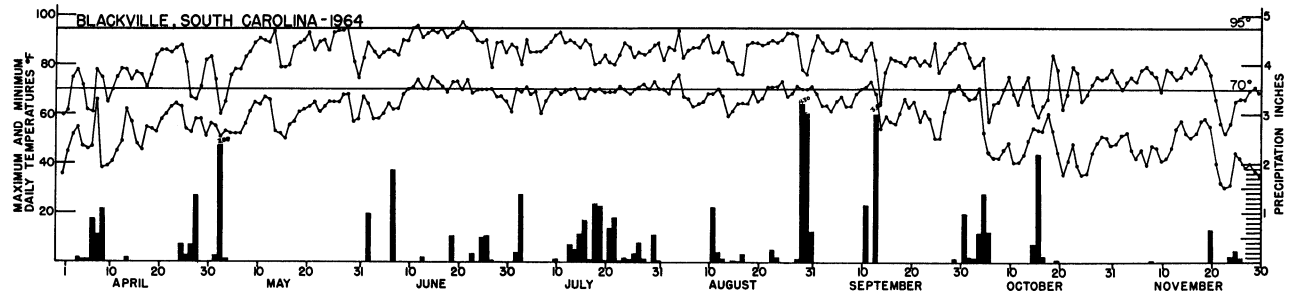
OCTOBER
NOVEMBER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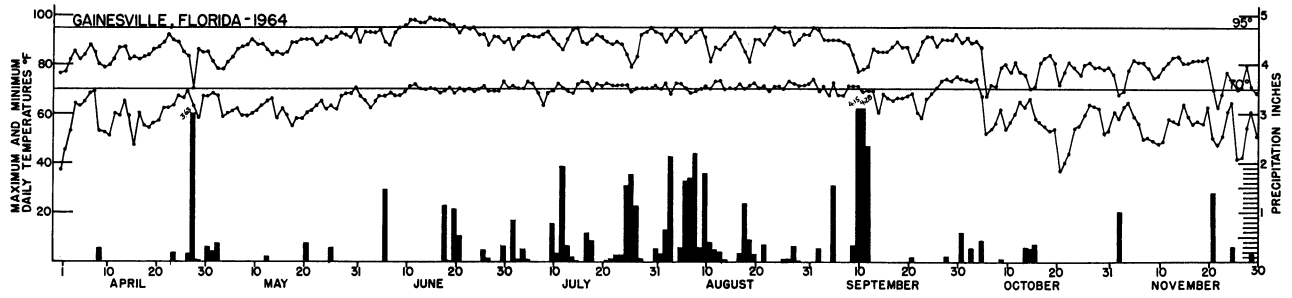
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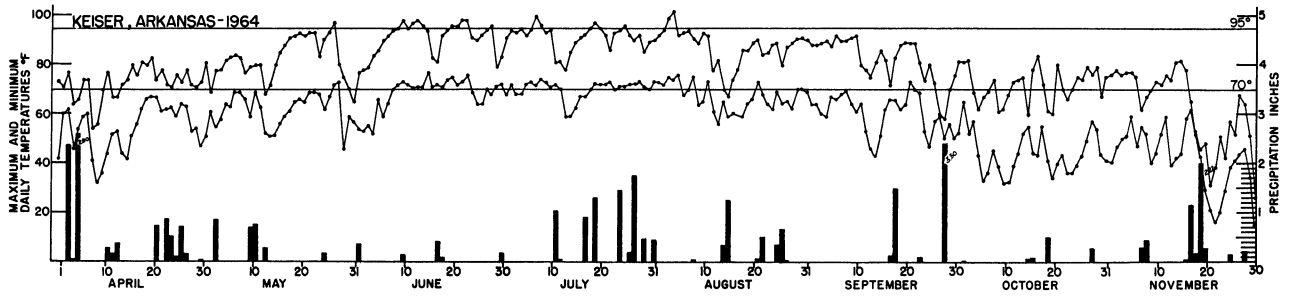
KEISER, ARKANSAS - 1964
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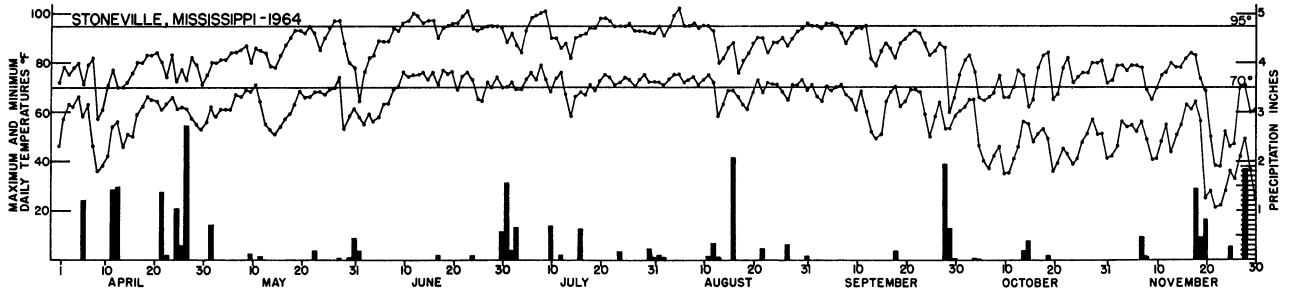
NOVEMBER


STONEVILLE, MISSISSIPPI - 1964
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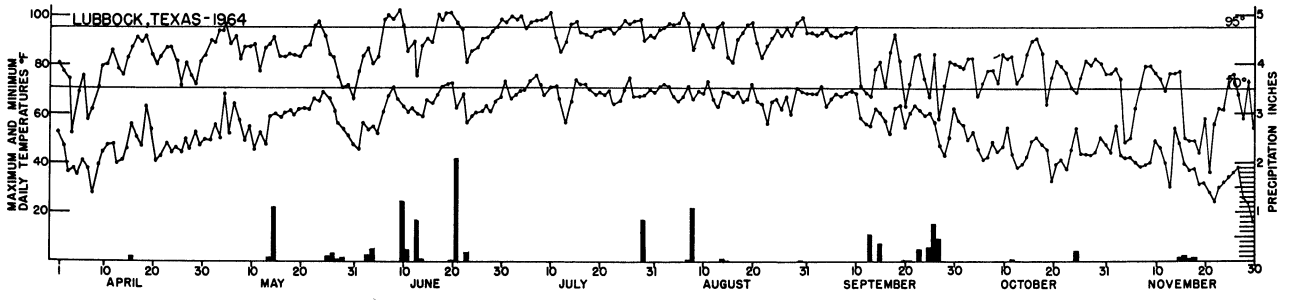
NOVEMBER


LUBBOCK, TEXAS - 1964
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
95°
70°
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER