U. S. REGIONAL SOYBEAN LABORATORY
URBANA, ILLINOIS

THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

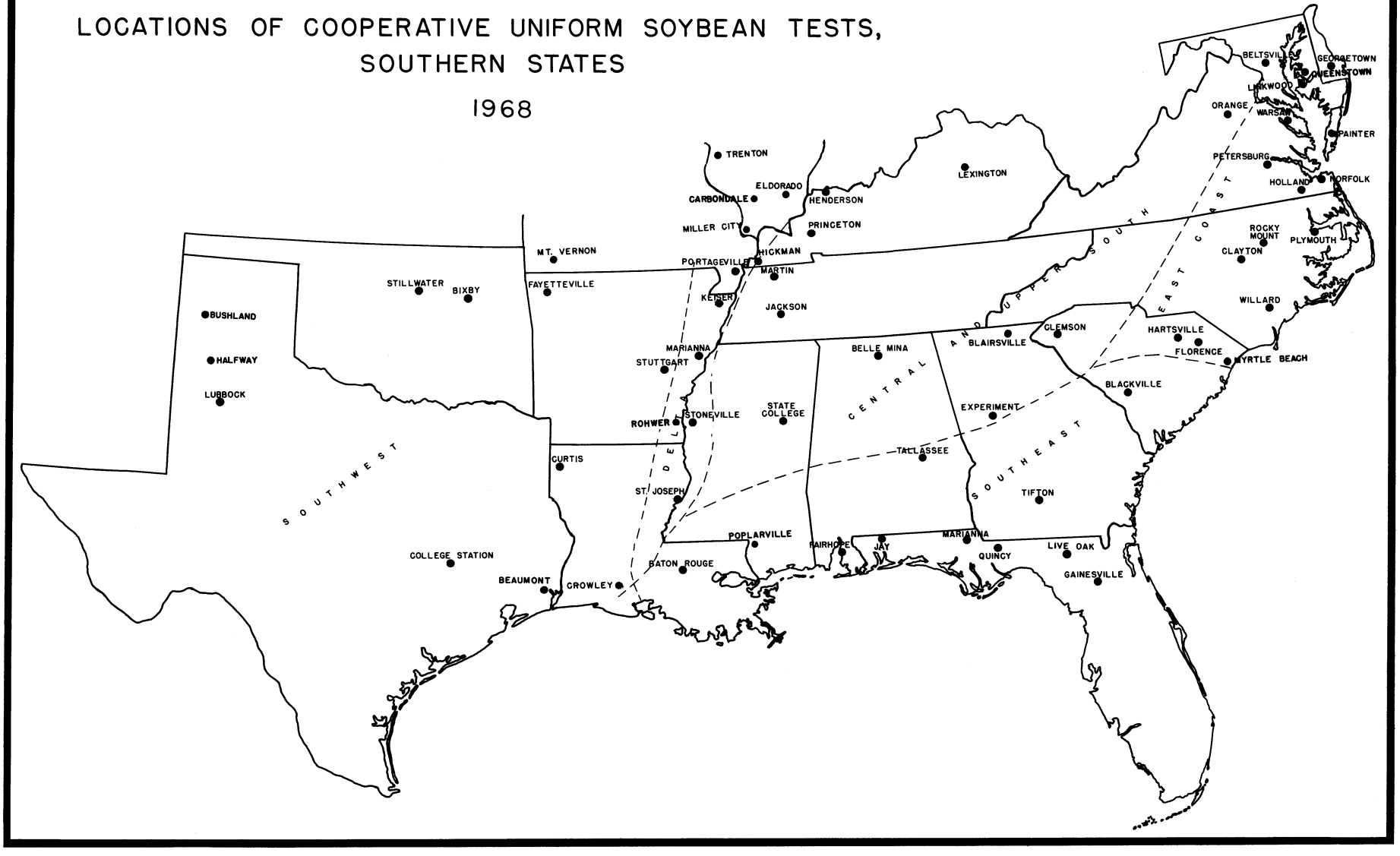
1968

RSLM 237

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

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES

1968



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Compiled by:

Edgar E. Hartwig and Kathryn W. Jamison

From data supplied by:

H. G. Vest, Maryland
G. D. Jones, Orange, Va.
H. M. Camper, Warsaw, Va.
E. M. Dunton, Jr., Painter, Va.
M. T. Carter, Petersburg, Va.
M. W. Alexander, Holland, Va.
C. A. Brim, North Carolina
J. B. Pitner, Florence, S.C.
H. L. Musen, Blackville, S.C.
E. B. Eskew, Clemson, S.C.
J. J. Stanton, Jr., Hartsville, S.C.
H. B. Harris, Experiment, Ga.
M. B. Parker, Blairsville, Ga.
W. H. Marchant, Tifton, Ga.
J. K. Boseck, Belle Mina, Ala.
J. W. Langford, Tallassee, Ala.
H. F. Yates, Fairhope, Ala.
Kuell Hinson, Gainesville, Fla.
R. W. Lipscomb, Marianna, Fla.
W. H. Chapman, Quincy, Fla.
John Schillinger, Maryland
R. L. Smith, Jay, Fla.
J. F. Shane, Kentucky
R. L. Bernard, Urbana, Ill.
V. D. Luedders, Columbia, Mo.
Elmer Counce, Martin, Tenn.
J. R. Overton, Jackson, Tenn.
E. E. Hartwig, Stoneville, Miss.
L. A. Duclos, Portageville, Mo.
Maxsie Taylor, Keiser, Ark.
F. J. Williams, Stuttgart, Ark.
J. L. Dameron, Marianna, Ark.
C. E. Caviness, Fayetteville, Ark.
C. G. Shepherd, Baton Rouge, La.
R. N. Flint, St. Joseph, La.
J. L. Rabb, Curtis, La.
J. H. Davis, Crowley, La.
R. M. Oswalt, Oklahoma.
D. F. Owen, Halfway, Texas
J. R. Wood, Beaumont, Texas
J. P. Craigmiles, Beaumont, Texas

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COOPERATING AGENCIES AND PERSONNEL

FOR THE

SOUTHERN REGION

Soybean Investigations, Beltsville, Maryland

B. E. Caldwell, Leader
C. Sloger, Plant Physiologist
H. G. Vest, Jr., Agronomist
D. F. Weber, Microbiologist

Laboratory Headquarters, Urbana, Illinois

R. L. Cooper, Agronomist-in-Charge
R. L. Bernard, Geneticist
F. I. Collins, Oil Chemist
O. A. Krober, Protein Chemist (on leave)
J. E. Harper, Plant Physiologist
W. L. Ogren, Plant Physiologist
R. W. Rinne, Plant Physiologist
D. W. Chamberlain, Plant Pathologist
L. E. Gray, Plant Pathologist

Southern Region Headquarters, Stoneville, Mississippi

Edgar E. Hartwig, Agronomist
B. L. Keeling, Pathologist
T. C. Kilen, Geneticist
Calton J. Edwards, Jr., Research Assistant
Kathryn W. Jamison, Statistical Clerk
J. Kenneth Buckner, Research Technician
Pat Butler, Research Technician

Raleigh, North Carolina

Charles A. Brim, Agronomist
John P. Ross, Pathologist
Cecil Tester, Research Chemist
M. F. Young, Research Technician
Clifford Elledge, Research Technician 1/

Gainesville, Florida

Kuell Hinson, Geneticist
Howard F. McGraw, Research Aid

1/ Full-time State employee.

STATE COLLABORATORS IN THE SOUTHERN REGION

L. E. Ensminger
Alabama Agricultural Experiment Station
Auburn, Alabama

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

R. L. Smith
West Florida Agricultural Experiment Station
Jay, Florida

H. B. Harris
Georgia Agricultural Experiment Station
Experiment, Georgia

C. G. Shepherd
Louisiana Agricultural Experiment Station
Baton Rouge, Louisiana

W. K. Porter, Jr.
Mississippi Agricultural Experiment Station
Delta Branch
Stoneville, Mississippi

C. A. Brim
North Carolina Agricultural Experiment Station
Raleigh, North Carolina

R. S. Matlock
Oklahoma Agricultural Experiment Station
Stillwater, Oklahoma

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

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

Raymond D. Brigham
South Plains Research and Extension Center
Lubbock, Texas

T. J. Smith
Virginia Agricultural Experiment Station
Blacksburg, Virginia

INTRODUCTION

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

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

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

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

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

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STAIIN IDENTIFICATION

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

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

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

Location	IV	V	VI	VII	VIII		P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted Variety[2]
East Coast											
Queenstown, Md.	1	1	1			Mattapex silt loam	M	M		0-80-80	40.7 - A
Linkwood, Md.	1*	1*	1			Sassafras sandy loam	M	M		0-30-60	39.8 - C
Warsaw, Va.	1*	1*	1			Sassafras sandy loam	H	M	6.0	0-30-60	37.8 - D
Painter, Va.	1	1	1			Woodstown f. sandy loam	VH	H+	6.0	0-0-0	51.8 - D
Petersburg, Va.		1	1*			Goldsboro f. sandy loam	VH	M+	6.0	0-0-0	20.7 - D
Holland, Va.		1	1			Dragston f. sandy loam	VH	M	5.5	0-0-0	43.4 - C
Plymouth, N.C.	1	1*	1*			Bladen f. sandy loam				0-40-80	50.0 - F
Rocky Mt., N.C.				1		Norfolk sandy loam				0-40-80	31.2 - I
Willard, N.C.			1	1*		Norfolk f. sandy loam				0-40-80	40.0 - F
Florence, S.C.			1	1	1	Marlboro f. sandy loam				24-72-72	30.0 - I
Hartsville, S.C.(A)			1	1	1	Coxville sandy loam	M+	M+		0-50-100	20.0 - I
Hartsville, S.C.(B)					1	Norfolk sandy loam				12-36-72	30.0 - J
Southeast											
Blackville, S.C.(A)				1*	1	Norfolk sandy loam	H+	M+	6.0	0-60-120	6.6 - I
Blackville, S.C.(B)					1*	Norfolk sandy loam	VH	M-	6.1	0-60-120	13.5 - J
Tallassee, Ala.				1*	1	Augusta f. sandy loam			6.1	0-42-42	18.4 - J
Tifton, Ga.				1	1	Norfolk loamy sand	M	L	6.1	0-40-80	25.4 - J
Live Oak, Fla.				1*	1*	Scranton fine sand	H	MH	6.2	0-60-120	31.2 - K
Gainesville, Fla.				1	1*	Arredonda fine sand	H	H	6.7	0-60-120	33.9 - I
Quincy, Fla.			1	1	1*	Norfolk loamy f. sand	M	H	6.6	0-70-70	43.1 - J
Marianna, Fla.				1	1	Ruston sandy loam				24-72-72	24.5 - I
Jay, Fla.			1*	1*	1*	Tifton f. sandy loam				0-140-140	40.1 - I
Fairhope, Ala.			1	1	1	Marlboro f. sandy loam				0-50-50	27.7 - I
Baton Rouge, La.			1	1	1	Olivier silt loam				0-60-60	35.0 - F
Upper & Central South											
Orange, Va.	1	1				Starr clay loam	M-	M	6.7	0-50-100	47.4 - A
Trenton, Ill.	1					Harrison silt loam	H	H	6.3	0-0-0	48.4 - A
Eldorado, Ill.	1					Harco silt loam	H	H	6.5	0-0-0	42.4 - A
Carbondale, Ill.	1					Stoy silt loam	H	H		0-90-150	37.9 - A
Lexington, Ky.	1	1				Burgin sandy loam	H	H	6.1	0-125-250	43.8 - A

Location	IV	V	VI	VII	VIII	Soil type	P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adpated variety[2]
Upper & Central South (cont'd).											
Princeton, Ky.	1	1				Crider silt loam				0-0-0	37.6 - C
Martin, Tenn.	1	1				Collins silt loam	H	H	6.9	0-100-100	44.9 - B
Belle Mina, Ala.		1	1			Humphrey sandy loam				0-60-60	37.5 - C
Blairsville, Ga.	1	1				State loam	M	M	6.5	0-70-140	49.4 - A
Clemson, S.C.				1		Cecil sandy loam	M-	M+	6.0	0-70-70	33.2 - I
Clemson, S.C.			1			Congaree silt loam	M+	M-	5.9	0-70-70	70.6 - F
Experiment, Ga.		1	1	1	1	Cecil sandy clay loam	M	M		25-50-75	38.4 - I
Delta											
Miller City, Ill.	1	1				Riley f. sandy loam	H	H	6.7	0-0-0	45.9 - L
Henderson, Ky.	1	1				Wakeland silt loam	L	M	5.6	0-0-0	44.6 - A
Hickman, Ky.		1				Commerce silt loam	M	H	7.5	0-0-0	43.8 - C
Portageville, Mo.(A)	1*	1*	1*			Salix silt loam	VH	VH	5.1	0-50-50	47.9 - L
Portageville, Mo.(B)	1*	1*	1*			Sharkey clay	VH	VH	5.8	0-0-0	31.2 - G
Keiser, Ark.	1	1*	1*			Sharkey clay	H+	H+	6.5	0-0-0	29.1- E
Marianna, Ark.[3]	1	1	1			Richland silt loam	M	M	6.7	0-30-30	32.1 - F
Stoneville, Miss.(A)		1	1*	1*	1	Bosket f. sandy loam	M-	M-	6.7	0-0-0	46.6 - G
Stoneville, Miss.(B)	1*	1*	1*	1*		Sharkey clay	M	H+	6.4	0-0-0	47.2 - G
Rohwer, Ark.				1		Perry clay	H+	H+	6.8	0-0-0	35.5 - H
St. Joseph, La.		1	1	1	1	Commerce sandy loam				0-0-0	54.0 - I
West											
Manhattan, Kan.	1					Sarpy f. sandy loam	L	H	6.0	0-0-0	51.6 - A
Mt. Vernon, Mo.[3]	1	1				Huntington silt loam				0-60-60	32.1 - A
Stuttgart, Ark.[3]		1	1	1		Crowley silt loam	VL	1+		0-48-48	43.4 - G
Curtis, La.		1	1	1	1	Yahola f. sandy loam				0-0-0	37.9 - I
Bixby, Okla.[3]	1	1	1			Lonoke very f. sandy loam			7.4	0-0-0	45.8 - G
Halfway, Texas[3]	1	1	1			Pullman clay				18-46-0	49.1 - B
Lubbock, Texas	1*	1	1			Amarillo f. sandy loam				0-0-0	40.8 - F
Crowley, La.			1	1	1	Crowley silt loam				0-60-30	43.5 - F
Beaumont, Texas[3]			1	1*	1*	Morrey silt loam	L	M	7.0	0-120-120	35.1 - H

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 = Kent; B = Hill; C = Dare; D = York; E = Davis; F = Lee; G = Lee 68; H = Semmes; I = Bragg; J = Hampton; K = Hardee; L = Dyer.

3/ Irrigated as needed.

* 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 groups. Row widths at the different locations vary from 36 to 40 inches. An attempt was made to follow the best cultural and management practices in conducting these strain comparisons.

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

Planting Rate: All strains were packeted at the rate of 190 seeds for planting a 19-foot row. This gives a planting rate of 10 seeds per foot.

Yields are taken by harvesting a 16-foot length from the midsection of each plot. Actual seed weights are recorded after the seed of strains have a unifrom moisture content.

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

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

Chemical composition: Percent oil and percent protein were determined from representative locations. Percentage composition of the seed is expressed on a moisture-free basis. All chemical analyses are made at Urbana, Illinois.

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

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

1 - almost all plants erect
2 - either all plants leaning slightly, or a few plants down
3 - either all plants leaning moderately, or 25 to 50% of the plants down
4 - either all plants leaning considerably, or 50 to 80% of the plants down
5 - all plants down badly

Height is determined as the average length of plants in a plot from the ground to the top extremity at time of maturity.

Maturity is taken as the date when the pods are dry and most of the leaves have dropped. Under most conditions, the stems are also dry. Maturity in all summaries is expressed as days earlier (-) or later (+) than a standard or reference variety. Reference varieties used for the different uniform tests are as follows: Group IV, Kent; Group V, Hill; Group VI, Hood; Group VII, Bragg; and Group VIII, Hampton.

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

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

The factors considered in estimating seed quality are development of seed, wrinkling damage, and brightness. While the seed quality score indicates relative appearance of seed for the several varieties at one location, considerable 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 surround lesion
5 - leaves covered with lesions and much necrosis

B. Root and stem

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

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

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

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

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

UNIFORM GROUP IV-S

1968

	Variety or strain	Parentage	Generation composited
1.	Kent	Lincoln x Ogden	F_7
2.	Delmar	C799 x FC 33243	F_6
3.	Custer	Scott type with resistance to C.N. and P.R.	Comp. of 23 F_3 lines
4.	S63-3277	Scott x Hill	F_5
5.	D65-2262	D54-2437 x PI 261,467	F_5
6.	D66-4361	D53-354(2) x D54-2437	F_7
7.	D66-4498	D53-354(2) x D54-2437	F_7
8.	D66-4504	D53-354(2) x D54-2437	F_7
9.	D66-4505	D53-354(2) x D54-2437	F_7
10.	D66-4582	D53-354 x D54-2437	F_7
11.	D66-4587	D53-354 x D54-2437	F_7
12.	S65-15A	Subline of Custer	

Background of strains used as parents:

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.

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

PI 261,467 is a late-flowering strain of Group III maturity. It is considered a "summer type" at the 34° latitude level in Japan.

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

Twenty-seven Group IV-S nurseries were planted. Results from 26 nurseries are summarized in Table 1 through 7. The planting at Bushland, Texas, was destroyed by hail. Table 1 gives a general summary of agronomic qualities, oil and protein content of the seed, and field reaction to disease development. Two and three year data are reported for seed yield by production regions. Two and three year data are also reported for oil and protein percentages.

Differences among strains for seed yield were significant at the 5% level of confidence at 21 of the 26 locations. A combined analysis of variance for seed yields for locations within a production region showed differences among strains to be significant at the 5% level in the Upper and Central South and Delta, but nonsignificant in the East and West.

Custer and S63-3277 have been evaluated on a regional basis for 3 years. The 3-year mean yield of Custer is below that of Kent in each region. Oil content is similar but protein level of Custer is considerably below that of Kent. Maturity is nearly similar as is also susceptibility to shattering. However, Custer can be grown and will give reasonably good production on soils where cyst nematodes or phytophthora rot would make production of Kent hazardous. S63-3277 has a mean yield above that for Kent in the East Coast and Delta areas, and below Kent in the Upper and Central South and West. It is slightly superior to Kent in seed quality and seed holding.

One strain, D65-2262, has been included in this group 2 years. D65-2262 is the only strain having a determinate growth type. Late flowering was a factor in selection, so as to permit a short-season type to make adequate growth. Seed yields have been good in all areas, but average below Kent in the Upper and Central region. Maturity is similar to Delmar in the southern locations, but the overall average is 4 days later than Delmar and 8 days later than Kent. Seed holding and seed quality are superior to that of Kent.

Seven strains were advanced from the Preliminary Group IV-S nursery. S65-15A, a subline of Custer, gave a higher seed yield in each region than Custer. Seed quality scores and shattering were similar to Custer. The four strains selected from D53-354(2) x D54-2437 and the two strains from D53-354 x D54-2437 all produced seed superior in quality than that of Kent and were superior to Kent in seed holding. D66-4505 and D66-4582 appear to be the most promising of these strains. D66-4505 averaged 2 days earlier than Kent, while D66-4582 averaged 2 days later in maturity. Both of these strains have a higher level of resistance to phytophthora rot than does S63-3277 and are also superior to S63-3277 in seed holding and seed quality.

Table 1. - General summary of performance for the strains in Uniform Group IV, 1968

	Kent	Delmar	Custer	S63-3277	D65-2262	D66-4361
Seed Yield - 1968						
East Coast	41.2	39.7	38.0-	43.6+	39.1	38.8-
Upper & Central South	44.4	40.0-	39.2-	43.1	40.3	38.8-
Delta	28.3	28.2	28.1	33.1+	32.6+	32.2+
West	41.6	40.0	39.4	38.1	40.1	42.0
- 1967-68						
East Coast	38.9	37.8	36.6	41.6	38.7	
Upper & Central South	43.5	41.1	38.1	42.2	40.0	
Delta	32.1	30.3	31.5	34.9	36.3	
West	42.6	42.0	42.6	41.4	42.3	
- 1966-68						
East Coast	36.4	34.4	34.1	38.1		
Upper & Central South	43.9	40.8	37.9	41.8		
Delta	35.2	32.2	33.6	36.8		
West	37.7	36.3	35.7	37.0		
Oil Content - 1968	22.2	22.8+	22.2	22.2	20.4-	21.6-
- 1967-68	22.2	22.6	22.0	22.0	20.3	
- 1966-68	22.0	22.2	22.0	22.0		
Protein Content - 1968	39.9	38.5-	36.5-	36.8-	39.0-	38.8-
- 1967-68	40.0	38.6	36.7	37.3	39.9	
- 1966-68	40.1	39.2	36.9	37.3		
Seed size	15.5	14.3-	13.7-	14.3-	12.0-	10.9-
Maturity index	9-26	+4	-1	+3	+8	-2
Seed quality	2.6	2.5	2.7	2.4	1.9	2.0
Height	38	41	44	41	33	36
Shattering[1/]	3.9	1.0	4.0	2.4	1.4	2.6
Bacterial pustule	3.0	3.0	1.0	1.0	1.0	1.0
Phytophthora rot	3.0	2.3	1.0	1.0	1.0	1.0
Seed coat mottling (%)[2/]	25.0	23.0	6.0	16.0	0.0	9.0
Flower color	P	W	P	P	W	P
Pubescence color	T	G	G	G	G	G
Pod wall color	B	B	B	B	T	B
Growth type	I	I	I	I	D	I

1/ Warsaw, Plymouth, Keiser, Stoneville, and Halfway data.
2/ Halfway data.

Table 1. - (continued)

	D66-4498	D66-4504	D66-4505	D66-4582	D66-4587	S65-15A
Seed Yield - 1968						
East Coast	39.7	37.0-	42.2	41.7	39.6	41.1
Upper & Central South	39.0	36.9-	41.1-	40.6-	42.2-	41.4-
Delta	29.0	30.1	35.5+	32.0+	30.3	31.7+
West	40.2	39.8	41.5	40.7	40.5	40.2
- 1967-68						
East Coast						
Upper & Central South						
Delta						
West						
- 1966-68						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1968	21.3-	21.6-	21.9	22.0	20.9-	22.6
- 1967-68						
- 1966-68						
Protein Content - 1968	39.5	38.9-	38.5-	38.0-	38.8-	36.2-
- 1967-68						
- 1966-68						
Seed size	10.9-	11.4-	12.1-	12.6-	10.9-	13.2-
Maturity index	-1	0	-2	+2	+3	0
Seed quality	1.9	2.1	1.9	2.2	2.0	2.8
Height	36	39	37	41	39	45
Shattering[1/]	1.6	1.9	2.0	1.7	2.2	3.6
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	1.0	1.0	1.0	1.0	1.0	1.0
Seed coat mottling (%)[2/]	0.0	9.0	0.0	24.0	5.0	7.0
Flower color	P	W	P	P	P	P
Pubescence color	G	G	G	G	G	G
Pod wall color	T	T	T	T	T	B
Growth type	I	I	I	I	I	I

Table 2. - Seed yield, in bushels per acre, for the strains in Uniform Group IV, 1968

Location	Kent	Delmar	Custer	S63-3277	D65-2262	D66-4361	D66-4498
East Coast							
Queenstown, Md.	40.7	36.4	39.6	39.4	35.3	37.1	37.9
Linkwood, Md.	41.6	41.7	39.3	42.1	40.8	38.5	40.1
Painter, Va.	41.6	40.0	36.7	45.2	45.0	44.8	42.7
Warsaw, Va.	32.6	31.0	36.0+	34.6	29.3-	31.7	34.3
Plymouth, N. C.	49.7	49.3	38.3-	56.7+	45.2	42.0-	43.4
Mean	41.2	39.7	38.0	43.6	39.1	38.8	39.7
Upper and Central South							
Orange, Va.	47.4	39.0-	41.0-	44.5	36.3-	43.6-	43.2-
Blairsville, Ga.	49.4	45.5	45.5	46.6	51.9	42.4	40.1-
Trenton, Ill.	48.4	40.2-	38.4-	47.2	43.5-	42.3-	40.9-
Eldorado, Ill.	42.4	39.3	39.4	48.2+	41.9	39.4	40.5
Carbondale, Ill.	37.9	38.8	41.3	39.8	39.5	35.6	36.8
Princeton, Ky.	41.9	32.0	34.3	33.5	32.4	30.2	31.0
Lexington, Ky.	43.8	44.8	34.2-	40.7	38.6	38.5	40.0
Mean	44.4	40.0-	39.2-	43.1	40.3-	38.8-	39.0-
Delta							
Miller City, Ill.	25.7	37.9+	41.5+	37.0+	27.4	32.3	30.6
Henderson, Ky.	44.6	34.5-	32.5-	38.6-	39.0-	36.6-	36.2-
Portageville, Mo.(A)	41.8	45.9	43.2	43.1	37.4	46.0	41.0
Portageville, Mo.(B)	7.4	5.9	5.6	17.0+	27.1+	24.3+	9.3
Martin, Tenn.	49.7	37.5	40.4	48.3	49.7	45.2	46.4
Keiser, Ark.	11.6	9.4	12.6	19.7+	19.2+	16.9+	11.9
Marianna, Ark.	24.8	27.4	20.7	29.1+	28.9+	27.0	27.0
Stoneville, Miss.(B)	20.6	27.1+	28.3+	32.1+	31.9+	29.3+	29.8+
Mean	28.3	28.2	28.1	33.1+	32.6+	32.2+	29.0
West							
Manhattan, Kan.(A)	44.9	41.0	44.5	41.9	27.6-	44.1	40.3
Manhattan, Kan.(B)	51.6	46.1	47.6	46.5	56.8	52.3	46.1
Mt. Vernon, Mo.	32.1	31.7	32.1	35.6+	30.5	38.0+	38.4+
Bixby, Okla.	36.1	39.6	37.8	41.2	40.3	39.3	35.7
Halfway, Texas (A)	42.8	44.1	40.9	37.1	43.5	47.9	48.2
Halfway, Texas (B)	44.1	44.7	39.8	33.4-	42.5	36.7-	40.0
Lubbock, Texas	36.0	30.5-	31.3-	28.9-	37.1	34.3	30.3-
Mean	41.6	40.0	39.4	38.1	40.1	42.0	40.2

(+) - 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	D66-4504	D66-4505	D66-4582	D66-4587	S65-15A	L.S.D. (.05)	C.V.
			East Coast				
Queenstown, Md.	37.3	41.2	41.3	38.3	41.2	6.0	9%
Linkwood, Md.	39.7	40.2	39.4	39.2	42.9	N.S.	5%
Painter, Va.	42.0	46.0	41.8	48.3+	39.0	5.8	8%
Warsaw, Va.	31.0	33.2	33.6	29.1-	36.2+	2.5	5%
Plymouth, N. C.	35.1-	50.4	52.3	43.2-	46.4	5.5	7%
Mean	37.0	42.2	41.7	39.6	41.1	N.S.	
			Upper and Central South				
Orange, Va.	39.4-	44.7	43.0-	43.9-	40.8-	3.0	4%
Blairsville, Ga.	41.2-	44.6	47.4	47.5	46.7	7.5	10%
Trenton, Ill.	40.2-	44.5-	41.8-	43.2-	41.8-	3.4	5%
Eldorado, Ill.	39.5	42.7	42.2	42.5	42.3	3.6	5%
Carbondale, Ill.	34.4	37.6	39.3	38.1	38.9	N.S.	8%
Princeton, Ky.	30.9	29.4	29.3	34.6	35.0	N.S.	14%
Lexington, Ky.	34.4-	43.8	41.4	45.5	42.0	6.8	10%
Mean	36.9-	41.1-	40.6-	42.2	41.4-	2.7	
			Delta				
Miller City, Ill.	29.9	36.2	31.9	31.1	46.2+	11.1	19%
Henderson, Ky.	35.6-	40.7	34.1-	35.0-	34.8-	5.1	8%
Portageville, Mo.(A)	45.2	45.9	42.7	42.3	45.4	5.7	8%
Portageville, Mo.(B)	10.1	28.8+	19.0+	22.8+	10.1	5.1	19%
Martin, Tenn.	41.6	47.3	46.1	41.1	45.9	N.S.	12%
Keiser, Ark.	18.7+	20.7+	18.9	14.2	13.6	3.8	14%
Marianna, Ark.	28.3	31.3+	30.6+	27.5	27.7	3.6	8%
Stoneville, Miss.(B)	31.3+	33.4+	32.8+	28.2+	29.9+	5.0	10%
Mean	30.1	35.5+	32.0	30.3	31.7+	3.9	
			West				
Manhattan, Kan.(A)	37.8	43.1	42.2	42.0	42.5	7.2	10%
Manhattan, Kan.(B)	52.2	48.9	44.2	49.5	52.4	N.S.	10%
Mt. Vernon, Mo.	36.2+	34.8	37.0+	33.7	33.4	3.4	8%
Bixby, Okla.	40.7	43.8	41.6	39.5	41.3	N.S.	8%
Halfway, Texas(A)	39.0	45.7	47.4	42.8	41.6	N.S.	11%
Halfway, Texas(B)	38.1-	37.4-	42.8	42.2	38.2-	4.4	7%
Lubbbock, Texas	32.8	35.9	35.7	31.4-	30.9-	4.2	8%
Mean	39.8	41.5	41.7	40.5	40.2	N.S.	

Table 3. - Chemical composition and seed size for the strains in Uniform Group IV, 1968

Location	Kent	Delmar	Custer	S63-3277	D65-2262	D66-4361
			Oil Percentage			
Linkwood, Md.	23.0	22.9	22.1	22.1	20.8	22.3
Warsaw, Va.	21.4	20.8	22.5	21.7	20.7	20.4
Blairsville, Ga.	21.6	22.8	21.6	20.4	19.1	21.0
Miller City, Ill.	21.1	21.6	22.3	21.7	19.3	21.1
Henderson, Ky.	22.7	22.4	22.1	21.2	20.1	21.7
Portageville, Mo.(A)	23.6	24.9	24.9	24.9	21.6	23.2
Keiser, Ark.	22.2	23.9	22.1	23.2	21.0	21.4
Stoneville, Miss.(B)	23.4	24.8	24.2	24.5	22.5	23.4
Bixby, Okla.	22.1	22.1	20.1	21.7	20.6	20.9
Halfway, Texas	20.9	21.3	19.9	20.2	18.6	20.9
Mean	22.2	22.8+	22.2	22.2	20.4-	21.6-
			Protein Percentage			
Linkwood, Md.	38.7	38.4	36.3	36.6	39.5	38.7
Warsaw, Va.	39.8	40.7	37.0	37.7	37.5	39.0
Blairsville, Ga.	41.0	39.0	36.5	37.6	40.5	40.5
Miller City, Ill.	40.9	39.3	36.3	36.3	39.8	39.0
Henderson, Ky.	39.2	39.5	36.1	37.0	39.6	39.8
Portageville, Mo.(A)	37.2	35.4	34.1	35.4	37.5	38.2
Keiser, Ark.	39.2	36.5	35.9	35.3	35.8	37.0
Stoneville, Miss.(B)	39.0	36.4	35.2	35.3	36.7	36.4
Bixby, Okla.	41.3	39.8	39.0	37.3	40.3	39.6
Halfway, Texas	42.5	40.0	38.6	39.4	42.7	39.5
Mean	39.9	38.5-	36.5-	36.8-	39.0-	38.8-
			Grams Per 100 Seeds			
Linkwood, Md.	18.4	17.4	16.6	16.7	14.3	14.3
Warsaw, Va.	12.9	11.0	12.8	11.5	10.4	9.0
Blairsville, Ga.	21.4	17.9	16.4	17.9	14.6	14.5
Miller City, Ill.	13.1	13.2	12.6	13.1	10.7	9.5
Henderson, Ky.	15.9	15.4	14.1	14.9	14.1	10.9
Portageville, Mo.(A)	11.5	11.4	9.0	11.0	9.0	7.3
Keiser, Ark.	13.7	13.0	11.3	11.0	9.7	9.0
Stoneville, Miss.(B)	15.0	12.9	12.8	15.0	11.8	10.1
Bixby, Okla.	15.3	14.9	15.3	15.5	12.5	11.7
Halfway, Texas	18.0	16.0	16.0	16.0	13.0	13.0
Mean	15.5	14.3-	13.7-	14.3-	12.0-	10.9-

Table 3. - (continued)

Location	D66-4498	D66-4504	D66-4505	D66-4582	D66-4587	S65-15A	L.S.D. (.05)
			Oil Percentage				
Linkwood, Md.	22.0	22.0	22.7	22.7	21.2	22.6	
Warsaw, Va.	20.5	20.1	21.7	20.9	20.2	22.1	
Blairsville, Ga.	20.1	21.0	20.7	21.2	20.4	22.5	
Miller City, Ill.	21.2	21.1	21.1	21.0	20.2	22.6	
Henderson, Ky.	21.3	21.3	22.2	21.1	20.6	22.8	
Portageville, Mo.(A)	23.1	22.8	22.6	23.1	21.5	25.0	
Keiser, Ark.	21.1	21.9	21.9	22.4	21.3	23.2	
Stoneville, Miss.(B)	22.7	23.3	23.7	24.2	22.5	24.5	
Bixby, Okla.	21.2	20.7	21.7	22.1	20.7	20.0	
Halfway, Texas	20.1	21.5	20.4	21.0	20.8	20.2	
Mean	21.3-	21.6-	21.9	22.0	20.9-	22.6	0.5
			Protein Percentage				
Linkwood, Md.	39.9	39.3	38.2	38.2	38.5	36.3	
Warsaw, Va.	39.6	40.1	38.6	38.8	38.4	36.9	
Blairsville, Ga.	41.8	40.1	40.1	40.5	39.8	36.7	
Miller City, Ill.	39.2	39.7	38.6	36.9	39.6	35.9	
Henderson, Ky.	39.9	39.4	38.9	39.6	40.0	36.4	
Portageville, Mo.(A)	36.9	37.4	37.4	34.7	38.0	35.9	
Keiser, Ark.	37.4	36.0	37.1	36.2	36.5	35.4	
Stoneville, Miss.(B)	39.0	36.6	36.7	35.7	36.7	34.1	
Bixby, Okla.	40.0	39.9	39.7	39.5	40.1	36.8	
Halfway, Texas	41.4	40.2	39.9	39.9	40.7	37.3	
Mean	39.5	38.9-	38.5-	38.0-	38.8-	36.2-	0.7
			Grams per 100 Seeds				
Linkwood, Md.	12.7	14.5	13.9	14.9	13.0	16.2	
Warsaw, Va.	8.7	9.2	9.4	10.1	8.2	11.5	
Blairsville, Ga.	14.4	13.6	16.0	16.2	14.1	17.2	
Miller City, Ill.	9.6	10.4	10.3	11.5	9.3	12.0	
Henderson, Ky.	12.4	11.5	12.0	13.1	10.9	13.7	
Portageville, Mo.(A)	7.3	9.7	9.0	9.7	8.3	8.3	
Keiser, Ark.	9.0	9.7	10.0	10.3	8.7	11.0	
Stoneville, Miss.(B)	9.9	10.6	11.9	11.5	11.2	12.8	
Bixby, Okla.	11.3	11.7	13.1	13.8	11.1	14.5	
Halfway, Texas	14.0	13.0	15.0	15.0	13.0	15.0	
Mean	10.9-	11.4-	12.1-	12.6-	10.9-	13.2-	0.6

Table 4. - Relative maturity data, days earlier (-) or later (+) than Kent, for the strains in Uniform Group IV, 1968

Location	Date planted	Kent matured	Delmar	Custer	S63-3277	D65-2262	D66-4361
			East Coast				
Queenstown, Md.	5-22	9-26	+4	+1	+1	+10	-5
Linkwood, Md.	5-21	9-22	+4	+1	+2	+13	-2
Painter, Va.	6-5	9-30	+4	0	+1	+9	-2
Warsaw, Va.	5-23	9-17	+3	0	+3	+8	-2
Plymouth, N.C.	5-14	9-22	+2	-3	-2	+4	-3
Mean		9-23	+3	0	+1	+9	-3
			Upper and Central South				
Orange, Va.	5-21	10-5	-4	-4	-4	+9	-4
Blairsville, Ga.	5-29	9-30	+2	+2	+6	+2	0
Trenton, Ill.	6-10	10-5	+1	-1	+2	+11	-5
Eldorado, Ill.	6-6	9-27	+1	-2	+2	+11	-6
Carbondale, Ill.	6-12	9-26	+5	+1	+3	+10	-4
Princeton, Ky.	5-22	9-18	+5	0	+3	+7	-4
Lexington, Ky.	5-3	10-1	+1	-3	+5	+9	+2
Mean		9-29	+2	-1	+3	+8	-3
			Delta				
Miller City, Ill.	5-29	9-24	+4	-1	+1	+5	-1
Henderson, Ky.	5-21	9-24	+8	+2	+10	+14	-1
Portageville, Mo.(A)	5-8	9-20	+3	-2	+2	+3	0
Portageville, Mo.(B)	5-24	9-15	+10	-3	+6	+14	+6
Keiser, Ark.	6-1	10-1	+3	-3	-3	0	-5
Marianna, Ark.	5-28	9-18	+4	-5	+2	+5	-5
Stoneville, Miss.(B)	5-30	9-16	+8	-4	+3	+6	-3
Mean		9-21	+6	-2	+3	+7	-1
			West				
Manhattan, Kan.(A)	5-16	10-3	+13	+3	+9	+14	+1
Manhattan, Kan.(B)	5-9	10-8	+1	+1	+4	+6	-2
Bixby, Okla.	5-17	10-1	-2	+4	-1	-3	-5
Halfway, Texas	6-18	10-4	+5	0	+5	+10	+5
Mean		10-4	+4	+2	+4	+7	0

Table 4. - (continued)

Location	D66-4498	D66-4504	D66-4505	D66-4582	D66-4587	S65-15A
			East Coast			
Queenstown, Md.	-3	0	-3	+2	+3	+2
Linkwood, Md.	-1	+1	-3	+2	+3	+1
Painter, Va.	-4	0	-2	+2	+3	0
Warsaw, Va.	-2	0	-2	+2	+2	-1
Plymouth, N. C.	-3	-2	-2	-2	+4	-4
Mean	-3	0	-2	+1	+3	0
			Upper and Central South			
Orange, Va.	-4	-4	-4	-4	-4	-4
Blairsville, Ga.	+2	0	+1	+2	+1	+1
Trenton, Ill.	-7	-5	-4	-2	+1	-2
Eldorado, Ill.	-6	-3	-6	-3	-3	-2
Carbondale, Ill.	-4	-2	-4	0	+1	-2
Princeton, Ky.	-5	-1	-4	-1	+5	+1
Lexington, Ky.	+6	+2	+5	+7	+5	+2
Mean	-3	-2	-2	0	+1	-1
			Delta			
Miller City, Ill.	-1	+1	-4	+1	+1	+1
Henderson, Ky.	-1	-4	0	+5	+9	+5
Portageville, Mo.(A)	-1	+2	-1	+2	+4	-4
Portageville, Mo.(B)	+6	+12	+6	+14	+12	-3
Keiser, Ark.	-7	-1	-7	-1	-1	-4
Marianna, Ark.	0	+4	0	+1	0	0
Stoneville, Miss.(B)	-6	-1	-2	+2	-1	-2
Mean	-1	+2	-1	+3	+3	-1
			West			
Manhattan, Kan.(A)	+6	+8	0	+11	+12	+3
Manhattan, Kan.(B)	+2	+4	0	+2	+4	+2
Bixby, Okla.	-5	-4	-3	-2	-4	+3
Halfway, Texas	+5	+7	+5	+5	+5	+5
Mean	+2	+4	0	+4	+4	+3

Table 5. - Plant height for the strains in Uniform Group IV, 1968

Location	Kent	Delmar	Custer	S63-3277	D65-2262	D66-4361
			East Coast			
Queenstown, Md.	38	42	51	42	35	37
Linkwood, Md.	42	44	45	46	37	39
Painter, Va.	41	40	46	42	38	39
Warsaw, Va.	34	40	39	39	33	32
Plymouth, N. C.	41	43	48	45	34	38
Mean	39	42	46	41	35	37
			Upper and Central South			
Orange, Va.	49	48	54	44	43	50
Blairsville, Ga.	40	39	43	40	38	35
Trenton, Ill.	48	46	46	47	36	45
Eldorado, Ill.	46	47	50	47	42	43
Carbondale, Ill.	36	39	40	37	33	34
Princeton, Ky.	41	45	52	45	36	38
Lexington, Ky.	48	49	51	49	42	43
Mean	44	45	48	44	39	41
			Delta			
Miller City, Ill.	33	45	49	42	28	33
Henderson, Ky.	48	45	52	50	33	44
Portageville, Mo.(A)	37	43	41	37	18	30
Portageville, Mo.(B)	22	28	28	31	28	26
Martin, Tenn.	43	46	56	52	32	39
Keiser, Ark.	24	28	25	28	26	24
Marianna, Ark.	36	39	45	40	34	35
Stoneville, Miss.(B)	27	31	37	36	25	33
Mean	34	38	42	40	28	33
			West			
Manhattan, Kan.(A)	38	40	43	42	27	37
Manhattan, Kan.(B)	46	50	51	52	36	46
Mt. Vernon, Mo.	31	35	39	35	35	32
Bixby, Okla.	32	35	44	38	31	32
Halfway, Texas	28	28	34	28	28	28
Mean	35	38	42	39	31	35

Table 5. - (continued)

Location	D66-4498	D66-4504	D66-4505	D66-4582	D66-4587	S65-15A
			East Coast			
Queenstown, Md.	38	39	40	43	38	48
Linkwood, Md.	38	42	38	45	42	49
Painter, Va.	37	43	40	44	42	46
Warsaw, Va.	34	37	31	41	33	41
Plymouth, N. C.	39	42	42	45	39	46
Mean	37	41	38	44	39	46
			Upper and Central South			
Orange, Va.	44	45	45	49	50	52
Blairsville, Ga.	33	36	34	36	38	45
Trenton, Ill.	41	41	42	45	44	51
Eldorado, Ill.	40	44	41	45	43	53
Carbondale, Ill.	33	36	33	36	36	42
Princeton, Ky.	39	43	37	43	44	53
Lexington, Ky.	42	44	44	46	47	55
Mean	39	41	39	43	43	50
			Delta			
Miller City, Ill.	33	38	37	40	36	50
Henderson, Ky.	44	47	45	47	47	50
Portageville, Mo.(A)	36	42	32	38	40	40
Portageville, Mo.(B)	24	29	26	30	24	28
Martin, Tenn.	41	46	39	48	45	52
Keiser, Ark.	23	25	24	28	24	26
Marianna, Ark.	35	37	34	42	37	44
Stoneville, Miss.(B)	31	35	31	39	33	36
Mean	33	37	34	39	36	41
			West			
Manhattan, Kan.(A)	36	38	33	40	38	45
Manhattan, Kan.(B)	48	50	48	52	48	53
Mt. Vernon, Mo.	30	36	33	36	33	36
Bixby, Okla.	32	36	34	38	33	44
Halfway, Texas	28	30	30	30	30	34
Mean	35	38	36	39	36	42

Table 6. - Lodging scores for the strains in Uniform Group IV, 1968

Location	Kent	Delmar	Custer	S63-3277	D65-2262	D66-4361
East Coast						
Queenstown, Md.	1.1	1.6	2.3	1.4	3.8	1.1
Linkwood, Md.	1.1	1.2	1.4	1.1	3.5	1.2
Painter, Va.	1.3	1.8	4.7	2.3	4.7	2.3
Warsaw, Va.	1.0	1.1	2.1	1.4	2.1	1.0
Plymouth, N. C.	3.0	2.0	4.0	2.0	4.0	3.0
Upper and Central South						
Orange, Va.	1.7	1.0	2.7	2.7	4.7	2.7
Blairsville, Ga.	1.8	2.2	3.3	2.5	4.0	3.3
Trenton, Ill.	1.9	2.0	3.0	2.4	4.8	2.3
Eldorado, Ill.	1.8	1.6	2.4	1.7	3.8	2.0
Carbondale, Ill.	1.0	1.0	2.0	1.0	3.0	1.0
Princeton, Ky.	1.0	1.0	1.0	1.0	1.7	1.0
Lexington, Ky.	1.3	2.0	2.7	2.0	4.0	2.0
Delta						
Miller City, Ill.	1.4	1.4	2.2	1.4	1.5	1.4
Henderson, Ky.	2.3	2.0	3.0	3.0	2.3	2.0
Portageville, Mo.(A)	1.5	1.5	2.3	1.8	1.5	1.8
Portageville, Mo.(B)	1.0	1.2	1.0	1.3	1.8	1.3
Martin, Tenn.	2.0	2.0	4.0	2.0	4.0	4.0
Keiser, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, Ark.	1.0	1.3	2.0	1.0	2.0	1.0
Stoneville, Miss.(B)	1.7	1.7	1.7	1.7	2.0	1.7
West						
Manhattan, Kan.(A)	1.6	1.9	3.3	1.5	4.8	2.2
Manhattan, Kan.(B)	1.3	1.0	1.8	1.3	4.2	2.2
Mt. Vernon, Mo.	1.3	1.3	2.8	1.3	3.3	1.0
Bixby, Okla.	1.0	1.0	2.0	1.0	3.0	1.0
Halfway, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 6. - (continued)

Location	D66-4498	D66-4504	D66-4505	D66-4582	D66-4587	S65-15A
			East Coast			
Queenstown, Md.	1.0	1.1	1.3	1.8	1.4	2.3
Linkwood, Md.	1.1	1.1	1.0	1.2	1.3	1.3
Painter, Va.	1.8	1.8	1.3	2.3	2.0	2.3
Warsaw, Va.	1.0	1.0	1.0	1.4	1.0	1.5
Plymouth, N. C.	3.0	3.0	2.0	3.0	3.0	3.0
			Upper and Central South			
Orange, Va.	1.3	1.3	2.3	2.3	2.3	3.0
Blairsville, Ga.	2.5	2.8	2.3	2.8	2.7	3.3
Trenton, Ill.	1.5	1.6	1.5	2.0	2.5	2.5
Eldorado, Ill.	1.3	1.5	1.2	1.9	1.6	2.2
Carbondale, Ill.	1.0	1.0	2.0	1.0	1.0	1.0
Princeton, Ky.	1.0	1.0	1.0	1.0	1.3	1.0
Lexington, Ky.	1.7	2.3	2.3	2.0	2.3	2.0
			Delta			
Miller City, Ill.	1.3	1.3	1.2	1.4	1.5	1.8
Henderson, Ky.	2.3	2.0	2.3	3.0	2.0	3.0
Portageville, Mo.(A)	1.8	1.8	1.5	1.8	2.2	1.7
Portageville, Mo.(B)	1.0	1.3	1.3	1.5	1.5	1.0
Martin, Tenn.	3.0	2.0	2.0	4.0	2.0	3.0
Keiser, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, Ark.	1.0	1.3	1.0	2.0	2.0	2.0
Stoneville, Miss.(b)	1.0	1.7	1.3	2.0	1.7	2.0
			West			
Manhattan, Kan.(A)	2.3	1.5	1.9	1.5	2.3	2.3
Manhattan, Kan.(B)	4.2	1.0	1.3	1.3	2.2	1.3
Mt. Vernon, Mo.	1.0	1.5	1.0	1.8	1.0	2.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Halfway, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 7. - Seed quality scores for the strains in Uniform Group IV, 1968

Location	Kent	Delmar	Custer	S63-3277	D65-2262	D66-4361
			East Coast			
Queenstown, Md.	3.0	3.0	3.0	3.0	2.0	2.0
Linkwood, Md.	3.0	3.0	3.0	3.0	2.0	2.0
Painter, Va.	3.3	2.2	3.3	2.7	2.0	1.8
Warsaw, Va.	3.0	1.9	2.2	2.0	1.6	2.8
Plymouth, N. C.	2.0	2.0	3.0	2.0	1.0	2.0
			Upper and Central South			
Orange, Va.	2.0	1.0	2.0	1.0	1.0	1.0
Blairsville, Ga.	4.0	3.0	4.0	3.5	2.5	3.5
Trenton, Ill.	2.0	2.0	2.5	2.3	1.3	2.0
Eldorado, Ill.	2.5	2.7	3.0	2.5	1.5	1.7
Carbondale, Ill.	2.0	2.0	2.0	3.0	2.0	1.0
Princeton, Ky.	3.0	3.0	4.0	2.3	3.3	2.0
Lexington, Ky.	2.0	2.0	2.0	2.0	2.0	2.0
			Delta			
Miller City, Ill.	2.5	1.8	3.0	2.7	1.8	1.8
Henderson, Ky.	2.0	2.5	2.1	2.0	2.1	1.7
Portageville, Mo.(A)	2.8	2.7	2.3	2.2	2.3	2.2
Portageville, Mo.(B)	3.0	3.7	3.0	3.2	2.7	3.0
Keiser, Ark.	4.3	4.2	4.0	3.3	2.5	3.0
Marianna, Ark.	4.0	4.0	4.0	3.7	1.8	3.5
Stoneville, Miss.(B)	2.7	2.7	3.0	3.0	2.0	2.3
			West			
Manhattan, Kan.(a)	1.5	1.4	1.7	1.7	1.2	1.2
Manhattan, Kan.(B)	1.6	1.6	2.0	1.4	1.2	1.7
Mt. Vernon, Mo.	3.2	3.0	3.0	2.3	2.0	1.8
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0

Table 7. - (continued)

Location	D66-4498	D66-4504	D66-4505	D66-4582	D66-4587	S65-15A
			East Coast			
Queenstown, Md.	2.0	3.0	2.0	2.0	3.0	3.0
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	3.0
Painter, Va.	2.0	2.3	2.2	3.0	2.3	3.0
Warsaw, Va.	1.8	1.9	1.8	1.9	1.9	2.2
Plymouth, N. C.	2.0	2.0	1.0	2.0	2.0	3.0
			Upper and Central South			
Orange, Va.	1.0	1.0	1.0	1.0	1.0	2.7
Blairsville, Ga.	3.5	3.0	3.5	3.0	3.0	4.0
Trenton, Ill.	1.3	1.3	1.5	1.7	1.2	2.5
Eldorado, Ill.	1.3	1.3	1.5	2.3	1.7	2.7
Carbondale, Ill.	1.0	2.0	2.0	2.0	2.0	3.0
Princeton, Ky.	1.7	2.0	2.0	2.7	2.3	3.3
Lexington, Ky.	2.0	2.0	2.0	2.0	2.0	2.0
			Delta			
Miller City, Ill.	1.7	2.2	1.7	2.2	2.0	2.5
Henderson, Ky.	1.5	2.0	1.3	2.1	2.0	2.0
Portageville, Mo.(A)	2.7	2.7	2.0	2.7	2.3	2.7
Portageville, Mo.(B)	3.0	3.0	3.0	3.0	3.2	3.7
Keiser, Ark.	2.3	2.7	3.2	2.8	3.0	4.3
Marianna, Ark.	2.8	3.2	3.0	3.5	2.5	4.0
Stoneville, Miss.(B)	2.3	2.0	2.0	2.0	2.0	3.3
			West			
Manhattan, Kan.(A)	1.2	1.3	1.2	1.2	1.2	1.5
Manhattan, Kan.(B)	1.4	1.5	1.7	1.3	1.4	1.8
Mt. Vernon, Mo.	1.7	1.8	1.8	2.5	1.8	2.5
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0

PRELIMINARY GROUP IV-S

1968

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

Differences among strains for seed yield were significant at the 5% level of confidence at each location. However, the combined analysis of variance showed the mean yield differences to be nonsignificant. Only two strains, D66-5566 and D66-4608, had mean yields above that for Kent. Twenty-one strains ranked above Custer in mean seed yields for the five locations. Although the seed quality score of Kent was better than usual, 16 strains ranked above Kent. Kent received a score of 5.0 for shattering and Custer a score of 3.8. Twenty-three strains received a score of 2.0 or lower.

Five strains produced seed significantly higher in protein content than Kent and 8 strains had significantly lower protein content.

Among the strains which appear to merit advancing to Uniform IV-S are: D66-4459, D66-4508, D66-5566, D66-5626, D66-5634, and Md62-2313. Two strains, UD65-7157 and UD65-9116, were too late maturing for this group. Several strains ranked well for seed yield but had low protein content, poor seed holding, or were highly susceptible to phytophthora rot.

Table 8. - Parentage of the strains in Preliminary Group IV-S, 1968

	Variety or strain	Parentage	Generation composited
1.	Kent	Lincoln x Ogden	F_7
2.	Custer	Scott with resistance to C.N. and P.R.	
3.	D66-4330	D53-354(2) x D54-2437	F_7
4.	D66-4358	D53-354(2) x D54-2437	F_7
5.	D66-4417	D53-354(2) x D54-2437	F_7
6.	D66-4454	D53-354(2) x D54-2437	F_7
7.	D66-4459	D53-354(2) x D54-2437	F_7
8.	D66-4499	D53-354(2) x D54-2437	F_7
9.	D66-4508	D53-354(2) x D54-2437	F_7
10.	D66-4518	D53-354(2) x D54-2437	F_7
11.	D66-4519	D53-354(2) x D54-2437	F_7
12.	D66-4547	D53-354(2) x D54-2437	F_7
13.	D66-4580	D53-354 x D54-2437	F_7
14.	D66-4603	D53-354 x D54-2437	F_7
15.	D66-4605	D53-354 x D54-2437	F_7
16.	D66-4606	D53-354 x D54-2437	F_7
17.	D66-4607	D53-354 x D54-2437	F_7
18.	D66-4608	D54-354 x D54-2437	F_7
19.	D66-5566	(subline of DA60-13-1) D49-2491(4) x Hawkeye	F_8
20.	D66-5580	DA60-13-1 x PI 171,450	F_5
21.	D66-5588	DA60-13-1 x PI 171,450	F_5
22.	D66-5595	DA60-13-1 x PI 171,450	F_5
23.	D66-5599	DA60-13-1 x PI 171,450	F_5
24.	D66-5626	DA60-13-1 x PI 171,340	F_5
25.	D66-5634	DA60-13-1 x PI 171,450	F_5
26.	D66-5636	DA60-13-1 x PI 171,450	F_5
27.	Md62-2313	Sel. from bulk population	
28.	Md62-3514	Sel. from bulk population	
29.	UD65-7157	Delmar x Kent	
30.	UD65-9103	Bethel x Kent	
31.	UD65-9114	Bethel x Kent	
32.	UD65-9116	Bethel x Kent	
33.	UD65-9138	Bethel x Kent	
34.	UD65-9147	Bethel x Kent	
35.	UD66-9677	Bethel x Kent	
36.	V66-318	D53-184 x J22	

Table 9. - General summary of performance for the strains grown in Preliminary Group IV-S, 1968

Strain	Seed yield	Maturity index	Ht.	Oil	Protein	Seed quality	Seed holding	P.R.	% mottled seed
Kent	34.7	9-19	36	23.1	38.9	2.1	5.0	2.0	1.5
Custer	30.0	0	42	23.4	36.0-	2.3	3.8	1.0	0.5
D66-4330	31.4	+2	37	22.1-	37.1-	1.8	2.5	1.0	0.5
D66-4358	30.6	+2	41	21.8-	38.5	2.1	1.0	1.0	0.0
D66-4417	29.7	0	37	22.2-	37.6	1.8	1.2	1.0	0.0
D66-4454	30.4	-2	37	22.2-	36.8-	2.0	1.5	1.0	1.0
D66-4459	31.6	0	40	21.5-	38.0	1.7	1.8	1.0	0.0
D66-4499	30.5	0	34	21.7-	38.4	1.9	5.0	1.0	0.0
D66-4508	33.2	0	35	22.3	38.8	2.0	1.5	1.0	0.0
D66-4518	32.1	+3	39	22.2-	37.9	2.0	2.9	1.0	0.0
D66-4519	33.0	+3	42	22.2-	37.7	2.0	2.5	1.0	0.0
D66-4547	30.4	+2	38	21.7-	37.9	1.9	1.8	1.0	0.0
D66-4580	30.9	+1	38	22.2-	37.9	1.8	2.0	1.0	0.0
D66-4603	32.8	+5	41	22.1-	36.8-	1.8	1.0	1.0	0.0
D66-4605	32.7	+5	42	22.5	36.0-	1.8	1.8	1.0	0.0
D66-4606	32.8	+3	43	22.6	35.9-	1.8	1.8	1.0	1.0
D66-4607	33.4	+7	42	22.0-	37.2-	2.2	1.0	1.0	0.5
D66-4608	34.9	+2	37	22.1-	37.3-	2.1	1.5	1.0	0.0
D66-5566	35.1	-2	22	22.2-	40.1	2.0	1.0	2.0	1.5
D66-5580	27.4	-6	26	18.0-	42.6+	2.0	4.2	1.0	1.0
D66-5588	27.1	-5	30	20.1-	39.2	2.2	4.5	1.0	2.0
D66-5595	29.8	-3	31	19.4-	39.3	1.9	2.5	1.0	3.0
D66-5599	27.6	-2	26	19.3-	40.4+	2.1	1.0	1.0	6.0
D66-5626	29.8	-2	26	19.2-	40.6+	2.2	1.5	1.0	11.0
D66-5634	29.8	-5	27	21.0-	40.4+	2.1	1.8	2.0	4.5
D66-5636	28.5	-4	29	20.1-	40.8+	2.1	1.8	1.0	2.5
Md62-2313	30.5	-4	32	23.5	38.7	2.5	1.5	2.0	10.0
Md62-3514	27.4	-2	30	22.8	38.9	2.3	3.8	5.0	0.0
UD65-7157	30.1	+12	42	23.1	37.4-	2.6	1.0	2.0	7.5
UD65-9103	30.1	+3	41	22.1-	38.5	2.6	3.5	2.0	1.0
UD65-9114	28.3	0	44	22.0-	40.7+	2.5	4.0	3.0	0.5
UD65-9116	32.6	+9	43	21.9-	40.0	2.7	1.2	1.0	1.0
UD65-9138	30.8	+4	46	21.9-	40.2	2.3	1.8	3.0	0.0
UD65-9147	27.0	+3	41	22.2-	39.0	2.7	2.2	3.0	0.0
UD66-9677	28.2	+12	49	21.8-	39.5	2.3	1.5	2.0	0.5
V66-318	28.9	-3	21	22.9	39.6	2.2	1.0	1.0	0.0
L.S.D.(.05)	N.S.			0.8	1.5				
L.S.D.(.01)	N.S.			1.1	2.0				

Table 10. - Seed yield, in bushels per acre, for the strains in Preliminary Group IV-S, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss.(B)	Lubbock, Texas
Kent	43.4	34.8	29.7	30.7	34.8
Custer	38.4	39.7	19.2-	30.8	21.8-
D66-4330	35.8-	31.1	23.6	35.1	31.4
D66-4358	33.8-	29.2-	25.8	33.7	30.8
D66-4417	32.1-	30.8	26.0	28.2	31.6
D66-4454	31.8-	34.2	25.7	35.0	25.0-
D66-4459	33.4-	33.9	24.9	32.7	33.0
D66-4499	35.8-	29.4	22.3	32.2	32.6
D66-4508	35.2-	35.2	26.8	38.4+	30.6
D66-4518	34.2-	31.7	28.4	33.4	32.9
D66-4519	35.1-	29.6	29.3	33.8	36.9
D66-4547	30.0-	31.4	25.8	34.8	30.3
D66-4580	35.3-	30.3	29.2	33.4	26.0-
D66-4603	36.9	30.8	27.3	34.2	34.9
D66-4605	39.6	31.8	28.0	32.6	31.6
D66-4606	37.8	28.5-	22.9	37.1	37.7
D66-4607	38.1	30.1	28.0	38.3+	32.2
D66-4608	40.9	32.6	29.2	31.3	40.5
D66-5566	42.0	37.7	26.3	27.6	41.8
D66-5580	33.6-	31.4	23.0	29.8	19.2-
D66-5588	28.6-	28.7-	23.0	25.6	29.5
D66-5595	33.6-	27.3-	26.7	30.3	30.9
D66-5599	28.4-	25.3-	22.3	29.1	32.8
D66-5626	30.4-	35.7	26.6	28.8	27.6
D66-5634	32.2-	34.6	23.6	28.6	29.9
D66-5636	29.5-	29.3-	25.3	30.0	28.3
Md62-2313	38.2	44.6+	22.4	23.3-	24.1
Md62-3514	42.9	31.9	25.6	11.5-	25.3
UD65-7157	34.8-	30.0	18.4-	31.9	35.1
UD65-9103	39.6	30.1	25.6	24.2-	30.8
UD65-9114	38.5	28.9-	24.1	23.3-	26.7-
UD65-9116	34.4-	30.9	24.4	37.6+	35.9
UD65-9138	32.5-	26.5-	25.1	31.2	38.6
UD65-9147	34.0-	27.7-	21.7	20.8-	31.0
UD66-9677	33.0-	24.7-	18.4-	31.8	32.9
V66-318	36.6	47.0+	18.0-	17.5-	25.6-
L.S.D.(.05)	6.8	5.5	10.1	6.5	7.6
C.V.	9%	9%	20%	11%	12%

Table 11. - Oil percentages for the strains in Preliminary Group IV-S, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss. (B)
Kent	23.4	21.4	23.3	24.2
Custer	22.2	22.4	24.3	24.8
D66-4330	21.7	20.5	22.6	23.4
D66-4358	21.4	20.5	21.9	23.4
D66-4417	21.6	20.9	22.9	23.4
D66-4454	22.3	19.7	23.5	23.4
D66-4459	21.9	19.4	21.4	23.3
D66-4499	21.6	19.8	22.2	23.2
D66-4508	22.3	20.5	22.3	23.9
D66-4518	21.6	19.8	23.1	24.3
D66-4519	22.6	19.7	22.1	24.3
D66-4547	21.5	20.7	21.2	23.4
D66-4580	22.1	20.1	22.9	23.7
D66-4603	22.3	20.5	22.4	23.3
D66-4605	22.6	20.4	22.6	24.5
D66-4606	21.6	20.7	23.6	24.5
D66-4607	21.6	20.5	22.1	23.6
D66-4608	21.9	20.9	21.8	23.9
D66-5566	21.8	20.2	23.0	23.9
D66-5580	17.3	17.1	18.7	18.8
D66-5588	19.9	19.2	20.6	20.5
D66-5595	19.3	18.4	19.7	20.2
D66-5599	19.0	17.7	20.5	20.1
D66-5626	19.0	17.7	20.3	19.9
D66-5634	20.4	20.5	21.9	21.0
D66-5636	19.1	19.2	20.9	21.1
Md62-2313	22.9	23.3	23.8	23.9
Md62-3514	22.9	22.3	22.9	23.1
UD65-7157	22.0	21.5	24.5	24.4
UD65-9103	21.8	20.9	22.6	22.9
UD65-9114	22.5	20.2	23.0	22.4
UD65-9116	21.5	20.6	22.4	22.9
UD65-9138	22.2	20.6	21.4	23.4
UD65-9147	22.7	19.9	23.1	23.1
UD66-9677	21.5	20.6	21.8	23.1
V66-318	21.8	21.8	24.1	23.8

Table 12. - Protein percentages for the strains in Preliminary Group IV-S, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss. (B)
Kent	37.9	40.1	39.7	38.0
Custer	35.8	37.7	35.8	34.7
D66-4330	38.5	39.3	34.7	35.7
D66-4358	39.2	40.3	38.2	36.2
D66-4417	37.8	38.9	37.4	36.4
D66-4454	36.7	39.1	35.6	35.9
D66-4459	37.1	40.5	38.2	36.3
D66-4499	38.4	39.4	38.3	37.3
D66-4508	39.1	39.8	38.9	37.5
D66-4518	38.9	40.4	37.0	35.3
D66-4519	38.3	40.5	36.4	35.4
D66-4547	37.2	40.2	37.7	36.5
D66-4580	38.1	39.2	37.6	36.6
D66-4603	37.2	38.9	36.5	34.5
D66-4605	37.0	37.5	35.5	33.8
D66-4606	37.8	37.9	34.1	33.7
D66-4607	38.4	38.2	37.7	34.5
D66-4608	38.0	39.0	36.4	35.9
D66-5566	40.5	42.0	38.4	39.4
D66-5580	43.7	42.7	40.6	43.2
D66-5588	40.8	39.8	38.0	38.1
D66-5595	40.1	39.5	37.5	40.0
D66-5599	41.1	41.2	39.1	40.1
D66-5626	41.1	42.2	38.9	40.1
D66-5634	41.8	40.4	38.7	40.5
D66-5636	41.8	41.8	39.6	39.9
Md62-2313	39.8	38.7	37.3	38.8
Md62-3514	38.8	39.4	37.5	39.8
UD65-7157	38.9	38.0	36.6	36.1
UD65-9103	39.9	40.3	34.4	39.5
UD65-9114	40.0	42.0	40.0	40.6
UD65-9116	40.4	41.0	40.8	37.9
UD65-9138	41.1	41.0	38.9	39.6
UD65-9147	38.8	41.2	37.5	38.3
UD66-9677	40.6	41.5	40.4	35.3
V66-318	40.0	40.6	38.8	39.0

Table 13. - Plant height for the strains in Preliminary Group IV-S, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss. (B)
Kent	41	37	32	35
Custer	48	42	35	42
D66-4330	42	36	31	38
D66-4358	46	42	34	41
D66-4417	40	39	32	38
D66-4454	38	37	32	41
D66-4459	42	42	34	41
D66-4499	39	34	26	35
D66-4508	37	34	30	39
D66-4518	41	42	33	41
D66-4519	45	40	37	44
D66-4547	41	38	33	38
D66-4580	40	38	35	37
D66-4603	44	44	36	40
D66-4605	47	42	39	41
D66-4606	48	42	40	42
D66-4607	46	42	38	43
D66-4608	42	36	34	36
D66-5566	28	24	19	18
D66-5580	32	26	23	22
D66-5588	38	30	29	23
D66-5595	39	32	25	26
D66-5599	34	26	23	22
D66-5626	32	26	23	21
D66-5634	32	27	27	23
D66-5636	34	31	27	22
Md62-2313	36	34	27	32
Md62-3514	38	33	25	24
UD65-7157	48	43	38	40
UD65-9103	48	42	38	37
UD65-9114	51	46	39	39
UD65-9116	50	44	39	39
UD65-9138	48	46	46	45
UD65-9147	50	45	34	35
UD66-9677	57	48	46	44
V66-318	26	27	19	13

Table 14. - Seed quality scores for the strains in Preliminary Group IV-S, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Portageville, Mo.	Stoneville, Miss. (B)
Kent	1.4	2.2	2.3	2.5
Custer	2.0	1.8	3.0	2.5
D66-4330	1.2	1.8	2.3	2.0
D66-4358	1.6	1.8	3.0	2.0
D66-4417	1.4	1.9	1.8	2.0
D66-4454	1.5	1.5	3.0	2.0
D66-4459	1.5	1.5	1.8	2.0
D66-4499	1.2	1.6	2.8	2.0
D66-4508	1.1	1.8	3.0	2.0
D66-4518	1.5	1.8	2.8	2.0
D66-4519	1.6	1.9	2.5	2.0
D66-4547	1.5	1.7	2.3	2.0
D66-4580	1.1	1.7	2.5	2.0
D66-4603	1.2	1.1	2.8	2.0
D66-4605	1.8	1.4	2.0	2.0
D66-4606	1.9	1.1	2.3	2.0
D66-4607	3.0	1.9	2.3	1.5
D66-4608	2.0	1.4	2.3	2.5
D66-5566	2.0	1.8	2.0	2.0
D66-5580	2.0	1.6	2.3	2.0
D66-5588	2.0	1.6	3.3	2.0
D66-5595	2.0	1.4	2.3	2.0
D66-5599	2.0	1.5	2.8	2.0
D66-5626	2.0	1.8	2.8	2.0
D66-5634	2.0	1.7	2.5	2.0
D66-5636	2.0	1.7	2.5	2.0
Md62-2313	3.0	1.9	3.0	2.0
Md62-3514	2.0	1.7	2.5	3.0
UD65-7157	2.0	3.0	3.5	2.0
UD65-9103	3.0	1.9	2.5	3.0
UD65-9114	2.0	1.9	3.0	3.0
UD65-9116	3.0	2.3	3.3	2.0
UD65-9138	3.0	2.0	1.8	2.5
UD65-9147	3.0	2.0	2.8	3.0
UD66-9677	2.0	2.5	2.5	2.0
V66-318	2.0	1.3	2.5	3.0

UNIFORM GROUP V

1968

	Variety or strain	Parentage	Generation composited
1.	Hill	D632-15 x D49-2525	F_5
2.	Dare	Hill x D52-810	F_5
3.	York	Dorman x Hood	F_7
4.	Dyer	Hill x [Lee(2) x Peking]	F_6
5.	D64-4731	Lee(2) x [Clark(2) x T109]	F_5
6.	N63-2769	Hill x D52-810, Subline N59-6958	F_6
7.	R64-14	(R54-168 x Hill) x (Lee x Dortchsoy 110)	F_6
8.	D64-3253	D49-2491(5) x Hawkeye	F_4
9.	D65-2567	Hill(2) x PI 196,177	F_5
10.	D65-3097	Hill(4) x PI 171,442	F_6
11.	D66-12,392	D63-6100 x Dyer	F_5
12.	R65-113	Hill x R59-200	F_5

Background of strains used as parents:

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

D49-2525 is a sister strain to Lee.

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

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

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

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

PI 196,177 is a small-seeded introduction from Korea.

PI 171,442 is an introduction from China used as a source of resistance to phytophthora rot.

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

R59-200 is a late off-type plant selected from Lee.

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

Seed yield differences among strains were significant at the 5% level of confidence at 22 of the 29 locations. The combined analysis of variance for mean seed yields by production regions showed differences to be significant at the 5% level of confidence in all regions except the West.

Three-year mean seed yields show Dare and York to have higher average yields in all production regions than Hill. Both are approximately 10 days later in maturity than Hill. Dyer has a 3-year mean yield equal to Hill in the East but is lower in other regions. Dyer is also more likely to shatter. Although Dyer does average lower than Hill, Dare, or York in the absence of cyst nematode injury, it does give good production where cyst nematodes are a problem.

As in 1967, York was free of seed coat mottling at Halfway, Texas, where other strains showed as much as 89% mottling.

Three strains have been included in this group two years. The narrow-leaf type, D64-4731, has yielded well in all regions. It stands very well under conditions where Hill lodges. D64-4731 is moderately susceptible to phytophthora rot. N63-2769 yields slightly better than Dare and is slightly later. It showed a higher percentage seed coat mottling than Dare in both years. R64-14 has also yielded very well in all areas. Its maturity is midway between Hill and Dare.

Five strains have been included one year. D64-3253, a Lee type converted to earlier maturity, yielded well in all areas. Like R64-14, its maturity is midway between Hill and Dare. It yielded slightly above Dare in the East and Upper and Central regions and was equal to Dare in the Delta and West. D65-2467 was the top yielding strain in the 1967 Preliminary Group V nurseries, but in these plantings was no better than Hill. D66-3097 averaged later in maturity than Dare and also lower in seed yield in all regions except the West. R65-113 was similar to Hill in maturity but showed no superiority in seed yield. The strain D66-12,392 averaged 2 days later in maturity than Hill and was nearly similar in productivity. D66-12,392 carries resistance to phytophthora rot, cyst nematodes, and root knot nematodes. It is slightly weaker in seed holding than Hill, but in most qualities appears to be very similar to Hill. It is superior to Dyer in seed holding and combines resistance to phytophthora rot with resistance to cyst and root knot nematodes.

Table 15. - General summary of performance for the strains in Uniform Group V, 1968

	Hill	Dare	York	Dyer	D64-4731	N63-2769
Seed Yield - 1968						
East Coast	34.5	37.8+	40.6+	37.5	41.9+	37.6+
Upper & Central South	41.7	42.9	46.1+	33.5-	43.2	44.7
Delta	34.9	38.1	38.2+	32.5	36.8	39.7+
West	37.4	37.1	40.2	35.2	37.2	39.6
- 1967-68						
East Coast	34.4	37.0	39.8	36.2	39.5	37.5
Upper & Central South	40.1	41.7	44.4	34.8	42.7	43.6
Delta	37.1	41.1	41.1	35.5	39.8	42.1
West	39.8	40.6	42.5	37.3	39.7	43.5
- 1966-68						
East Coast	33.2	36.0	38.1	34.4		
Upper & Central South	38.1	40.0	42.4	34.2		
Delta	37.5	41.0	40.8	35.7		
West	38.8	40.2	41.4	36.2		
Oil Content - 1968	21.7	22.8+	21.6	21.1-	20.9-	22.1
- 1967-68	21.3	22.3	21.1	20.9	21.0	21.6
- 1966-68	21.2	22.1	20.9	20.7		
Protein Content - 1968	37.6	37.2	37.7	38.3+	38.8+	38.3+
- 1967-68	38.4	38.7	38.6	39.1	39.6	39.4
- 1966-68	38.5	38.6	38.6	39.2		
Seed size	11.8	12.9+	17.3+	15.1+	11.6	14.7+
Seed quality	2.0	1.6	1.9	1.9	1.8	1.7
Maturity index	9-29	+11	+9	+6	+7	+12
Height	35	35	33	29	28	36
Bacterial pustule	1.0	1.0	2.5	1.0	1.0	1.0
Phytophthora rot	1.0	1.0	2.0	3.0	3.0	2.0
Seed coat mottling (%)[1/]	49.0	13.0	0.0	28.0	29.0	49.0
Shattering	1.1	1.1	1.3	2.3	1.1	1.1
Flower color	W	W	P	P	P	W
Pubescence color	T	G	G	T	T	G
Pod wall color	T	Br	T	T	T	Br

1/ Halfway, Texas, data

Table 15. - (continued)

	R64-14	D64-3253	D65-2567	D65-3097	D66-12,392	R65-113
Seed Yield - 1968						
East Coast	39.7+	38.8+	34.0	35.0	36.1	34.5
Upper & Central South	44.4	43.9	40.8	41.1	40.4	41.6
Delta	40.3+	37.6	34.7	34.9	34.5	34.2
West	39.4	37.1	35.0	37.2	35.9	33.5
- 1967-68						
East Coast	40.0					
Upper & Central South	42.0					
Delta	41.3					
West	42.8					
- 1966-68						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1968	22.3+	21.8	21.5	21.6	22.0	22.2+
- 1967-68	21.7					
- 1966-68						
Protein Content - 1968	38.8+	39.8+	38.4+	38.1	37.5	38.1
- 1967-68	39.7					
- 1966-68						
Seed size	13.0+	13.2+	11.7	11.9	12.9+	11.8
Seed quality	1.9	1.8	1.9	1.8	2.1	1.9
Maturity index	+5	+5	0	+13	+2	0
Height	38	33	35	35	32	36
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	1.0	1.0	1.0	1.0	1.0	1.0
Seed coat mottling (%)[1/]	18.0	35.0	89.0	59.0	54.0	15.0
Shattering	1.0	1.2	1.0	1.0	1.5	1.2
Flower color	W	P	W	W	W	P
Pubescence color	T	T	T	T	T	T
Pod wall color	T	T	T	T	T	T

Table 16. - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1968

Location	Hill	Dare	York	Dyer	D64-4731	N63-2769	R64-14
			East Coast				
Queenstown, Md.	25.9	27.8	33.4	34.8+	35.6+	24.8	25.1
Linkwood, Md.	39.0	39.8	42.0	40.8	43.4	37.6	42.6
Painter, Va.	46.9	41.8	51.8	45.3	51.7	42.9	49.8
Warsaw, Va.	31.2	34.3+	37.8+	33.7	34.6+	37.8+	37.9+
Petersburg, Va.	19.7	21.8	20.7	23.5	25.1+	26.1+	24.9+
Holland, Va.	32.9	43.4+	35.9	38.8	46.7+	40.7	40.7
Plymouth, N. C.	45.7	55.8+	62.9+	45.3	56.1+	53.0	56.4+
Mean	34.5	37.8+	40.6+	37.5	41.9+	37.6+	39.7+
			Upper and Central South				
Orange, Va.	40.7	37.7	46.0	36.2	41.5	36.4	40.3
Blairsville, Ga.	58.0	52.2	54.9	42.9-	56.0	49.6-	56.7
Belle Mina, Ala.	31.6	37.5+	33.7	26.1-	37.1+	39.9+	35.4
Experiment, Ga.	41.0	48.2	51.3+	33.4-	39.2	50.8+	48.8+
Princeton, Ky.	33.8	37.6+	38.3+	30.0-	34.9	38.9+	36.6
Martin, Tenn.	44.9	44.2	52.3	32.3-	50.4	52.3	48.3
Mean	41.7	42.9	46.1+	33.5-	43.2	44.7	44.4
			Delta				
Miller City, Ill.	34.9	33.6	40.0	45.9	36.4	42.5	42.4
Henderson, Ky.	30.9	34.0	33.2	31.5	31.0	30.5	30.3
Hickman, Ky.	34.2	43.8+	40.0+	33.3	36.0	41.3+	36.6
Portageville, Mo.(A)	46.1	49.9	51.1	47.9	45.6	54.2+	54.0+
Portageville, Mo.(B)	27.6	24.5	25.8	17.8-	24.4	31.9	30.3
Keiser, Ark.	22.8	26.6	23.5	22.7	21.3	26.1	25.4
Marianna, Ark.	34.3	35.7	33.0	28.6	33.2	33.4	35.8
Stoneville, Miss.(A)	34.9	35.5	36.9	32.8	44.0+	38.5	38.7
Stoneville, Miss.(B)	33.9	40.9+	42.2+	26.3-	35.5	42.6+	45.4+
St. Joseph, La.	49.7	56.9+	56.5	38.1-	60.9+	56.5	64.4+
Mean	34.9	38.1	38.2+	32.5	36.8	39.7+	40.3+
			West				
Mt. Vernon, Mo.	27.3	27.7	30.5	28.0	28.7	34.1+	26.9
Stuttgart, Ark.	37.8	41.4	39.2	27.1-	37.9	45.0+	42.0+
Curtis, La.*	35.2	26.6	27.2	19.5	37.1	37.4	33.8
Bixby, Okla.	38.6	39.8	41.0	37.4	38.6	44.2+	36.7
Halfway, Texas	49.1	44.5	49.0	45.1	42.7	40.8	46.4
Lubbock, Texas	33.8	31.9	41.4	39.2	37.7	33.2	40.2
Mean	37.4	37.1	40.2	35.2	37.2	39.6	39.4

(+) - 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	D64-3253	D65-2567	D65-3097	D66-12,392	R65-113	L.S.D. (.05)	C.V.
			East Coast				
Queenstown, Md.	30.3	28.0	24.3	28.7	31.0	8.6	14%
Linlwood, Md.	39.2	36.7	34.3	40.0	41.9	N.S.	8%
Painter, Va.	50.1	44.4	41.0	42.9	46.7	6.6	8%
Warsaw, Va.	35.1+	31.3	32.5	32.6	28.7	2.8	5%
Petersburg, Va.	19.8	19.5	25.1+	18.8	17.7	4.6	12%
Holland, Va.	41.2+	31.9	36.4	38.5	29.0	8.3	13%
Plymouth, N. C.	56.1+	46.0	51.8	50.9	46.4	7.5	9%
Mean	38.8+	34.0	35.0	36.1	34.5	3.1	
			Upper and Central South				
Orange, Va.	42.0	41.0	32.2-	39.2	41.3	5.5	8%
Blairsville, Ga.	54.0	52.8	48.8-	56.6	49.6-	7.8	9%
Belle Mina, Ala.	35.8	30.5	38.0+	31.6	33.8	5.2	9%
Experiment, Ga.	45.8	47.2	46.1	43.8	46.0	7.4	10%
Princeton, Ky.	33.0	30.2-	38.2+	33.4	30.0-	3.4	6%
Martin, Tenn.	52.8	43.2	43.3	38.0	49.0	9.5	12%
Mean	43.9	40.8	41.1	40.4	41.6	4.1	
			Delta				
Miller City, Ill.	30.3	35.1	38.6	40.3	31.8	N.S.	15%
Henderson, Ky.	30.9	29.4	26.9	30.7	32.4	N.S.	14%
Hickman, Ky.	40.9+	32.7	31.9	33.9	33.9	5.0	8%
Portageville, Mo.(A)	52.0	48.1	44.1	42.6	47.5	6.3	8%
Portageville, Mo.(B)	21.8	26.6	30.0	16.8-	20.5	7.3	17%
Keiser, Ark.	24.8	23.0	28.2	23.9	21.9	N.S.	15%
Marianna, Ark.	33.4	32.0	31.5	33.8	32.6	N.S.	8%
Stoneville, Miss.(A)	42.5+	33.3	31.5	33.3	33.6	7.4	12%
Stoneville, Miss.(B)	40.3	36.3	41.3+	41.9+	36.9	7.0	11%
St. Joseph, La.	58.9+	50.7	44.6	47.4	51.1	7.1	8%
Mean	37.6	34.7	34.9	34.5	34.2	3.3	
			West				
Mt. Vernon, Mo.	29.7	26.4	28.0	26.5	24.9	5.6	13%
Stuttgart, Ark.	43.4+	38.2	40.9	40.0	36.1	4.2	6%
Curtis, La.*	30.4	27.7	28.1	23.8	28.4	N.S.	34%
Bixby, Okla.	39.5	33.1-	37.1	38.8	36.3	5.1	8%
Halfway, Texas	40.9	43.7	44.0	43.7	38.4	N.S.	11%
Lubbock, Texas	31.6	33.6	35.4	30.6	30.5	7.3	12%
Mean	37.1	35.0	37.2	35.9	33.5	N.S.	

*Not included in mean.

Table 17. - Chemical composition and seed size for the strains in Uniform Group V, 1968

Location	Hill	Dare	York	Dyer	D64-4731	N63-2769	R64-14
			Oil Percentage				
Linkwood, Md.	21.5	22.5	20.8	19.7	20.7	22.6	22.6
Warsaw, Va.	20.9	22.5	20.9	20.6	19.5	22.3	22.4
Plymouth, N.C.	22.8	23.6	22.7	22.3	21.0	22.9	22.9
Miller City, Ill.	20.8	22.0	20.8	21.4	20.1	21.7	21.1
Henderson, Ky.	20.8	21.6	20.9	21.4	20.3	21.3	20.7
Portageville,Mo.(A)	23.1	23.1	22.5	22.5	22.0	22.7	22.8
Keiser, Ark.	22.6	24.7	22.7	22.3	22.8	21.7	23.9
Stoneville, Miss.(B)	22.1	23.7	22.4	20.9	21.4	23.3	23.3
Stuttgart, Ark.	22.0	22.6	22.7	20.6	20.6	22.2	22.2
Halfway, Texas	20.8	21.2	19.6	19.3	20.6	20.6	21.1
Mean	21.7	22.8+	21.6	21.1-	20.9-	22.1	22.3+
			Protein Percentage				
Linkwood, Md.	37.1	37.9	38.2	38.2	39.9	37.7	38.9
Warsaw, Va.	37.3	37.6	37.4	37.4	39.4	36.7	37.9
Plymouth, N.C.	38.6	36.1	39.8	40.4	40.0	38.9	39.3
Miller City, Ill.	38.5	38.8	39.2	37.9	39.1	38.7	39.9
Henderson, Ky.	38.8	39.1	39.0	36.9	39.2	39.9	39.6
Portageville, Mo.(A)	36.1	36.6	33.6	38.2	37.5	37.4	37.5
Keiser, Ark.	32.7	31.5	34.1	34.0	33.2	36.0	33.8
Stoneville, Miss.(B)	38.5	36.3	36.6	39.7	38.2	37.2	38.0
Stuttgart, Ark.	41.2	39.6	40.0	42.1	42.8	40.9	43.6
Halfway, Texas	37.2	38.7	38.9	38.2	38.5	39.3	39.4
Mean	37.6	37.2	37.7	38.3	38.8+	38.3	38.8+
			Grams per 100 Seeds				
Linkwood, Md.	14.0	15.4	18.7	16.1	13.7	16.2	15.0
Warsaw, Va.	10.4	11.7	15.0	13.6	9.5	13.6	11.9
Plymouth, N.C.	11.1	12.8	17.1	15.4	11.0	14.6	12.0
Miller City, Ill.	11.2	11.6	16.0	13.6	10.9	14.0	12.2
Henderson, Ky.	12.4	14.2	18.6	14.8	11.9	15.0	14.1
Portageville, Mo.(A)	11.0	11.7	17.0	15.0	10.7	14.0	12.0
Keiser, Ark.	10.3	11.7	15.7	13.0	10.0	15.0	12.3
Stoneville, Miss.(B)	11.4	12.6	17.1	15.9	12.1	14.2	12.5
Stuttgart, Ark.	13.0	13.3	18.7	17.7	12.7	16.0	13.7
Halfway, Texas	13.0	14.0	19.0	16.0	13.0	14.0	14.0
Mean	11.8	12.9+	17.3+	15.1+	11.6	14.7+	13.0+

Table 17. - (continued)

Location	D64-3253	D65-2567	D65-3097	D66-12,392	R65-113	L.S.D. (.05)
			Oil Percentage			
Linkwood, Md.	21.3	21.3	21.6	21.6	22.1	
Warsaw, Va.	20.7	21.6	20.5	21.8	21.8	
Plymouth, N.C.	22.2	22.6	22.3	22.4	22.4	
Miller City, Ill.	21.1	20.7	21.1	21.2	21.2	
Henderson, Ky.	21.1	20.2	21.0	22.1	21.7	
Portageville, Mo.(A)	22.8	22.0	22.6	22.9	22.9	
Keiser, Ark.	23.3	22.5	22.7	22.7	22.7	
Stoneville, Miss.(B)	22.7	21.4	21.2	22.1	23.7	
Stuttgart, Ark.	21.9	22.0	21.8	21.9	22.5	
Halfway, Texas	21.1	20.6	21.1	20.9	20.6	
Mean	21.8	21.5	21.6	22.0	22.2+	0.5
			Protein Percentage			
Linkwood, Md.	39.8	38.2	38.9	37.4	38.8	
Warsaw, Va.	39.4	39.4	38.4	36.3	36.0	
Plymouth, N.C.	41.6	39.4	38.5	39.4	39.2	
Miller City, Ill.	40.1	38.9	38.0	37.4	38.7	
Henderson, Ky.	42.0	39.4	38.4	37.9	39.0	
Portageville, Mo.(A)	38.6	37.3	37.4	38.3	37.3	
Keiser, Ark.	34.7	34.3	34.2	32.7	35.2	
Stoneville, Miss.(B)	39.3	38.5	37.9	38.1	36.7	
Stuttgart, Ark.	42.7	40.6	40.4	40.0	40.9	
Halfway, Texas	40.2	38.4	38.6	37.4	39.0	
Mean	39.8+	38.4+	38.1	37.5	38.1	0.8
			Grams per 100 Seeds			
Linkwood, Md.	15.2	13.8	14.3	15.1	14.7	
Warsaw, Va.	12.5	10.3	10.8	11.6	9.6	
Plymouth, N.C.	14.1	11.5	11.6	12.8	11.8	
Miller City, Ill.	12.3	11.1	10.6	12.0	10.6	
Henderson, Ky.	13.6	12.3	10.7	13.6	12.6	
Portageville, Mo.(A)	12.0	11.3	12.0	12.0	10.7	
Keiser, Ark.	11.3	10.0	11.7	10.7	10.3	
Stoneville, Miss.(B)	13.0	11.0	11.5	13.0	12.9	
Stuttgart, Ark.	14.3	12.7	12.0	13.7	12.0	
Halfway, Texas	14.0	13.0	14.0	14.0	13.0	
Mean	13.2+	11.7	11.9	12.9+	11.8	0.5

Table 18. - Relative maturity, days earlier (-) or later (+) than Hill, for the strains in Uniform Group V, 1968

Location	Date planted	Hill matured	Dare	York	Dyer	D64-4731	N63-2769
			East Coast				
Queenstown, Md.	5-22	10-5	+8	+5	+2	+6	+11
Linkwood, Md.	5-21	10-4	+11	+12	+5	+5	+11
Painter, Va.	6-5	10-7	+11	+13	+2	+7	+11
Warsaw, Va.	5-23	9-27	+10	+8	+6	+5	+12
Petersburg, Va.	5-23	9-28	+14	+6	+1	+5	+16
Holland, Va.	5-24	9-30	+15	+21	+9	+8	+19
Plymouth, N.C.	5-14	9-26	+10	+10	+10	+8	+10
Mean		10-1	+11	+11	+5	+6	+13
			Upper and Central South				
Blairsville, Ga.	5-29	10-17	+3	+3	+3	+3	+6
Belle Mina, Ala.	5-22	9-25	+21	+22	+21	+20	+21
Experiment, Ga.	5-23	9-15	+9	+9	+5	+3	+9
Princeton, Ky.	5-22	9-30	+10	+2	-3	0	+13
Mean		9-29	+11	+9	+7	+7	+12
			Delta				
Miller City, Ill.	5-29	10-1	+16	+11	+3	+8	+17
Henderson, Ky.	5-21	10-12	+8	+3	+8	0	+13
Portageville, Mo.(A)	5-8	10-1	+4	+4	+2	+5	+7
Portageville, Mo.(B)	5-25	10-1	+9	+8	+1	+5	+16
Marianna, Ark.	5-28	9-30	+9	+9	+11	+4	+13
Stoneville, Miss.(A)	5-8	9-15	+10	+5	+5	+10	+9
Stoneville, Miss.(B)	5-30	9-26	+7	+8	+7	+6	+8
St. Joseph, La.	5-9	9-13	+9	+10	+10	+11	+11
Mean		9-27	+9	+7	+6	+6	+12
			West				
Stuttgart, Ark.	5-27	9-27	+11	+13	+12	+6	+11
Curtis, La.	5-30	9-21	+14	+17	+5	+16	+12
Bixby, Okla.	5-17	10-4	+13	+16	+16	+13	+13
Mean		9-28	+13	+15	+11	+12	+12

Table 18. - (continued)

Location	D64-14	D64-3253	D65-2567	D65-3097	D66-12,392	R65-113
			East Coast			
Queenstown, Md.	+6	+4	+1	+8	+1	-5
Linkwood, Md.	+4	+2	+2	+11	+2	-3
Painter, Va.	+6	+3	+1	+11	0	-1
Warsaw, Va.	+8	+4	+2	+15	+2	+1
Petersburg, Va.	+7	+6	+1	+16	-3	-3
Holland, Va.	0	+4	0	+13	+1	0
Plymouth, N.C.	+8	+8	-2	+8	+8	-2
Mean	+6	+4	0	+12	+2	-2
			Upper and Central South			
Blairsville, Ga.	+2	+2	0	0	+3	-1
Belle Mina, Ala.	+6	+21	-1	+19	0	0
Experiment, Ga.	+2	+5	0	+15	+1	0
Princeton, Ky.	+1	0	0	+16	0	-1
Mean	+3	+7	0	+13	+1	0
			Delta			
Miller City, Ill.	+12	+6	0	+17	-1	-4
Henderson, Ky.	+8	+13	+3	+13	+3	+3
Portageville, Mo.(A)	+2	+2	0	+13	0	0
Portageville, Mo.(B)	+5	+3	0	+15	+2	0
Marianna, Ark.	+7	0	0	+14	0	-5
Stoneville, Miss.(A)	+8	+8	+1	+15	0	-2
Stoneville, Miss.(B)	+2	+4	0	+11	+1	-2
St. Joseph, La.	+11	+10	0	+10	+1	0
Mean	+7	+6	0	+14	0	-1
			West			
Stuttgart, Ark.	+1	+8	+3	+12	+1	-1
Curtis, La.	+7	+7	+4	+16	+5	+7
Bixby, Okla.	+7	+1	+4	+14	+8	+3
Mean	+5	+5	+4	+14	+5	+3

Table 19. - Plant height data for the strains in Uniform Group V, 1968

Location	Hill	Dare	York	Dyer	D64-4731	N63-2769
			East Coast			
Queenstown, Md.	38	37	40	27	30	38
Linkwood, Md.	40	40	40	34	32	40
Painter, Va.	40	38	36	32	31	40
Warsaw, Va.	34	35	34	29	26	37
Petersburg, Va.	36	38	37	27	28	34
Holland, Va.	32	36	30	28	27	36
Plymouth, N. C.	38	39	37	33	29	39
Mean	37	38	36	30	29	38
			Upper and Central South			
Orange, Va.	45	46	47	40	39	45
Blairsville, Ga.	39	37	39	35	35	37
Belle Mina, Ala.	38	39	34	26	29	38
Experiment, Ga.	36	37	35	30	29	35
Princeton, Ky.	39	39	37	29	30	39
Martin, Tenn.	38	36	39	35	34	39
Mean	39	39	39	33	33	39
			Delta			
Miller City, Ill.	33	28	29	27	23	31
Henderson, Ky.	35	37	37	30	27	39
Hickman, Ky.	37	38	36	28	30	38
Portageville, Mo.(A)	25	25	23	17	18	32
Portageville, Mo.(B)	31	34	29	27	25	31
Keiser, Ark.	31	33	31	26	27	31
Marianna, Ark.	36	42	37	31	27	42
Stoneville, Miss.(A)	35	36	31	27	29	37
Stoneville, Miss.(B)	32	31	27	31	23	31
St. Joseph, La.	35	36	28	26	28	35
Mean	33	34	31	27	26	35
			West			
Mt. Vernon, Mo.	34	38	34	28	28	37
Stuttgart, Ark.	29	28	20	23	19	31
Curtis, La.	27	19	24	20	18	26
Bixby, Okla.	33	37	36	29	28	36
Halfway, Texas	28	28	28	26	24	28
Mean	30	30	28	25	24	32

Table 19. - (continued)

Location	R64-14	D64-3253	D65-2567	D65-3097	D66-12,392	R65-113
			East Coast			
Queenstown, Md.	42	39	40	40	34	41
Linkwood, Md.	44	38	39	39	36	40
Painter, Va.	45	34	41	38	33	41
Warsaw, Va.	37	33	33	36	30	35
Petersburg, Va.	40	32	35	39	34	36
Holland, Va.	36	33	35	34	31	35
Plymouth, N.C.	41	37	36	39	35	38
Mean	41	35	37	38	33	38
			Upper and Central South			
Orange, Va.	52	44	45	43	41	50
Blairsville, Ga.	37	38	40	49	37	40
Belle Mina, Ala.	37	36	37	37	35	40
Experiment, Ga.	39	35	36	35	34	37
Princeton, Ky.	40	37	38	37	36	41
Martin, Tenn.	44	37	36	37	37	39
Mean	42	38	39	38	37	41
			Delta			
Miller City Ill.	34	24	33	35	35	32
Henderson, Ky.	40	33	38	38	34	34
Hickman, Ky.	42	34	37	38	34	39
Portageville, Mo.(A)	30	25	26	28	22	26
Portageville, Mo.(B)	32	30	32	32	28	32
Keiser, Ark.	37	29	32	31	29	32
Marianna, Ark.	43	35	38	38	34	43
Stoneville, Miss.(A)	39	33	35	35	32	37
Stoneville, Miss.(B)	36	27	32	31	29	33
St. Joseph, La.	39	33	36	33	32	36
Mean	37	30	34	34	31	34
			West			
Mt. Vernon, Mo.	36	33	33	36	30	33
Stuttgart, Ark.	31	24	28	30	25	27
Curtis, La.	28	22	26	26	22	27
Bixby, Okla.	37	35	34	37	32	37
Halfway, Texas	32	26	30	30	26	28
Mean	33	28	30	32	27	30

Table 20. - Lodging scores for the strains in Uniform Group V, 1968

Location	Hill	Dare	York	Dyer	D64-4731	N63-2769
			East Coast			
Queenstown, Md.	2.3	3.0	1.6	1.7	1.3	2.1
Linkwood, Md.	3.0	1.9	1.2	1.3	1.3	1.6
Painter, Va.	3.8	2.8	2.8	3.5	2.3	3.5
Warsaw, Va.	1.3	1.2	1.0	1.0	1.0	1.1
Petersburg, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Holland, Va.	5.0	3.3	2.3	2.3	1.7	2.0
Plymouth, N. C.	3.0	3.0	3.0	2.0	1.0	3.0
			Upper and Central South			
Orange, Va.	4.3	5.0	2.7	4.3	2.0	3.7
Blairsville, Ga.	3.8	3.0	1.5	3.0	2.3	3.2
Belle Mina, Ala.	2.3	2.0	1.3	3.0	1.0	1.3
Experiment, Ga.	2.0	1.0	1.0	1.0	1.0	1.7
Princeton, Ky.	1.3	1.7	1.0	1.0	1.0	1.0
Martin, Tenn.	5.0	3.0	4.0	4.0	3.0	4.0
			Delta			
Miller City, Ill.	2.0	1.7	1.3	2.0	1.3	1.4
Henderson, Ky.	3.0	3.0	1.3	1.3	1.7	2.3
Hickman, Ky.	1.3	1.0	1.0	1.0	1.0	1.0
Portageville, Mo.(A)	2.7	2.3	1.8	2.0	1.2	2.0
Portageville, Mo.(B)	2.5	1.7	1.8	1.7	1.8	1.8
Keiser, Ark.	1.5	1.5	1.0	2.0	1.2	1.2
Marianna, Ark.	3.0	2.0	2.0	2.0	1.0	2.0
Stoneville, Miss.(A)	3.3	3.0	2.0	2.7	2.0	3.0
Stoneville, Miss.(B)	3.0	3.0	2.0	2.7	2.0	2.7
St. Joseph, La.	5.0	4.0	3.0	3.0	3.0	4.0
			West			
Mt. Vernon, Mo.	2.5	2.8	1.8	1.8	1.3	2.3
Stuttgart, Ark.	2.0	3.0	1.0	1.0	1.0	1.7
Curtis, La.	2.0	1.3	1.3	1.7	1.7	1.7
Bixby, Okla.	1.0	2.0	1.0	1.0	1.0	1.0
Halfway, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 20. - (continued)

Location	R64-14	D64-3253	D65-2567	D65-3097	D66-12,392	R65-113
			East Coast			
Queenstown, Md.	2.7	1.9	2.9	2.9	2.6	1.8
Linkwood, Md.	2.9	1.8	3.1	2.8	3.1	2.6
Painter, Va.	4.2	3.7	4.7	4.5	3.8	3.5
Warsaw, Va.	1.7	1.3	1.8	1.1	1.2	1.2
Petersburg, Va.	1.0	2.0	2.0	2.0	1.0	1.0
Holland, Va.	3.7	3.3	4.0	4.3	3.3	4.3
Plymouth, N.C.	3.0	4.0	4.0	3.0	3.0	3.0
			Upper and Central South			
Orange, Va.	4.0	3.0	4.7	5.0	4.0	5.0
Blairsville, Ga.	3.7	2.0	4.3	4.2	3.7	3.8
Belle Mina, Ala.	1.7	2.0	2.0	2.0	3.0	2.0
Experiment, Ga.	2.0	1.7	2.0	2.0	2.3	1.7
Princeton, Ky.	1.3	1.0	1.3	2.0	3.3	1.0
Martin, Tenn.	5.0	3.0	4.0	5.0	5.0	3.0
			Delta			
Miller City, Ill.	2.1	1.7	2.4	2.3	4.0	1.9
Henderson, Ky.	3.7	1.3	3.3	3.7	3.7	2.3
Hickman, Ky.	1.0	1.3	1.0	2.3	1.0	1.0
Portageville, Mo.(A)	2.8	2.3	3.0	2.7	1.7	1.7
Portageville, Mo.(B)	2.2	2.0	2.8	3.0	2.0	2.0
Keiser, Ark.	1.8	1.7	2.0	2.0	1.5	1.5
Marianna, Ark.	2.0	3.0	3.0	3.0	3.3	3.0
Stoneville, Miss.(A)	4.0	2.7	4.3	3.3	3.0	4.0
Stoneville, Miss.(B)	3.0	3.0	3.0	3.0	3.0	3.3
St. Joseph, La.	4.0	4.0	5.0	4.0	4.0	5.0
			West			
Mt. Vernon, Mo.	2.8	2.3	2.8	3.0	3.3	2.5
Stuttgart, Ark.	2.0	2.0	2.3	3.7	2.0	2.0
Curtis, La.	2.3	1.7	3.0	2.3	1.3	2.0
Bixby, Okla.	2.0	1.0	3.0	2.0	1.0	2.0
Halfway, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 21. - Seed quality scores for the strains in Uniform Group V, 1968

Location	Hill	Dare	York	Dyer	D64-4731	N63-2769
			East Coast			
Queenstown, Md.	3.0	2.0	2.0	3.0	2.0	3.0
Linkwood, Md.	3.0	2.0	2.0	3.0	2.0	2.0
Painter, Va.	2.0	1.5	1.3	1.8	1.8	1.8
Warsaw, Va.	1.8	1.5	1.4	1.9	1.7	1.2
Petersburg, Va.	1.0	1.0	2.0	1.0	1.0	3.0
Holland, Va.	2.5	1.5	2.0	1.5	2.0	1.5
Plymouth, N.C.	1.5	1.0	1.0	1.0	1.0	1.0
			Upper and Central South			
Orange, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Blairsville, Ga.	2.0	2.0	2.5	2.0	1.5	2.5
Experiment, Ga.	1.8	1.7	2.7	3.0	1.5	1.8
Princeton, Ky.	2.0	1.3	2.3	2.3	4.0	1.7
			Delta			
Miller City, Ill.	1.8	1.5	1.3	2.5	1.2	1.3
Henderson, Ky.	1.7	1.7	1.7	2.0	1.7	2.0
Hickman, Ky.	2.0	1.7	1.7	2.0	2.0	2.0
Portageville, Mo.(A)	1.5	1.0	1.5	1.0	1.5	1.2
Portageville, Mo.(B)	2.0	1.7	1.7	1.7	2.0	1.5
Keiser, Ark.	2.7	2.5	3.5	3.0	3.2	3.0
Marianna, Ark.	1.5	1.0	1.5	1.0	1.5	1.2
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.7	2.0	2.0
St. Joseph, La.	3.0	1.3	2.0	3.0	1.3	2.0
			West			
Mt. Vernon, Mo.	2.3	2.1	2.0	2.3	2.0	1.8
Stuttgart, Ark.	2.8	2.5	3.0	3.8	2.8	2.2
Curtis, La.	1.3	1.0	2.0	1.7	2.0	1.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0

Table 21. - (continued)

Location	R64-14	D64-3253	D65-2567	D65-3097	D66-12,392	R65-113
			East Coast			
Queenstown, Md.	2.0	2.0	3.0	2.0	3.0	2.0
Linkwood, Md.	2.0	2.0	2.0	2.0	3.0	2.0
Painter, Va.	2.2	1.8	1.7	1.8	2.0	2.2
Warsaw, Va.	1.6	1.8	1.8	1.8	2.0	1.9
Petersburg, Va.	2.0	1.0	1.0	2.0	2.0	1.0
Holland, Va.	2.0	2.0	2.5	2.0	3.0	3.5
Plymouth, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
			Upper and Central South			
Orange, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Blairsville, Ga.	2.5	2.5	2.5	2.0	2.0	2.0
Experiment, Ga.	1.8	1.8	1.8	2.3	2.5	1.7
Princeton, Ky.	4.0	3.3	3.0	2.0	3.0	2.3
			Delta			
Miller City, Ill.	1.0	1.5	1.7	1.3	1.7	1.5
Henderson, Ky.	2.0	2.0	2.0	2.0	2.0	2.0
Hickman, Ky.	2.0	2.0	2.0	2.0	2.0	2.0
Portageville, Mo.(A)	1.3	1.5	1.5	1.5	1.5	1.5
Portageville, Mo.(B)	1.5	1.5	1.7	1.7	2.0	1.5
Keiser, Ark.	2.8	2.5	2.8	2.7	3.3	2.5
Marianna, Ark.	1.3	1.5	1.5	1.5	1.5	1.5
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.7
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, La.	2.0	2.0	3.0	2.0	3.0	2.7
			West			
Mt. Vernon, Mo.	1.5	1.8	2.0	1.8	2.1	1.8
Stuttgart, Ark.	2.8	2.7	2.8	2.2	3.0	2.8
Curtis, La.	1.0	1.0	1.3	1.0	1.3	1.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0

PRELIMINARY GOUP V

1968

Preliminary Group V nurseries, including 34 experimental strains and the two check varieties Hill and Dare, were grown at six locations. The parentage of these strains is reported in Table 22. Performance data are summarized in Tables 23 through 28. Differences in seed yield were significant at the 5% level of confidence in each of the plantings. The combined analysis of variance for seed yield also showed differences among strains to be significant. Dare and three strains produced yields significantly higher than Hill. Each of these higher yielding strains was at least 6 days later in maturity than Hill. There were 13 additional strains which ranked above Hill in mean seed yield and all but three were at least 6 days later in maturity. Five strains had mean seed yields significantly lower than that of Hill.

D66-5648, a subline of S-100, was included to recheck the newer lines against an old variety. Twenty-seven strains had mean seed yields significantly above that for D66-5648. Only two strains ranked lower in mean seed yield.

Fifteen strains had significantly lower oil content and higher protein content than Hill. Three strains had an average oil content within the range of experimental error of Hill, but were significantly higher in average protein content.

The two strains D66-12,447 and D66-12,467 are vegetable types with seed weight averaging approximately 30 grams per 100.

Strains which appear to merit being advanced to Uniform Group V are: R65-12, V66-1077, V66-12, V66-840, V66-180, V66-23, D65-3642, and D65-3987.

Table 22. - Parentage of the strains in Preliminary Group V, 1968

	Variety or strain	Parentage	Generation composited
1.	Hill		
2.	Dare		
3.	D64-3566	Hill(2) x FC 34195	F_5
4.	D65-2532	PI 196,177(2) x Hill	F_5
5.	D65-2839	Hill x D62-6346	F_7
6.	D65-3067	Hill(4) x PI 171,442	F_5
7.	D65-3168	Hill x PI 96983	F_7
8.	D65-3268	Hill x PI 96983	F_7
9.	D65-3339	Hill x PI 96983	F_7
10.	D65-3426	D53-142 x PI 96983	F_7
11.	D65-3642	Hill x PI 187,155	F_7
12.	D65-3910	D53-142 x PI 96983	F_7
13.	D65-3987	D53-142 x PI 96983	F_7
14.	D65-4063	Hill x PI 227,557	F_7
15.	D65-6555	D61-475 x D61-2624	F_5
16.	D66-5648	Subline S-100	
17.	D66-5680	Hill x D61-253	F_5
18.	D66-5702	Hill x D61-253	F_5
19.	D66-5738	Hill x D61-253	F_5
20.	D66-6977	Hill x D60-7908	F_5
21.	D66-12,338	Hill x D61-253	F_5
22.	D66-12,394	D63-6100 x Dyer	F_5
23.	D66-12,397	D63-6100 x Dyer	F_5
24.	D66-12,447	Hill x Hahto	F_5
25.	D66-12,467	Hill x Hahto	F_5
26.	R65-12	(R64-168 x Hill) x (Lee x Dortchsoy 110)	F_7
27.	R65-100	Hill(6) x Arksoy	F_4
28.	R65-211	Hill x R59-200	F_5
29.	V66-6	Lee x S5-7075	F_6
30.	V66-12	D54-1192 x Dorman	F_8
31.	V66-14	D52-203 x Lee	F_6
32.	V66-23	Dorman x D52-203	F_7
33.	V66-178	Lee x S5-7075	F_6
34.	V66-180	Lee x S5-7075	F_6
35.	V66-840	Sampson x Hill	F_6
36.	V66-1077	Sampson x Hill	F_6

Table 23. General summary of performance for the strains grown in Preliminary Group V, 1968

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	Seed holding	Downey mildew	% mottled seed
Hill	35.4	10-1	34	22.0	36.7	1.0	1.0	1.5
Dare	40.3+	+9	35	23.1+	37.0	1.0	1.0	0.0
D64-3566	37.3	+6	36	22.2	36.5	1.0	1.0	11.5
D65-2532	30.5-	+4	28	19.3-	39.8+	2.0	2.5	4.0
D65-2839	34.8	+13	41	21.2-	36.9	2.0	1.0	10.5
D65-3067	35.5	0	32	23.2+	36.6	1.5	1.0	0.0
D65-3168	37.0	+11	33	18.6-	38.7+	1.0	1.5	0.0
D65-3268	33.3	+7	29	20.2-	39.5+	1.0	3.0	0.0
D65-3339	31.0-	+7	34	18.6-	40.0+	1.5	3.0	0.0
D65-3426	34.9	+8	38	18.7-	40.0+	1.5	2.5	0.5
D65-3642	36.7	+9	34	20.8-	39.1+	1.0	1.0	2.5
D65-3910	33.2	+11	32	18.5-	42.0+	1.0	2.5	0.0
D65-3987	36.1	+9	31	18.4-	42.0+	1.0	2.5	4.5
D65-4063	38.1	+9	33	21.9	37.4	2.0	2.5	0.0
D65-6555	35.0	+2	33	19.9-	39.8+	1.0	1.0	9.5
D66-5648	30.7-	+3	42	20.5-	40.4+	1.5	4.0	0.0
D66-5680	36.5	+7	34	21.5	36.1	1.5	3.0	2.0
D66-5702	36.0	+6	30	21.0-	36.8	1.0	2.5	4.0
D66-5738	34.6	+1	31	21.6	37.4	1.5	1.0	0.0
D66-6977	30.2-	+5	36	19.5-	40.4+	2.0	1.0	3.0
D66-12,338	35.1	+7	36	21.6	38.5+	3.0	1.0	0.0
D66-12,394	35.4	+3	31	21.9	37.9	1.5	1.0	1.5
D66-12,397	35.9	+6	31	21.3-	37.7	2.0	1.0	1.5
D66-12,447	31.3-	+9	28	20.9-	39.6+	2.0	3.0	10.0
D66-12,467	35.3	+6	29	20.5-	42.0+	2.5	1.0	1.5
R65-12	40.2+	+6	37	23.1+	37.4	1.0	2.0	0.5
R65-100	33.2	0	32	22.5	37.4	1.0	3.0	0.0
R65-211	36.2	+6	32	22.6	38.2	1.5	2.0	4.5
V66-6	35.6	-2	34	22.6	36.2	1.0	3.0	0.0
V66-12	39.4+	+6	33	21.1-	38.1	2.0	3.0	0.0
V66-14	32.1	-4	36	20.8-	41.3+	3.5	1.0	0.0
V66-23	37.5	+2	35	21.5	38.4+	1.0	1.0	0.0
V66-178	37.4	+5	33	22.3	37.2	1.5	1.0	0.0
V66-180	38.1	+2	31	22.0	39.0+	1.5	2.0	0.0
V66-840	38.1	+1	33	20.9-	38.3+	1.5	1.0	0.5
V66-1077	39.5+	+6	30	21.8	37.0	1.0	2.0	5.5
L.S.D.(.05)	3.9			0.7	1.6			
L.S.D.(.01)	5.1			1.0	2.1			

Table 24. - Seed yield, in bushels per acre, for the strains in Preliminary Group V, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)
Hill	35.4	27.5	49.1	28.3	32.5	39.6
Dare	42.1+	31.3	52.9	39.9+	28.2	47.4+
D64-3566	34.0	33.0+	47.3	34.1	34.3	41.4
D65-2532	34.4	27.6	49.6	27.2	12.6-	31.7-
D65-2839	30.2-	28.0	49.8	30.5	26.8-	43.4
D65-3067	38.2	30.7	51.0	27.8	31.0	34.5
D65-3168	34.6	28.6	53.5	37.3	22.3-	45.8+
D65-3268	37.5	28.2	44.3	27.3	27.5	34.8
D65-3339	30.0-	28.5	42.0	29.1	21.4-	35.0
D65-3426	33.5	32.6+	50.3	28.9	21.6-	42.7
D65-3642	34.3	28.0	49.5	35.5	34.0	38.9
D65-3910	32.0	26.4	44.7	32.6	25.2-	38.2
D65-3987	36.9	29.5	51.8	25.6	25.3-	47.6+
D65-4063	39.7	31.8+	55.2	27.2	25.7-	49.1+
D65-6555	32.8	27.8	50.6	31.8	26.4-	41.0
D66-5648	37.0	27.2	39.6-	28.2	18.0-	34.4
D66-5680	39.6	30.3	50.9	28.7	26.0-	43.7
D66-5702	38.4	30.8	48.6	29.1	24.0-	44.9
D66-5738	39.8	27.8	45.0	32.3	24.5-	38.2
D66-6977	31.3	27.6	40.2-	26.9	17.8-	37.5
D66-12,338	34.0	27.7	45.2	28.2	30.6	45.0
D66-12,394	35.0	30.6	49.0	31.9	25.1-	40.7
D66-12,397	37.6	31.6	48.8	32.7	24.0-	41.0
D66-12,447	33.4	29.8	43.3	21.9	21.0-	38.1
D66-12,467	35.0	29.7	44.4	34.2	27.1-	41.5
D65-12	44.2+	31.5	56.0	38.4	28.1	43.1
R65-100	35.6	28.4	44.6	22.7	30.9	36.9
R65-211	38.6	29.5	51.8	30.1	26.5-	40.7
V66-6	38.4	27.5	52.0	29.4	27.0-	39.4
V66-12	41.5+	29.6	54.4	31.6	30.3	48.9+
V66-14	38.8	28.7	43.3	28.0	18.4-	35.3
V66-23	40.6+	29.7	58.2+	31.3	26.9-	38.4
V66-178	42.6+	33.5+	52.9	26.5	21.8-	37.4
V66-180	48.6+	34.1+	44.8	38.7	21.1-	41.4
V66-840	40.6+	29.1	51.1	38.6	28.1	41.3
V66-1077	39.6	33.4	53.8	37.8	32.0	40.5
L.S.D.(.05)	4.6	4.3	8.6	10.5	5.4	5.6
C.V.	6%	7%	9%	17%	10%	7%

Table 25. - Oil percentages for the strains in Preliminary Group V, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)
Hill	21.3	20.1	22.2	23.6	22.7	22.1
Dare	21.0	22.4	23.2	24.1	24.8	23.0
D64-3566	21.3	21.0	22.6	22.5	23.3	22.4
D65-2532	19.4	18.4	17.9	20.8	20.6	18.6
D65-2839	20.9	21.0	21.1	21.3	21.4	21.6
D65-3067	22.6	23.0	23.6	24.1	23.3	22.7
D65-3168	19.2	19.2	18.0	17.8	18.9	18.6
D65-3268	20.0	19.3	20.7	20.5	20.9	20.0
D65-3339	19.5	19.0	18.1	17.5	18.6	18.8
D65-3426	18.2	18.7	18.1	18.8	19.4	18.8
D65-3642	20.4	21.0	21.1	20.5	20.9	20.9
D65-3910	18.7	17.4	18.5	19.0	18.8	18.6
D65-3987	18.3	17.9	17.5	19.0	19.3	18.3
D65-4063	20.8	21.6	22.0	21.7	22.7	22.6
D65-6555	20.0	19.3	20.0	20.2	19.8	20.1
D66-5648	20.4	20.3	19.5	21.5	20.5	20.8
D66-5680	21.3	20.6	21.5	22.0	22.0	21.3
D66-5702	21.0	20.6	20.6	20.8	22.0	21.2
D66-5738	21.3	20.5	21.7	21.8	22.0	22.1
D66-6977	19.4	19.5	17.7	19.8	20.8	19.6
D66-12,338	21.3	20.4	21.7	21.8	22.5	21.8
D66-12,394	21.3	21.6	22.1	21.5	22.7	22.1
D66-12,397	21.0	20.7	21.6	20.8	21.7	21.7
D66-12,447	18.4	20.2	21.4	21.1	21.7	22.3
D66-12,467	19.7	19.6	20.9	20.5	20.8	21.5
R65-12	22.5	22.3	23.5	23.1	23.0	24.2
R65-100	22.2	21.2	22.5	24.2	23.0	22.1
R65-211	22.3	21.7	22.3	23.3	23.3	22.6
V66-6	21.5	21.5	23.6	23.0	22.4	23.7
V66-12	20.1	19.9	21.2	20.8	22.4	22.0
V66-14	20.8	19.9	20.7	22.1	19.8	21.2
V66-23	21.4	20.2	22.1	21.3	22.1	22.0
V66-178	20.7	21.2	22.8	23.3	22.9	22.6
V66-180	21.1	21.2	22.3	22.6	22.3	22.6
V66-840	21.2	19.0	21.7	22.1	19.8	21.6
V66-1077	20.8	20.9	21.3	23.1	22.7	22.0

Table 26. - Protein percentages for the strains in Preliminary Group V, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)
Hill	37.9	37.0	38.5	35.1	34.9	37.0
Dare	38.7	38.9	38.9	36.0	32.9	36.5
D64-3566	37.9	38.1	36.1	37.0	33.7	36.3
D65-2532	41.6	38.6	42.9	39.3	37.1	39.3
D65-2839	37.9	36.6	39.0	37.0	34.8	36.3
D65-3067	38.0	34.3	39.8	35.9	34.1	37.3
D65-3168	40.1	37.5	39.5	40.3	36.5	38.4
D65-3268	39.2	39.8	45.4	37.7	35.9	39.0
D65-3339	41.6	39.7	39.8	42.9	39.6	36.6
D65-3426	43.1	40.9	39.1	41.6	34.5	41.0
D65-3642	40.0	38.2	39.9	40.1	37.2	38.9
D65-3910	41.9	42.3	43.2	43.2	40.4	40.8
D65-3987	43.6	42.7	43.8	41.2	38.3	42.5
D65-4063	38.4	38.2	40.4	37.0	34.3	36.1
D65-6555	40.8	40.2	39.2	41.9	37.2	39.7
D66-5648	42.3	38.9	39.5	40.6	39.3	41.7
D66-5680	38.0	36.8	37.2	35.5	32.1	36.7
D66-5702	38.4	36.0	37.7	36.7	34.1	37.9
D66-5738	38.0	36.1	42.0	37.4	33.4	37.4
D66-6977	43.1	40.1	39.5	41.3	37.1	41.5
D66-12,338	38.7	37.1	43.3	38.0	35.5	38.3
D66-12,394	38.2	36.2	44.5	36.8	33.8	37.8
D66-12,397	38.0	37.1	41.0	37.4	34.8	37.9
D66-12,447	41.8	39.4	43.3	38.4	35.8	39.1
D66-12,467	43.9	43.6	45.3	42.0	37.8	39.6
R65-12	38.7	36.7	37.9	37.7	35.3	37.8
R65-100	37.0	37.1	41.6	35.3	35.5	37.7
R65-211	37.9	37.5	45.2	36.6	34.5	37.7
V66-6	37.6	35.5	37.2	36.9	33.6	36.1
V66-12	39.1	38.3	42.6	37.8	33.9	36.8
V66-14	42.0	40.3	45.1	39.7	40.1	40.5
V66-23	40.7	38.6	37.7	38.7	36.3	38.6
V66-178	39.6	38.8	39.1	34.7	34.3	36.6
V66-180	40.7	38.0	41.3	39.4	36.5	38.3
V66-840	38.7	38.9	39.3	38.5	36.5	38.0
V66-1077	38.2	37.2	39.5	36.7	33.7	36.9

Table 27. - Plant height for the strains in Preliminary Group V, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)
Hill	40	32	39	32	31	32
Dare	42	36	38	29	32	33
D64-3566	41	36	39	31	31	35
D65-2532	34	29	28	28	24	24
D65-2839	48	40	44	42	36	37
D65-3067	38	32	34	28	28	29
D65-3168	40	36	35	31	25	32
D65-3268	35	32	30	26	25	27
D65-3339	40	36	36	32	28	34
D65-3426	48	42	40	30	33	36
D65-3642	41	34	37	28	33	30
D65-3910	37	36	35	29	27	29
D65-3987	39	30	36	25	24	29
D65-4063	38	36	36	29	28	32
D65-6555	39	34	33	31	29	32
D66-5648	51	42	43	39	30	45
D66-5680	37	36	37	28	30	34
D66-5702	35	30	35	27	27	28
D66-5738	38	32	31	29	24	30
D66-6977	41	39	38	33	29	37
D66-12,338	39	38	40	31	31	34
D66-12,394	37	30	34	25	28	34
D66-12,397	33	30	35	26	29	30
D66-12,447	33	30	36	23	25	22
D66-12,467	35	28	34	26	23	26
R65-12	39	40	41	32	31	38
R65-100	34	32	36	29	30	32
R65-211	40	31	36	27	29	30
V66-6	39	35	37	30	31	30
V66-12	39	35	35	31	30	27
V66-14	40	37	42	32	30	36
V66-23	41	33	39	30	30	35
V66-178	37	38	37	28	28	32
V66-180	37	32	33	27	26	30
V66-840	37	34	36	31	29	31
V66-1077	34	29	32	27	25	30

Table 28. - Seed quality scores for the strains in Preliminary Group V, 1968

Strain	Linkwood, Md.	Warsaw, Va.	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)
Hill	3.0	1.7	1.5	2.0	2.5	2.0
Dare	2.0	1.1	1.0	1.3	2.3	2.0
D64-3566	2.0	1.7	1.5	2.0	2.5	2.0
D65-2532	2.0	1.8	2.0	1.8	2.5	2.0
D65-2839	2.0	1.8	1.5	2.0	2.5	2.0
D65-3067	3.0	1.7	1.5	1.8	2.5	2.0
D65-3168	2.0	1.3	1.0	1.8	3.0	2.0
D65-3268	3.0	1.7	1.0	2.0	3.0	2.0
D65-3339	3.0	1.2	1.0	1.5	2.3	2.0
D65-3426	3.0	2.1	1.0	2.3	2.8	2.0
D65-3642	2.0	1.6	1.0	1.5	3.3	2.0
D65-3910	2.0	1.6	1.5	1.5	3.0	2.0
D65-3987	3.0	1.7	1.5	2.0	3.5	2.0
D65-4063	2.0	1.5	1.0	2.0	3.0	2.0
D65-6555	2.0	1.4	1.5	1.5	2.5	2.0
D66-5648	3.0	1.7	3.0	2.0	3.8	2.5
D66-5680	3.0	1.9	1.5	2.3	3.0	2.0
D66-5702	3.0	1.8	1.5	2.3	2.8	2.0
D66-5738	3.0	1.6	1.0	1.0	2.8	2.0
D66-6977	3.0	2.0	1.5	2.0	2.5	2.0
D66-12,338	2.0	1.4	1.0	1.0	2.3	2.0
D66-12,394	3.0	1.6	1.0	1.8	2.3	2.0
D66-12,397	3.0	1.6	1.5	2.0	2.5	2.0
D66-12,447	3.0	3.0	1.5	2.5	3.5	2.0
D66-12,467	3.0	2.8	1.5	2.3	3.8	2.0
D65-12	3.0	1.5	1.5	1.5	2.3	2.5
R65-100	3.0	1.6	1.0	1.5	2.8	2.0
R65-211	2.0	1.4	1.0	1.5	3.0	2.0
V66-6	3.0	1.6	1.0	1.8	2.5	2.0
V66-12	2.0	1.4	1.0	1.8	3.0	1.5
V66-14	3.0	1.8	2.0	1.8	4.0	2.5
V66-23	2.0	1.5	1.0	1.8	2.5	2.0
V66-178	2.0	1.5	1.0	1.8	3.3	2.5
V66-180	2.0	1.2	1.5	1.8	2.5	2.0
V66-840	3.0	1.8	1.0	2.5	3.3	2.0
V66-1077	2.0	1.5	1.5	1.5	2.3	2.0

UNIFORM GROUP VI

1968

	Variety or strain	Parentage	Generation composited
1.	Hood	Roanoke x N45-745	F_6
2.	Lee	S-100 x CNS	F_6
3.	Lee 68	Lee(6) x Arksoy	Sel. F_3 lines
4.	Pickett	[D49-2491(6) x Dorman] x [Lee(4) x Peking]	F_5
5.	Davis	D49-2573 x N45-1497	F_6
6.	D64-3937	Hill x D59-1619	F_5
7.	D64-4636	Hill x D58-3311	F_5
8.	R64-502	Lee(6) x Arksoy	F_3
9.	D67-B5	D62-7816 x P.R. resistant Lee	Sel. F_3 lines
10.	N62-2144	(N52-3908 x N51-1675) x (Ogden x Lee)	F_5
11.	N64-1758	(N55-3843 x N55-2908) x D56-1192	F_4
12.	R65-37	Hood(6) x Arksoy	F_4

Background of strains used as parents:

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

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

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

D59-1619 is a selection from D51-5427 x D49-2491, selected for resistance to phytophthora rot. D51-5427 is a subline of N45-1497.

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

D62-7816 is a Lee type with narrow leaves.

N52-3908 is a selection from Roanoke x N45-745 which was grown in Preliminary VII in 1955.

N51-1675 is a selection from N48-1248 x Perry which was grown in Preliminary VI in 1955.

N55-3843 is a selection from (N45-2994 x Ogden) x (N44-92 x N48-1867) which was grown in Preliminary VI in 1957. N45-2994 is from Arksoy x Ogden, N44-92 is from Haberlandt x Ogden, and N48-1867 is from Roanoke x N45-745.

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

D56-1192 is a selection from Perry x Lee which was grown in Uniform Group VI for the years 1959 and 1960.

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

Seed yield differences were significant at the 5% level of confidence at 22 of the 29 locations. The combined analysis of variance for mean seed yields by production regions showed differences among strains to be significant at the 5% level in all regions except the Upper and Central, which had only three locations.

The 3-year mean yield for Lee 68 was below that for Lee in the Southeast, above Lee in the Delta, and nearly similar to Lee in the other regions. The 3-year mean seed yield of Pickett in relation to Lee is 89% in the East, 97% in the Southeast and Upper and Central South, 88% in the Delta, and 94% in the West. Davis has yielded extremely well in Southeast and Upper and Central regions where its additional growth is advantageous.

Three strains have been included 2 years. D64-3937 and R64-502 have the high level of resistance to phytophthora rot. D64-3937 is 4 days earlier than Lee and R64-502 is of Hood maturity. Both have yielded well, especially in the Delta region. D64-3937 yielded very poorly in the 1968 plantings at Lubbock and Halfway. The strains of inoculant used appeared to be unsuitable for good nodulation. D64-4636 is of approximately Hood maturity, has a moderate level of resistance to phytophthora rot and a high level of resistance to root knot nematodes.

Four strains were included for the first time. D67-B5, a narrow leaf Lee type having resistance to phytophthora rot, did not demonstrate any advantage for the narrow leaf character. N62-2144, similar to Hood in maturity, averaged below Hood in seed yield in each production region. N64-1758, 4 days later in maturity than Hood, yielded slightly better than Hood in the Delta, but yielded less than Hood in the East, Southeast, and West. R65-37, a Hood type with a high level of resistance to phytophthora rot, averaged 3 inches taller and 4 days later in maturity than Hood. Seed yield was significantly below Hood in the East and above Hood in the Delta.

Hood, Davis, and R65-37 were free of seed coat mottling at Halfway, Texas, where R64-502 showed 68% mottling. In 1967, Hood had also been free of mottling at Halfway, while Davis showed 6% mottled seed.

Table 29. - General summary of the performance for the strains in Uniform Group VI, 1968

	Hood	Lee	Lee 68	Pickett	Davis	D64-3937
Seed Yield - 1968						
East Coast	37.0	33.2-	33.8-	29.9-	33.6-	33.5-
Southeast	31.3	32.4	30.2	31.0	36.1+	26.4-
Upper & Central South	50.7	52.2	49.0	45.9	54.7	46.6
Delta	38.1	36.3	38.5	32.0-	41.6	39.6
West	44.3	41.5	41.1	35.1-	41.6	29.6-
- 1967-68						
East Coast	37.7	34.5	35.3	31.0	34.6	35.2
Southeast	34.9	36.6	34.6	36.5	39.7	31.0
Upper & Central South	50.0	48.3	47.3	45.2	50.4	46.8
Delta	38.3	38.2	38.6	34.2	40.7	40.6
West	43.9	40.3	39.9	36.8	41.9	34.5
- 1966-68						
East Coast	37.6	34.9	35.4	31.1	35.8	
Southeast	37.0	37.8	35.8	36.7	41.2	
Upper & Central South	45.8	44.0	43.3	42.5	47.1	
Delta	39.4	38.3	39.6	33.7	40.5	
West	43.3	40.3	39.5	37.8	41.8	
Oil Content - 1968	22.6	21.5-	21.3-	21.7-	21.8-	20.9-
- 1967-68	22.1	21.4	21.2	21.7	21.8	20.9
- 1966-68	21.7	21.1	20.9	21.3	21.6	
Protein Content - 1968	38.5	39.9+	39.4+	39.5+	38.3	39.5+
- 1967-68	39.1	40.3	40.2	39.9	38.8	39.9
- 1966-68	39.3	40.6	40.5	40.1	38.8	
Seed size	13.4	12.4-	12.5-	12.5-	13.4	11.9-
Maturity index	10-10	+12	+11	+13	+8	+7
Height	32	33	33	31	39	31
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	3.0	1.0	1.0	3.0	1.0	1.0
Seed coat mottling (%)	1.0	28.0	37.0	20.0	0.0	8.0
Seed holding	2.0	1.0	1.0	1.0	2.6	1.3
Flower color	W	P	P	P	W	W
Pubescence color	G	T	T	G	G	G
Pod wall color	T	T	T	T	T	T

Table 29. - (continued)

	D64-4636	R64-502	D67-B5	N62-2144	N64-1758	R65-37
Seed Yield - 1968						
East Coast	36.8	34.0	33.1-	36.0	34.3	33.7-
Southeast	28.4	28.7	29.4	30.8	29.8	32.8
Upper & Central South	48.6	45.5	47.5	47.9	51.4	51.6
Delta	40.7	40.3	39.0	34.5	39.3	40.7
West	37.5-	41.5	36.8-	40.3	40.1	43.9
- 1967-68						
East Coast	37.2	36.0				
Southeast	33.7	33.3				
Upper & Central South	47.5	45.6				
Delta	41.9	41.2				
West	39.5	41.4				
- 1966-68						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
Oil Content - 1968	21.2-	21.8-	21.3-	22.2	21.6-	21.3-
- 1967-68	21.1	21.6				
- 1966-68						
Protein Content - 1968	39.9+	40.4+	40.1+	38.7	38.6	39.1+
- 1967-68	39.8	40.9				
- 1966-68						
Seed size	13.5	12.6-	11.8-	13.5	12.3-	14.0+
Maturity index	+3	0	+10	+2	+4	+4
Height	30	33	32	30	34	35
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	1.0	1.0	1.0	3.0	1.0	1.0
Seed coat mottling (%)	20.0	68.0	16.0	11.0	1.0	0.0
Seed holding	1.3	1.8	1.0	2.4	2.0	1.8
Flower color	W	P	P	P	P	P
Pubescence color	G	T	T	G	G	G
Pod wall color	T	T	T	T	T	Br

Table 30. - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1968

Location	Hood	Lee	Lee 68	Pickett	Davis	D64-3937	D64-4636
			East Coast				
Queenstown, Md.	34.7	26.3	24.2	26.1	24.4	24.6	26.6
Linkwood, Md.	39.4	30.8-	29.8-	25.7-	28.2-	32.1-	34.3-
Painter, Va.	46.0	40.9	48.1	36.4-	41.5	40.3	49.3
Warsaw, Va.	43.3	30.3-	29.9-	26.9-	31.4-	32.5-	35.3-
Petersburg, Va.	17.3	20.1	19.3	20.8	21.0	17.6	21.3
Holland, Va.	42.3	41.8	41.9	38.0	46.6	46.9	46.3
Plymouth, N.C.	54.2	50.0	55.8	46.1-	51.9	49.8	55.0
Willard, N.C.	33.0	40.0	36.6	32.7	41.8	35.9	37.3
Hartsville, S.C.(A)	23.2	18.4-	18.5-	16.3-	15.5-	21.8	25.6
Mean	37.0	33.2-	33.8-	29.9-	33.6-	33.5-	36.8
			Southeast				
Quincy, Fla.	35.8	34.0	33.1	30.7-	41.6+	29.0-	27.3-
Jay, Fla.	27.7	23.4-	20.7-	20.6-	28.2	21.9-	26.2
Fairhope, Ala.	32.0	37.1+	33.3	36.3+	33.5	29.3	33.0
Baton Rouge, La.	29.5	35.0	33.8	36.5	40.9+	25.4	27.1
Mean	31.3	32.4	30.2	31.0	36.1+	26.4-	28.4
			Upper and Central South				
Belle Mina, Ala.	34.6	35.1	38.5	35.0	34.5	32.7	34.4
Clemson, S.C.	66.4	70.6	64.0	60.4	74.6+	64.9	66.5
Experiment, Ga.	51.0	50.8	44.6	42.4-	54.9	42.3-	45.0
Mean	50.7	52.2	49.0	45.9	54.7	46.6	48.6
			Delta				
Portageville, Mo.(A)	42.0	36.0-	36.0-	31.8-	36.1-	40.0	44.7
Portageville, Mo.(B)	21.0	25.1	31.2+	21.3	30.9+	29.7+	29.8+
Keiser, Ark.	18.8	21.7	29.0+	22.9	29.1+	32.9+	27.0+
Marianna, Ark.	32.9	32.1	33.5	26.4-	32.7	29.7	34.8
Stoneville, Miss.(A)	44.6	44.1	46.6	38.5	49.9	42.6	41.7
Stoneville, Miss.(B)	45.4	42.0	47.2	35.6-	49.9	49.7	49.5
St. Joseph, La.	62.1	52.8-	46.3-	47.7-	62.8	52.7-	57.3
Mean	38.1	36.3	38.5	32.0-	41.6	39.6	40.7
			West				
Stuttgart, Ark.	44.0	40.4	43.4	37.8	41.4	40.4	37.1
Curtis, La.*	37.7	33.6	24.3	29.1	28.4	32.2	33.8
Crowley, La.	38.4	43.5	40.6	34.3	38.3	31.1-	36.8
Bixby, Okla.	49.3	45.8	43.3-	43.0-	45.8	49.1	46.1
Halfway, Texas	48.9	39.6-	40.3	33.6-	45.3	12.3-	35.8-
Lubbock, Texas	40.8	38.1	37.8	26.9-	37.3	15.3-	31.8-
Mean	44.3	41.5	41.1	35.1-	41.6	29.6-	37.5-

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

Table 30. - (continued)

Location	R64-502	D67-B5	N62-2144	N64-1758	R65-37	L.S.D. (.05)	C.V.
			East Coast				
Queenstown, Md.	30.0	27.8	31.4	24.4	25.0	N.S.	23%
Linkwood, Md.	37.1	30.6-	36.0-	33.2	30.6	3.3	6%
Painter, Va.	47.3	38.2-	50.5	41.1	44.7	6.6	9%
Warsaw, Va.	37.3-	29.3-	38.1-	36.4-	33.3-	3.3	6%
Petersburg, Va.	18.8	17.7	20.6	19.7	19.5	N.S.	11%
Holland, Va.	43.7	45.9	41.0	48.9+	39.5	6.5	9%
Plymouth, N.C.	48.3	52.3	57.7	54.1	50.0	6.3	7%
Willard, N.C.	28.8	36.2	32.9	38.4	39.9	N.S.	13%
Hartsville, S.C.(A)	14.9-	19.5-	16.1-	12.7-	20.4	3.6	11%
Mean	34.0	33.1-	36.0	34.3	33.7-	3.1	
			Southeast				
Quincy, Fla.	30.0-	32.9	33.5	33.5	38.6	3.5	6%
Jay, Fla.	24.9	18.9-	27.0	20.4-	26.5	4.3	11%
Fairhope, Ala.	31.6	33.1	27.5-	29.0	37.0+	4.2	8%
Baton Rouge, La.	28.2	32.4	35.2	36.2	29.1	8.2	15%
Mean	28.7	29.4	30.8	29.8	32.8	4.8	
			Upper and Central South				
Belle Mina, Ala.	33.3	35.9	32.9	34.7	39.3	N.S.	10%
Clemson, S.C.	61.9	64.5	66.4	70.7	64.0	7.1	6%
Experiment, Ga.	41.3-	41.9-	44.5	48.9	51.4	6.8	9%
Mean	45.5	47.5	47.9	51.4	51.6	N.S.	
			Delta				
Portageville, Mo.(A)	41.3	33.1-	42.8	43.4	41.1	5.9	9%
Portageville, Mo.(B)	36.6+	29.3+	20.5	25.7+	29.1+	4.3	9%
Keiser, Ark.	26.3+	27.2+	16.0	24.1+	27.9+	4.6	11%
Marianna, Ark.	35.3	34.4	28.6	33.5	33.3	4.5	8%
Stoneville, Miss.(A)	42.0	46.4	38.8	46.7	44.4	N.S.	10%
Stoneville, Miss.(B)	44.9	52.2+	39.1-	45.6	47.6	5.8	8%
St. Joseph, La.	56.2	50.4-	55.7	55.8	61.4	7.9	8%
Mean	40.3	39.0	34.5	39.3	40.7	3.9	
			West				
Stuttgart, Ark.	43.4	37.9	35.8	43.0	42.4	N.S.	10%
Curtis, La.*	27.9	26.8	28.4	39.5	38.8	N.S.	25%
Crowley, La.	34.1	33.7	31.5-	38.9	39.3	6.7	11%
Bixby, Okla.	47.1	42.9-	47.6	47.0	52.7	4.9	6%
Halfway, Texas	43.1	38.7-	45.4	39.3-	46.3	8.7	13%
Lubbock, Texas	39.9	30.7	41.3	32.6	38.8	9.0	15%
Mean	41.5	36.8-	40.3	40.1	43.9	6.2	

* Not included in mean.

Table 31. - Chemical composition and seed size for the strains in Uniform Group VI, 1968

Location	Hood	Lee	Lee 68	Pickett	Davis	D64-3937	D64-4636
			Oil Percentage				
Warsaw, Va.	21.9	19.5	19.5	19.5	20.5	19.5	20.1
Plymouth, N.C.	23.9	22.3	22.3	22.2	22.7	21.7	21.7
Willard, N. C.	22.7	22.7	21.9	22.8	21.8	20.9	21.2
Jay, Fla.	22.9	23.1	21.5	23.1	21.2	21.3	21.1
Portageville, Mo.(A)	22.3	21.2	21.7	21.6	22.1	21.6	22.1
Keiser, Ark.	22.8	21.3	21.4	22.5	22.9	21.6	21.7
Stoneville, Miss.(A)	23.3	21.7	22.0	21.3	22.1	20.8	21.4
Stoneville, Miss.(B)	23.5	22.8	22.3	22.9	22.6	21.2	21.3
Stuttgart, Ark.	22.5	20.8	21.2	21.9	22.3	21.0	21.6
Halfway, Texas	19.9	19.4	19.0	18.9	19.9	19.2	19.9
Mean	22.6	21.5-	21.3-	21.7-	21.8-	20.9-	21.2-
			Protein Percentage				
Warsaw, Va.	38.5	40.9	40.2	40.4	39.3	40.1	40.0
Plymouth, N.C.	37.7	40.0	40.0	39.0	38.5	39.2	40.4
Willard, N.C.	40.0	42.1	39.2	41.4	41.0	42.9	42.7
Jay, Fla.	41.7	40.2	41.7	40.9	37.7	41.7	43.1
Portageville, Mo.(A)	37.6	41.0	36.3	41.3	38.0	38.6	38.7
Keiser, Ark.	36.1	36.5	38.3	35.9	36.3	36.2	36.7
Stoneville, Miss.(A)	37.1	38.7	38.5	37.9	37.4	39.1	39.6
Stoneville, Miss.(B)	36.1	36.6	37.3	36.5	35.9	35.1	39.1
Stuttgart, Ark.	40.3	43.3	42.8	42.0	40.5	40.7	40.8
Halfway, Texas	39.4	40.1	39.7	40.1	38.7	40.9	38.3
Mean	38.5	39.9+	39.4+	39.5+	38.3	39.5+	39.9+
			Grams per 100 Seeds				
Warsaw, Va.	11.9	10.1	10.6	10.9	11.8	10.7	11.5
Plymouth, N.C.	14.4	12.4	12.0	12.2	14.5	12.3	13.6
Willard, N.C.	11.2	11.8	11.7	12.1	12.8	11.0	13.1
Jay, Fla.	13.4	12.4	11.5	12.9	12.4	11.0	12.4
Portageville, Mo.(A)	14.3	12.7	12.7	12.7	12.3	12.0	14.0
Keiser, Ark.	14.3	12.0	13.3	12.0	15.7	12.3	15.3
Stoneville, Miss.(A)	13.6	12.9	13.3	12.8	14.4	12.4	13.2
Stoneville, Miss.(B)	13.0	12.5	13.6	12.1	14.2	12.5	14.6
Stuttgart, Ark.	14.3	13.0	14.3	14.0	15.0	13.0	15.0
Halfway, Texas	14.0	14.0	12.0	13.0	11.0	12.0	12.0
Mean	13.4	12.4-	12.5-	12.5-	13.4	11.9-	13.5

Table 31. - (continued)

Location	R64-502	D67-B5	N62-2144	N64-1758	R65-37	L.S.D. (.05)
			Oil Percentage			
Warsaw, Va.	20.9	19.5	20.8	20.1	20.9	
Plymouth, N.C.	22.7	22.2	23.4	22.6	22.3	
Willard, N.C.	21.3	22.0	21.7	21.7	21.0	
Jay, Fla.	21.1	20.9	23.0	20.3	21.7	
Portageville, Mo.(A)	22.0	21.8	22.1	22.5	21.0	
Keiser, Ark.	22.8	21.4	21.7	22.7	20.8	
Stoneville, Miss.(A)	22.7	22.0	22.6	21.5	21.7	
Stoneville, Miss.(B)	22.2	22.0	23.0	22.4	21.2	
Stuttgart, Ark.	21.7	21.6	22.7	21.7	21.9	
Halfway, Texas	20.5	19.8	20.6	20.1	20.3	
Mean	21.8-	21.3-	22.2	21.6-	21.3-	0.5
			Protein Percentage			
Warsaw, Va.	40.1	41.8	39.8	39.9	39.1	
Plymouth, N.C.	40.5	39.7	38.2	37.8	38.7	
Willard, N.C.	43.4	42.1	40.7	40.7	41.3	
Jay, Fla.	43.4	42.2	40.6	43.1	42.9	
Portageville, Mo.(A)	40.1	40.3	38.2	36.6	38.5	
Keiser, Ark.	36.4	37.2	37.4	34.2	36.2	
Stoneville, Miss.(A)	38.9	38.3	36.4	37.4	38.0	
Stoneville, Miss.(B)	39.1	37.9	36.3	36.3	36.7	
Stuttgart, Ark.	42.3	43.1	40.8	40.0	39.6	
Halfway, Texas	39.6	38.1	39.0	39.5	40.0	
Mean	40.4+	40.1+	38.7	38.6	39.1+	0.9
			Grams per 100 Seeds			
Warsaw, Va.	11.6	10.1	11.9	10.7	12.2	
Plymouth, N.C.	12.3	11.5	14.2	12.6	14.2	
Willard, N.C.	10.4	11.0	11.6	11.4	12.4	
Jay, Fla.	11.8	11.0	12.8	11.5	14.0	
Portageville, Mo.(A)	13.3	12.7	13.3	13.0	13.0	
Keiser, Ark.	13.0	12.3	15.3	12.7	16.3	
Stoneville, Miss.(A)	12.5	12.6	13.2	12.2	14.5	
Stoneville, Miss.(B)	14.3	12.8	14.5	12.7	14.2	
Stuttgart, Ark.	14.0	13.3	15.7	13.3	15.0	
Halfway, Texas	13.0	11.0	12.0	13.0	14.0	
Mean	12.6-	11.8-	13.5	12.3-	14.0+	0.6

Table 32. - Relative maturity data, days earlier (-) or later (+) than Hood, for the strains in Uniform Group VI, 1968

Location	Date planted	Hood matured	Lee	Lee 68	Pickett	Davis	D64-3937
		East Coast					
Queenstown, Md.	5-22	10-15	+8	+9	+12	+6	+5
Linkwood, Md.	5-21	10-16	+4	+3	+7	+7	+3
Painter, Va.	6-5	10-19	+8	+7	+7	+9	+3
Warsaw, Va.	5-23	10-11	+7	+7	+12	+4	+4
Petersburg, Va.	5-24	10-20	+10	+7	+8	+12	+2
Holland, Va.	5-24	10-21	+5	+2	+9	+9	0
Plymouth, N.C.	5-14	10-10	+12	+8	+12	+8	+8
Willard, N.C.	5-9	10-16	+10	+8	+12	+6	+4
Hartsville, S.C.(A)	6-3	10-2	+17	+16	+22	+5	+4
Mean		10-14	+9	+7	+11	+7	+4
		Southeast					
Quincy, Fla.	6-13	9-26	+10	+11	+12	+10	0
Jay, Fla.	6-3	9-21	+12	+12	+17	+5	+3
Fairhope, Ala.	6-12	9-25	+15	+15	+17	+11	+9
Baton Rouge, La.	5-8	10-5	+18	+21	+17	+1	+20
Mean		9-27	+14	+15	+16	+7	+8
		Upper and Central South					
Belle Mina, Ala.	5-22	10-16	-1	-1	+12	-1	-1
Clemson, S.C.	5-23	10-14	+11	+10	+13	+7	+8
Experiment, Ga.	5-23	9-27	+16	+15	+22	+10	+9
Mean		10-9	+9	+8	+16	+5	+5
		Delta					
Portageville, Mo.(A)	5-8	10-20	+10	+9	+11	+3	+4
Portageville, Mo.(B)	5-24	10-18	+12	+13	+13	+4	+13
Keiser, Ark.	6-1	10-30	+14	+14	+15	+15	+14
Marianna, Ark.	5-28	10-14	+11	+10	+12	+7	+7
Stoneville, Miss.(A)	5-8	10-1	+17	+16	+15	+10	+5
Stoneville, Miss.(B)	5-30	10-6	+12	+12	+12	+9	+10
St. Joseph, La.	5-9	9-29	+14	+14	+15	+15	+15
Mean		10-13	+13	+13	+13	+9	+10
		West					
Stuttgart, Ark.	5-27	10-6	+21	+18	+20	+13	+15
Curtis, La.	5-30	10-10	+8	+8	+10	+5	+5
Crowley, La.	5-21	10-5	+18	+18	+12	+10	+16
Bixby, Okla.	5-17	10-23	+16	+16	+18	+13	+17
Mean		10-11	+16	+15	+15	+10	+13

Table 32. - (continued)

Location	D64-4636	R64-502	D67-B5	N62-2144.	N64-1758	R65-37
			East Coast			
Queenstown, Md.	+4	-2	+13	-2	+3	+5
Linkwood, Md.	+3	-2	+3	+5	+3	+3
Painter, Va.	0	-1	+5	+1	+4	+3
Warsaw, Va.	+3	-2	+10	+2	+4	+3
Petersburg, Va.	+6	-4	+9	+12	+11	-2
Holland, Va.	+7	-6	+5	-6	+3	+1
Plymouth, N.C.	0	-4	+6	-2	+4	0
Willard, N.C.	+2	+2	+10	-2	0	+2
Hartsville, S.C.(A)	-1	+7	+15	+28	+3	+2
Mean	+3	-1	+8	+4	+4	+2
			Southeast			
Quincy, Fla.	+7	+1	+10	0	-1	-2
Jay, Fla.	-3	0	+9	-1	0	+2
Fairhope, Ala.	+9	+6	+13	+6	+6	+6
Baton Rouge, La.	+7	+5	+15	-3	+3	+5
Mean	+5	+3	+12	0	+2	+3
			Upper and Central South			
Belle Mina, Ala.	0	-1	0	0	-1	-1
Clemson, S.C.	+7	+3	+10	+3	+5	+7
Experiment, Ga.	-3	-2	+14	-4	+6	+1
Mean	+1	0	+8	0	+3	+2
			Delta			
Portageville, Mo.(A)	-4	-3	+8	-4	0	+2
Portageville, Mo.(B)	+2	+3	+12	+1	+2	+4
Keiser, Ark.	+15	-2	+14	+1	-3	+15
Marianna, Ark.	+1	0	+10	0	+6	0
Stoneville, Miss.(A)	-5	-4	+13	-4	+2	+5
Stoneville, Miss.(B)	+1	0	+12	+2	+6	+8
St. Joseph, La.	+12	0	+15	-1	+2	+12
Mean	+3	0	+12	0	+2	+6
			West			
Stuttgart, Ark.	+7	+5	+15	+2	+8	+6
Curtis, La.	0	-1	+4	+7	+8	+8
Crowley, La.	-6	-4	+17	-4	+8	+3
Bixby, Okla.	-3	-4	+16	+17	+15	+14
Mean	0	-1	+13	+6	+10	+8

Table 33. - Plant height for the strains in Uniform Group VI, 1968

Location	Hood	Lee	Lee 68	Pickett	Davis	D64-3937
			East Coast			
Queenstown, Md.	36	41	43	49	43	35
Linkwood, Md.	40	41	41	39	47	40
Painter, Va.	43	43	44	37	49	39
Warsaw, Va.	32	36	36	31	39	34
Petersburg, Va.	25	31	32	24	37	24
Holland, Va.	36	37	39	33	33	34
Plymouth, N.C.	38	37	35	31	42	35
Willard, N.C.	26	29	29	25	36	27
Hartsville, S.C.(A)	36	37	37	29	45	30
Mean	35	37	37	33	41	33
			Southeast			
Quincy, Fla.	24	23	21	21	30	20
Jay, Fla.	28	30	31	26	37	24
Fairhope, Ala.	27	31	30	27	38	27
Baton Rouge, La.	26	25	26	24	33	31
Mean	26	27	27	25	35	26
			Upper and Central South			
Belle Mina, Ala.	33	39	37	32	38	35
Clemson, S.C.	31	30	29	28	31	29
Experiment, Ga.	33	36	37	31	42	33
Mean	32	35	34	30	37	32
			Delta			
Portageville, Mo.(A)	34	28	31	31	43	29
Portageville, Mo.(B)	33	36	37	31	37	34
Keiser, Ark.	29	32	34	30	37	33
Marianna, Ark.	35	39	40	37	45	36
Stoneville, Miss.(A)	40	35	33	35	45	36
Stoneville, Miss.(B)	35	34	34	33	42	33
St. Joseph, La.	38	35	36	34	45	36
Mean	35	34	35	33	42	34
			West			
Stuttgart, Ark.	27	29	28	26	30	28
Curtis, La.	28	28	26	25	31	25
Crowley, La.	27	27	27	23	34	22
Bixby, Okla.	34	35	33	34	36	34
Halfway, Texas	28	28	30	28	36	18
Mean	29	29	29	27	33	25

Table 33. - (continued)

Location	D64-4636	R64-502	D67-B5	N62-2144	N64-1758	R65-37
			East Coast			
Queenstown, Md.	36	40	43	37	41	40
Linkwood, Md.	38	41	38	39	45	45
Painter, Va.	37	36	42	41	44	46
Warsaw, Va.	32	34	35	33	37	36
Petersburg, Va.	27	31	33	24	29	31
Holland, Va.	34	31	36	38	40	39
Plymouth, N.C.	36	31	35	35	38	39
Willard, N.C.	28	31	28	28	32	33
Hartsville, S.C.(A)	35	35	37	33	35	39
Mean	34	34	36	34	38	39
			Southeast			
Quincy, Fla.	18	27	23	20	23	27
Jay, Fla.	30	32	27	28	29	31
Fairhope, Ala.	28	29	27	26	26	32
Baton Rouge, La.	21	26	21	24	30	28
Mean	24	29	25	25	27	30
			Upper and Central South			
Belle Mina, Ala.	32	39	35	31	36	39
Clemson, S.C.	24	29	27	28	32	29
Experiment, Ga.	34	40	33	31	35	37
Mean	30	36	32	30	34	35
			Delta			
Portageville, Mo.(A)	27	31	31	31	33	35
Portageville, Mo.(B)	31	35	35	28	36	35
Keiser, Ark.	30	33	33	29	33	35
Marianna, Ark.	35	39	37	34	38	41
Stoneville, Miss.(A)	37	38	35	36	41	40
Stoneville, Miss.(B)	34	32	34	32	34	37
St. Joseph, La.	34	37	34	33	38	38
Mean	33	35	34	32	36	37
			West			
Stuttgart, Ark.	24	30	27	22	29	30
Curtis, La.	24	26	24	22	27	29
Crowley, La.	21	26	25	21	27	26
Bixby, Okla.	31	32	30	35	42	42
Halfway, Texas	24	24	28	24	26	33
Mean	25	28	27	25	30	32

Table 34. - Lodging scores for the strains in Uniform Group VI, 1968

Location	Hood	Lee	Lee 68	Pickett	Davis	D64-3937
			East Coast			
Queenstown, Md.	1.4	3.1	2.7	2.3	1.9	1.6
Linkwood, Md.	1.7	3.5	3.7	2.0	1.8	1.3
Painter, Va.	3.8	4.7	5.0	3.0	4.8	2.8
Warsaw, Va.	2.0	2.4	2.2	1.8	2.7	1.3
Petersburg, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Holland, Va.	3.3	4.7	4.7	3.7	4.0	2.7
Plymouth, N.C.	3.0	4.0	4.0	3.0	3.0	3.0
Willard, N.C.	3.0	3.0	3.0	2.0	3.0	2.0
Hartsville, S.C.(A)	2.0	2.4	2.2	1.8	2.1	1.1
			Southeast			
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.3	1.3	1.0	1.3	3.0	1.0
			Upper and Central South			
Belle Mina, Ala.	2.0	2.3	2.0	2.0	2.0	1.3
Clemson, S.C.	4.0	3.0	4.0	3.0	5.0	2.0
Experiment, Ga.	1.3	1.7	1.7	1.0	1.7	1.0
			Delta			
Portageville, Mo.(A)	4.3	3.3	4.0	2.7	3.5	2.7
Portageville, Mo.(A)	2.5	2.8	3.0	2.2	3.2	1.8
Keiser, Ark.	1.5	1.7	2.5	1.5	1.3	1.5
Marianna, Ark.	2.7	3.0	3.3	3.0	2.7	2.3
Stoneville, Miss.(A)	3.0	3.3	3.3	3.0	3.0	3.0
Stoneville, Miss.(B)	3.0	3.0	3.0	3.0	3.7	2.0
St. Joseph, La.	3.3	3.0	3.0	2.3	4.0	2.3
			West			
Stuttgart, Ark.	2.3	3.0	3.0	2.0	3.0	2.0
Curtis, La.	1.7	1.7	1.3	1.7	1.3	1.3
Crowley, La.	1.2	1.0	1.0	1.0	1.5	1.0
Bixby, Okla.	1.7	1.0	1.7	1.0	1.3	1.0
Halfway, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 34. - (continued)

Location	D64-4636	R64-502	D67-B5	N62-2144	N64-1758	R65-37
			East Coast			
Queenstown, Md.	1.6	1.9	2.4	1.5	1.2	2.2
Linkwood, Md.	1.7	2.1	3.2	1.4	1.3	1.9
Painter, Va.	3.3	4.2	3.0	3.3	3.0	3.2
Warsaw, Va.	1.2	1.4	2.0	1.4	1.1	1.7
Petersburg, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Holland, Va.	3.3	3.7	3.7	2.7	2.7	4.0
Plymouth, N.C.	3.0	4.0	4.0	3.0	2.0	3.0
Willard, N. C.	2.0	3.0	3.0	3.0	2.0	3.0
Hartsville, S.C.(A)	1.4	4.0	2.0	1.2	1.3	2.0
			Southeast			
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.3	1.3	1.0	1.0	1.0	1.3
			Upper and Central South			
Belle Mina, Ala.	1.7	2.0	2.0	1.3	1.0	2.0
Clemson, S.C.	4.0	5.0	3.0	2.0	1.0	3.0
Experiment, Ga.	1.0	2.0	1.3	1.0	1.0	1.3
			Delta			
Portageville, Mo.(A)	2.5	2.8	3.5	2.3	2.2	3.5
Portageville, Mo.(B)	2.5	3.2	3.0	2.0	2.3	3.2
Keiser, Ark.	1.2	1.7	2.2	1.0	1.0	1.5
Marianna, Ark.	2.3	2.3	3.0	2.0	2.0	2.7
Stoneville, Miss.(A)	2.7	3.3	3.3	3.0	2.0	3.0
Stoneville, Miss.(B)	3.0	3.0	3.0	3.0	2.7	2.7
St. Joseph, La.	3.3	3.3	3.0	2.6	1.0	4.0
			West			
Stuttgart, Ark.	3.0	3.0	2.3	2.3	2.0	3.0
Curtis, La.	1.7	2.0	1.3	1.3	1.3	2.0
Crowley, La.	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Halfway, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 35. - Seed quality scores for the strains in Uniform Group VI, 1968

	Hood	Lee	Lee 68	Pickett	Davis	D64-3937
			East Coast			
Queenstown, Md.	2.0	2.0	3.0	3.0	2.0	2.0
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Painter, Va.	1.2	2.7	2.5	3.3	2.0	2.0
Warsaw, Va.	1.7	1.6	1.5	1.7	1.6	1.3
Petersburg, Va.	1.0	1.0	1.0	1.0	2.0	1.0
Holland, Va.	2.0	2.0	1.0	2.0	2.0	2.0
Plymouth, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Willard, N.C.	1.5	1.0	1.0	1.0	1.0	1.0
			Southeast			
Quincy, Fla.	2.0	3.0	3.0	3.0	1.0	2.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.3	1.7	2.3	1.0	2.3
Baton Rouge, La.	4.0	3.0	4.0	2.0	3.3	4.0
			Upper and Central South			
Clemson, S.C.	2.5	2.5	2.5	2.5	2.0	3.0
Experiment, Ga.	1.5	1.5	1.8	2.3	2.7	3.0
			Delta			
Portageville, Mo.(A)	2.2	2.0	2.0	2.3	2.2	2.2
Portageville, Mo.(B)	2.2	2.0	2.0	2.2	2.3	2.0
Keiser, Ark.	2.8	2.7	2.5	3.0	2.5	2.2
Marianna, Ark.	3.0	2.5	2.5	3.8	2.8	2.5
Stoneville, Miss.(A)	2.3	2.0	1.7	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.3	2.0	2.0
St. Joseph, La.	3.0	1.3	2.3	3.0	2.7	3.0
			West			
Stuttgart, Ark.	2.0	1.8	1.8	2.2	1.5	2.0
Curtis, La.	1.2	1.8	1.8	1.5	1.3	1.3
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0

Table 35. - (continued)

Location	D64-4636	R64-502	D67-B5	N62-2144	N64-1758	R65-37
			East Coast			
Queenstown, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Linkwood, Md.	2.0	2.0	2.0	2.0	2.0	2.0
Painter, Va.	2.0	2.0	2.5	1.5	1.7	1.8
Warsaw, Va.	1.5	1.5	1.9	1.8	1.6	1.4
Petersburg, Va.	2.0	1.0	1.0	1.0	2.0	1.0
Holland, Va.	2.0	2.0	1.5	2.0	2.0	1.5
Plymouth, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Willard, N.C.	1.0	1.0	1.0	1.5	1.0	1.5
			Southeast			
Quincy, Fla.	4.0	4.0	3.0	3.0	2.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.3	1.0	1.3	1.3	1.0	1.0
Baton Rouge, La.	4.3	4.3	3.0	4.7	3.0	4.0
			Upper and Central South			
Clemson, S. C.	3.0	2.0	3.0	2.0	2.5	2.5
Experiment, Ga.	1.5	2.0	1.7	2.2	2.8	2.2
			Delta			
Portageville, Mo.(A)	2.2	2.0	2.0	2.0	2.3	2.2
Portageville, Mo.(B)	2.0	2.0	2.3	2.2	2.2	2.0
Keiser, Ark.	3.5	2.3	2.5	4.2	2.3	2.5
Marianna, Ark.	2.8	2.3	2.7	3.7	2.8	2.5
Stoneville, Miss.(A)	2.0	2.0	2.0	2.3	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, La.	2.3	2.0	1.7	3.0	3.0	2.7
			West			
Stuttgart, Ark.	2.2	1.5	1.8	2.7	1.5	2.5
Curtis, La.	1.3	1.4	1.8	2.1	1.2	1.0
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0

PRELIMINARY GROUP VI

1968

Preliminary Group VI nurseries, including 34 experimental strains and the two check varieties Hood and Lee, were grown at seven locations. The parentage of these strains is reported in Table 36. Performance data are summarized in Tables 37 through 42. Differences in seed yield were significant at the 5% level of confidence in six of the seven plantings. The combined analysis of variance for seed yield showed differences among strains to be significant. One strain yielded significantly above Hood, while there were four strains which yielded significantly less than Hood. There were eight strains which ranked above Lee in mean seed yield.

D66-11,003, -11,005, and -11,010 represent types with narrow leaf, extra-narrow leaf, and oval leaf in a largely D49-2491 background. D66-11,005 and -11,010 had mean yields identical to Lee. The mean yield of D66-11,003 was slightly lower than that of Lee.

D68-B2 is another Lee type having resistance to phytophthora rot and cyst nematodes. Its mean yield was 3 bushels higher than that of Lee. Field appearance was similar to that for Lee.

Several strains showed a rather high percentage of seed coat mottling at Petersburg and Plymouth. Twenty-eight strains had 1% or less of the seed showing mottling.

Lee and 28 strains were significantly lower in oil content than Hood, while Lee and 27 strains were significantly higher in protein content than Hood. Twelve strains were significantly higher in protein content than Lee. D66-7398, the strain having the highest protein percentage, had a mean seed yield significantly below that of Lee and had a greater percentage of mottled seed. This strain also has yellow hilum. D65-5595 yielded within the range of experimental error of Lee, was 14% higher in protein content, and was 12% lower in oil content.

Strains which appear to merit being advanced to Uniform Group VI are: N66-1221, N66-1783, D68-B2, V66-185, N66-1231, and N66-5236.

Table 36. - Parentage of the strains in Preliminary VI, 1968

	Variety or strain	Parentage	Generation composited
1.	Hood		
2.	Lee		
3.	D64-5149	D49-2491(5) x PI 163,453	F_5
4.	D65-2874	Hill x D62-6346	F_5
5.	D65-3622	Hill x PI 187,155	F_7
6.	D65-3844	D53-142 x PI 96983	F_7
7.	D65-5447	D49-2491(4) x PI 163,453	F_6
8.	D65-5595	D49-2491(4) x PI 163,453	F_6
9.	D65-6562	D61-475 x D61-2624	F_5
10.	D66-5971	D63-6107 x D60-9647	F_5
11.	D66-7138	Hill x D60-7908	F_5
12.	D66-7163	Hill x D60-7908	F_5
13.	D66-7398	D61-3505 x (PI 96035 x D61-2624)	F_5
14.	D66-7471	D49-2491 x PI 172,902	F_5
15.	D66-7667	Hill x D58-10,054	F_5
16.	D66-7995	D61-618 x D58-10,054	F_5
17.	D66-11,003	D63-3991 x D62-7816	F_3
18.	D66-11,005	D63-3991 x D62-7816	F_3
19.	D66-11,010	D63-3991 x D62-7816	F_3
20.	D68-B2	Pickett x P.R. resistant Lee	F_3
21.	F66-728	Bragg x D60-8107	F_5
22.	N66-1221	N56-4202 x N57-6801	F_4
23.	N66-1231	N56-4202 x N57-6801	F_4
24.	N66-1783	N56-4202 x N57-6801	F_4
25.	N66-1843	N56-4202 x N57-6801	F_4
26.	N66-5073	N56-4202 x D61-3505	F_4
27.	N66-5099	N56-4202 x D61-3505	F_4
28.	N66-5236	N56-4202 x D61-3505	F_4
29.	N66-5451	N56-4202 x D61-3505	F_4
30.	R65-488	(R54-168 x Hill) x (Lee x Dortch 110)	F_5
31.	R65-515	(R54-168 x Hill) x (Lee x Dortch 110)	F_5
32.	R66-100A	Hood(6) x Arksoy	F_4
33.	R67-450	Cyst-resistant Lee type	
34.	V66-52	J22 x Ogden	F_6
35.	V66-176	Lee x S5-7075	F_6
36.	V66-185	Lee x S5-7075	F_6

Table 37. - General summary of performance for the strains in Preliminary Group VI, 1968

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	Seed holding	B.P.	P.R.	Percent mottled seed
Hood	37.7	10-10	34	22.8	36.5	2.0	1.0	1.5	0.0
Lee	38.1	+14	33	21.9-	38.2+	1.0	1.0	1.0	0.0
D64-5149	35.7	+8	31	19.6-	40.6+	1.0	1.0	2.0	0.0
D65-2874	34.8	+2	41	20.5-	38.2+	2.0	1.0	1.0	1.0
D65-3622	37.0	+4	30	20.4-	39.4+	2.0	1.0	1.0	25.0
D65-3844	33.7	+4	33	18.5-	41.3+	2.0	1.0	1.0	0.0
D65-5447	30.1-	+7	29	18.4-	43.5+	1.0	1.0	1.0	0.0
D65-5595	34.4	+13	32	19.2-	43.4+	1.0	1.0	1.0	10.0
D65-6562	33.5	+11	31	19.4-	42.1+	1.0	1.0	1.0	20.0
D66-5971	37.2	+9	31	19.7-	40.5+	2.0	1.0	1.0	0.0
D66-7138	31.2-	+3	31	17.5-	44.0+	1.0	1.0	1.0	0.0
D66-7163	28.4-	0	29	19.7-	43.7+	2.0	1.0	1.0	0.0
D66-7398	32.9-	+14	30	16.5-	45.9+	1.0	1.0	1.0	30.0
D66-7471	34.4	+12	29	21.2-	40.7+	1.0	1.0	1.0	25.0
D66-7667	37.7	+6	33	20.8-	38.5+	1.0	1.0	1.0	70.0
D66-7995	37.7	+11	33	21.1-	38.9+	1.0	1.0	1.0	20.0
D66-11,003	36.9	+11	34	21.7-	38.6+	1.0	1.0	1.0	0.0
D66-11,005	38.1	+4	31	21.5-	38.1+	1.0	1.0	1.0	0.0
D66-11,010	38.3	+10	29	21.2-	39.4+	1.0	1.0	1.0	0.0
D68-B2	41.2	+15	34	22.3	38.9+	1.0	1.0	1.0	0.0
F66-728	33.7	+13	35	21.6-	38.1+	1.0	1.0	1.0	10.0
N66-1221	42.5+	+13	38	21.3-	37.8+	1.0	1.0	1.0	0.0
N66-1231	39.7	+3	36	22.7	38.6+	1.0	1.0	1.0	0.0
N66-1783	41.3	+8	38	22.0	38.6+	2.0	1.0	1.0	0.0
N66-1843	37.7	+10	40	21.7-	37.3	1.0	1.0	3.0	0.0
N66-5073	34.8	+10	33	21.4-	39.3+	1.0	1.0	1.0	0.0
N66-5099	38.0	+3	29	21.5-	40.1+	1.0	1.0	1.0	0.0
N66-5236	39.1	+6	30	20.0-	40.0+	1.0	1.0	2.0	0.0
N66-5451	36.5	+12	31	21.0-	39.7+	1.0	1.0	1.0	0.0
R65-488	34.2	-1	31	21.8-	37.1	1.0	1.0	1.0	0.0
R65-515	37.6	+3	34	22.0	37.7	1.0	1.0	1.0	5.0
R66-100A	39.3	+2	34	21.0-	39.0+	2.0	1.0	1.0	0.0
R67-450	35.1	+9	31	22.5	37.3	1.0	1.0	1.0	0.0
V66-52	34.5	+1	31	20.8-	37.7	1.0	3.0	2.0	1.0
V66-176	39.6	-2	31	22.4	37.3	2.0	1.0	1.0	0.0
V66-185	39.8	+12	30	22.0	37.5	1.0	1.0	1.0	0.0
L.S.D.(.05)	4.7			0.8	1.4				
L.S.D.(.01)	6.2			1.1	1.9				

Table 38. - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1968

Strain	Petersburg, Va.*	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)	Jay, Fla.
Hood	18.8	51.6	31.1	19.0	39.7	47.9	37.1
Lee	16.0	58.4	27.5	29.6+	40.2	44.9	28.0
D64-5149	13.0	46.6	28.7	24.2+	38.6	44.5	31.4
D65-2874	15.4	50.0	28.2	23.9	35.7	39.7-	31.4
D65-3622	15.8	49.5	30.3	29.0+	41.5	43.4	28.4
D65-3844	13.4	46.0	27.2	27.8+	34.0	37.6-	29.9
D65-5447	13.0	37.8-	21.7-	18.5	37.7	39.5-	25.4-
D65-5595	15.0	45.3	27.7	26.9+	37.3	40.9-	28.4
D65-6562	13.1	43.2	29.7	27.5+	31.9-	38.3-	30.3
D66-5971	12.6	49.9	33.3	29.1+	42.6	43.6	24.6-
D66-7138	11.6	42.1	25.5	19.2	35.5	38.4-	26.5-
D66-7163	12.1	32.7-	23.4-	23.6	30.0-	32.1-	28.8
D66-7398	13.2	36.3-	24.8	25.6+	37.8	42.7-	30.3
D66-7471	12.2	41.7	27.6	30.1+	42.9	38.6-	25.8-
D66-7667	18.2	46.6	36.5	33.5+	36.1	41.7-	31.8
D66-7995	15.5	47.7	28.2	32.9+	30.7-	45.7	41.3
D66-11,003	12.1	45.7	29.2	25.3+	39.1	51.0	31.0
D66-11,005	19.4	54.4	32.3	27.8+	40.7	46.0	27.6-
D66-11,010	11.8	51.4	31.0	27.7+	45.4	46.2	28.4
D68-B2	15.2	48.4	31.0	35.1+	44.3	45.9	42.7
F66-728	15.7	47.4	24.6	14.5	41.1	40.6-	34.1
N66-1221	14.4	56.6	30.8	27.1+	54.8+	51.3	34.5
N66-1231	17.0	50.9	30.8	23.5	51.9+	46.7	34.8
N66-1783	10.8	53.5	29.8	27.5+	52.8+	51.6	32.9
N66-1843	10.8	56.7	30.2	16.3	51.2+	42.9	28.8
N66-5073	11.7	48.7	23.6	21.6	41.8	45.0	28.0
N66-5099	16.4	47.1	32.5	32.0+	42.9	42.8	31.0
N66-5236	20.9	48.4	32.5	24.4+	41.5	50.7	37.1
N66-5451	12.5	48.6	29.2	26.7+	35.9	46.1	32.9
R65-488	17.8	41.7	29.9	23.2	46.0	43.4	20.8-
R65-515	14.6	48.9	31.5	28.2+	41.7	47.2	28.4
R66-100A	15.8	51.9	29.5	30.9+	41.7	48.7	33.3
R67-450	14.2	48.5	26.4	20.9	43.1	41.6-	30.3
V66-52	10.8	43.7	24.7	17.7	45.7	44.2	31.0
V66-176	17.5	52.5	31.1	23.3	54.6+	44.9	31.4
V66-185	15.3	53.4	31.4	27.8+	48.2+	50.5	27.6-
L.S.D.(.05)	N.S.	11.0	7.4	5.1	7.3	5.2	9.5
C.V.	22%	11%	13%	10%	9%	6%	15%

*Not included in mean.

Table 39. - Oil percentages for the strains in Preliminary Group VI, 1968

Strain	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Hood	22.9	22.3	22.7	22.5	23.7
Lee	22.2	20.5	21.7	22.7	22.4
D64-5149	19.6	18.4	20.7	19.2	20.2
D65-2874	20.8	20.6	19.9	20.8	20.6
D65-3622	20.1	20.1	20.0	20.9	20.8
D65-3844	19.6	17.6	18.3	18.8	18.4
D65-5447	18.3	18.9	18.5	18.0	18.4
D65-5595	18.1	20.9	19.8	17.6	19.4
D65-6562	18.9	20.2	19.8	17.9	20.4
D66-5971	19.8	19.2	19.5	20.3	19.7
D66-7138	17.5	17.9	17.9	17.0	17.4
D66-7163	19.4	20.6	20.1	18.6	19.7
D66-7398	17.6	16.0	15.9	16.2	17.0
D66-7471	21.3	20.9	21.8	20.8	21.1
D66-7667	22.1	20.2	20.9	20.0	20.7
D66-7995	21.3	21.1	20.6	20.9	21.6
D66-11,003	21.8	21.4	21.9	21.6	21.9
D66-11,005	22.0	21.5	21.2	20.9	21.8
D66-11,010	21.7	20.3	20.9	21.4	21.8
D68-B2	22.6	20.8	22.2	22.8	23.0
F66-728	21.4	20.8	22.2	21.9	21.8
N66-1221	21.4	20.5	21.2	21.5	22.1
N66-1231	22.8	22.2	23.7	22.3	22.6
N66-1783	21.5	22.2	21.7	22.2	22.4
N66-1843	21.4	22.1	21.5	21.6	21.7
N66-5073	20.9	20.3	22.1	21.9	21.6
N66-5099	21.5	20.8	22.8	21.4	20.9
N66-5236	20.1	19.5	19.9	20.0	20.4
N66-5451	21.2	20.8	20.1	21.3	21.7
R65-488	20.7	21.8	23.3	21.6	21.8
R65-515	22.1	21.5	22.0	21.9	22.3
R66-100A	21.8	18.0	21.6	21.5	21.9
R67-450	22.9	21.8	22.2	22.6	23.1
V66-52	21.1	21.0	20.8	20.5	20.4
V66-176	22.4	22.7	21.5	23.1	22.4
V66-185	22.1	21.8	21.6	21.9	22.6

Table 40. - Protein percentages for the strains in Preliminary Group VI, 1968

Strain	Plymouth, N.C.	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(A)	Stoneville, Miss.(B)
Hood	38.2	35.6	36.1	37.2	35.3
Lee	40.6	37.4	35.9	38.8	38.5
D64-5149	43.4	39.9	37.5	42.0	40.4
D65-2874	38.9	41.2	35.8	38.0	37.0
D65-3622	41.5	41.1	36.4	39.1	38.7
D65-3844	43.2	43.0	40.2	40.4	39.9
D65-5447	46.0	45.2	40.0	43.0	43.5
D65-5595	46.4	42.3	40.1	46.0	42.3
D65-6562	43.3	43.5	39.6	43.2	41.0
D66-5971	42.7	42.0	38.0	40.1	39.9
D66-7138	44.7	45.7	42.0	44.1	43.4
D66-7163	44.6	46.2	41.9	44.5	41.5
D66-7398	47.4	46.5	46.7	44.5	44.2
D66-7471	43.5	41.6	38.4	40.4	39.8
D66-7667	39.6	38.6	36.9	39.7	37.7
D66-7995	40.7	40.2	36.6	40.3	36.6
D66-11,003	41.7	37.6	36.1	39.0	38.4
D66-11,005	40.8	37.7	36.5	39.7	36.0
D66-11,010	40.8	39.8	36.7	40.2	39.4
D68-B2	39.7	40.3	37.5	39.0	37.9
F66-728	42.0	36.9	35.5	38.9	37.2
N66-1221	41.9	33.9	37.0	38.0	38.0
N66-1231	42.6	37.9	36.4	38.6	37.6
N66-1783	41.1	37.7	37.2	38.9	37.9
N66-1843	39.5	37.7	35.9	37.2	36.0
N66-5073	40.7	40.5	38.0	39.0	38.5
N66-5099	41.9	40.8	39.8	38.7	39.5
N66-5236	40.5	41.5	39.5	39.5	38.9
N66-5451	40.5	40.4	39.1	39.5	39.0
R65-488	39.8	37.4	33.5	38.1	36.6
R65-515	39.5	37.5	34.7	39.6	37.2
R66-100A	39.7	42.9	37.1	38.6	36.7
R67-450	40.0	36.4	35.7	37.6	36.6
V66-52	39.6	37.2	36.0	38.9	37.0
V66-176	39.6	37.6	35.3	37.5	36.7
V66-185	39.7	37.9	35.0	37.8	37.1

Table 41. - Plant height for the strains in Preliminary Group VI, 1968

Strain	Peters-burg, Va.	Plymouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.(A)	Stone-ville, Miss.(B)	Jay, Fla.
Hood	29	38	36	30	39	36	30
Lee	33	39	36	30	33	34	26
D64-5149	31	33	34	30	32	33	26
D65-2874	36	47	42	40	44	44	36
D65-3622	25	34	31	30	30	33	25
D65-3844	31	36	35	32	31	36	30
D65-5447	28	30	31	29	32	33	21
D65-5595	31	32	32	34	30	35	31
D65-6562	28	34	33	30	32	33	25
D66-5971	29	32	34	34	29	33	24
D66-7138	28	33	31	29	32	35	29
D66-7163	21	31	30	27	30	33	28
D66-7398	26	32	31	29	30	34	26
D66-7471	26	30	30	29	29	33	27
D66-7667	30	36	35	31	36	33	31
D66-7995	29	35	36	34	33	34	29
D66-11,008	33	38	33	34	35	35	28
D66-11,005	28	34	31	32	33	33	25
D66-11,010	26	34	31	29	27	34	21
D68-B2	31	39	37	32	34	34	31
F66-728	31	38	37	36	34	36	32
N66-1221	31	42	39	36	41	40	34
N66-1231	28	43	37	31	40	37	33
N66-1783	36	40	41	37	41	37	37
N66-1843	36	45	45	39	39	38	35
N66-5073	30	37	35	33	33	35	30
N66-5099	28	32	30	27	31	34	24
N66-5236	27	33	33	26	33	33	25
N66-5451	29	35	36	27	32	34	24
R65-488	32	35	34	28	36	35	19
R65-515	28	37	38	36	33	37	31
R66-100A	26	37	38	35	35	36	31
R67-450	28	35	32	30	33	32	24
V66-52	32	33	34	27	28	33	27
V66-176	30	33	33	28	31	33	27
V66-185	28	32	33	30	30	34	24

Table 42. - Seed quality scores for the strains in Preliminary Grou VI, 1968

Strain	Peters-burg, Va.	Plymouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.(A)	Stone-ville, Miss.(B)	Jay, Fla.
Hood	2.0	1.5	2.3	3.0	2.0	2.0	1.0
Lee	1.0	1.0	2.0	2.8	2.0	2.0	1.0
D64-5149	1.0	1.0	2.0	2.8	2.0	2.0	1.0
D65-2874	1.0	1.0	2.3	2.8	2.0	2.0	1.0
D65-3622	3.0	2.0	2.8	3.3	2.0	2.0	1.0
D65-3844	1.0	2.0	2.5	3.5	2.0	3.0	1.0
D65-5447	1.0	1.5	2.0	2.8	2.0	2.0	1.0
D65-5595	1.0	1.0	2.0	3.0	2.0	2.0	1.0
D65-6562	1.0	1.0	2.0	2.8	2.0	2.0	2.0
D66-5971	4.0	2.0	2.5	3.5	2.0	2.0	1.0
D66-7138	1.0	1.5	2.3	2.8	2.0	2.0	1.0
D66-7163	2.0	1.5	2.0	2.8	3.0	2.0	1.0
D66-7398	1.0	1.5	2.5	3.5	2.0	2.0	1.0
D66-7471	2.0	1.5	2.5	2.8	2.0	2.0	1.0
D66-7667	4.0	1.5	2.0	3.5	2.0	2.0	1.0
D66-7995	2.0	1.5	2.3	2.5	2.0	2.0	1.0
D66-11,003	2.0	1.0	2.0	3.3	2.0	2.0	1.0
D66-11,005	1.0	1.0	1.8	2.3	2.0	2.0	1.0
D66-11,010	1.0	1.0	2.0	2.5	2.0	2.0	1.0
D68-B2	1.0	1.0	2.0	2.8	2.0	2.0	1.0
F66-728	2.0	1.5	2.8	3.8	2.0	2.0	2.0
N66-1221	1.0	1.0	2.0	2.8	2.0	2.0	1.0
N66-1231	2.0	1.5	2.0	2.8	2.0	2.0	1.0
N66-1783	3.0	2.0	2.3	3.0	2.0	2.0	1.0
N66-1843	1.0	1.0	2.0	2.8	2.0	2.0	1.0
N66-5073	2.0	1.5	2.3	3.3	2.0	2.0	1.0
N66-5099	1.0	1.0	2.0	2.5	2.0	2.0	1.0
N66-5236	1.0	1.5	2.0	3.0	2.0	2.0	1.0
N66-5451	2.0	1.5	2.3	3.0	2.0	2.0	1.0
R65-488	1.0	1.5	2.0	2.5	2.0	2.0	1.0
R65-515	2.0	2.0	2.3	2.8	2.0	2.0	1.0
R66-100A	2.0	1.5	2.0	2.5	2.0	2.0	1.0
R67-450	1.0	1.0	2.3	2.8	2.0	2.0	1.0
V66-52	2.0	1.0	2.0	3.5	2.0	2.0	1.0
V66-176	2.0	2.0	2.0	3.3	2.0	2.0	1.0
V66-185	3.0	1.0	2.0	2.5	2.0	2.0	1.0

UNIFORM GROUP VII

1968

	Variety or strain	Parentage	Generation composited
1.	Bragg	Jackson x D49-2491	F_6
2.	Semmes	D51-5427 x D49-2491	F_6
3.	D58-4384	D51-5052 x D49-2491	F_5
4.	F64-1683	Hardee x D53-1301	F_5
5.	F64-1881	F57-1471 x D53-1301	F_5
6.	N63-858	D58-3358 x D59-9289	F_5
7.	N63-1131	D58-3358 x D59-9289	F_5
8.	N64-2430	(N55-3843 x N55-2908) x D56-1185	F_5
9.	N64-2451	(N55-3843 x N55-2908) x D56-1185	F_5
10.	D65-6765	D58-3358 x D59-9289	F_5
11.	F65-1376	(F55-224 x D55-4073) x (F58-5788 x D56-4065)	F_5
12.	F65-1753	Bragg x D60-8107	F_4

Background of strains used as parents:

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

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

D51-5052 is a selection from Roanoke x N45-745. It was grown in Uniform Group VII for the years 1954-1957.

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

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

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

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

N55-3843 is a selection from (N45-2994 x Ogden) x (N44-92 x N48-1867) which was grown in Preliminary VI in 1957. N45-2994 is from Arksoy x Ogden, N44-92 is from Haberlandt x Ogden, and N48-1867 is from Roanoke x N45-745.

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

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

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

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

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

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

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Thirty Uniform Group VII nurseries were planted. Results of 26 nurseries are summarized in Tables 43 through 49. Table 43 gives a general summary of agronomic qualities, chemical composition of the seed, and field reaction to several diseases. Two and three year data are reported for seed yield and oil and protein percentages.

Seed yields were low at several East Coast and Southeast locations, because of severe drouth stress. Seed yield differences among strains were significant at the 5% level of confidence at 18 of the 26 locations. The combined analysis of variance for mean seed yields by production regions showed differences among strains to be significant at the 5% level of confidence in all production regions except the East Coast.

There were no experimental strains in test for 3 years. Semmes has a lower 3-year mean in all production regions than Bragg. Semmes was released for production on low, poorly drained clay soils. Semmes has a higher protein content and lower oil content than Bragg.

Five strains have been grown 2 years. D58-4384 had demonstrated good adaptation to the muck soils of central Florida. Its 2-year mean yield is not superior to that for Bragg. F64-1683 has yielded well in the East and Southeast and has a higher protein content than Bragg. F64-1881 has not shown any superiority over Bragg except in the Upper and Central region. N63-858 and N63-1131 yielded well in all regions but are weak in seed holding.

There were also five strains included in the group for the first time. N64-2430 averaged above Bragg in all regions. Protein content appears to be rather low. Seed yields for N64-2451 were also good but somewhat lower than for N64-2430. Protein percentage is rather low. D65-6765 and F65-1376 were selected for higher protein content of the seed. D65-6765 was the earliest maturing strain in the group. It yielded significantly less than Bragg in the Southeast but equalled Bragg in seed yield in the Delta and West. F65-1376 equalled in all areas except the Delta and West. F65-1753 yielded well in all areas.

Table 43. - General summary of performance for the strains in Uniform Group VII, 1968

	Bragg	Semmes	D58-4384	F64-1683	F64-1881	N63-858
Seed Yield - 1968						
East Coast	28.3	27.4	25.6	28.2	26.1	29.1
Southeast	29.7	28.0	30.8	30.3	29.7	32.4
Upper & Central South	35.8	31.8	35.2	37.6	38.3	39.8
Delta & West	42.9	39.1-	40.9	39.1-	42.2	43.6
1967-68						
East Coast	34.7	32.0	32.0	34.7	32.4	35.7
Southeast	35.6	32.9	35.6	36.2	34.9	37.4
Upper & Central South	38.0	36.4	37.8	36.6	39.3	41.6
Delta & West	42.0	37.4	40.4	36.7	41.3	42.1
1966-68						
East Coast	36.0	33.3				
Southeast	36.9	33.6				
Upper & Central South	35.8	33.7				
Delta & West	43.1	38.2				
Oil Content - 1968	21.8	21.3	22.4+	20.9-	21.2-	20.5-
- 1967-68	21.7	21.0	22.3	20.2	21.2	20.4
- 1966-68	21.5	20.9				
Protein Content - 1968	40.9	41.3	40.4	42.5+	40.5	41.9+
- 1967-68	40.5	41.6	40.6	42.7	40.7	41.9
- 1966-68	40.5	41.4				
Seed size	14.4	14.3	13.6	14.3	11.7-	14.6
Maturity index	10-22	-2	+4	+4	+1	0
Height	37	32	32	37	34	34
Shattering	1.0	1.3	1.5	1.0	2.0	4.0
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	1.3	1.0	1.0	2.0	1.8	2.0
Flower color	W	P	P	P	W	W
Pubescence color	T	G	G	T	T	T
Pod wall color	T	T	T	T	T	T

Table 43. - (continued)

	N63-1131	N64-2430	N64-2451	D65-6765	F65-1376	F65-1753
Seed Yield - 1968						
East Coast	28.0	30.6	30.1	27.8	28.7	27.7
Southeast	31.6	30.5	27.9	25.5-	29.4	30.7
Upper & Central South	41.7+	41.1+	37.4	33.7	36.8	38.1
Delta & West	42.0	45.8	42.6	43.0	41.6	43.0
- 1967-68						
East Coast	35.3					
Southeast	36.7					
Upper & Central South	42.5					
Delta & West	40.2					
- 1966-68						
East Coast						
Southeast						
Upper & Central South						
Delta & West						
Oil Content - 1968	21.9	23.7+	23.5+	19.5-	20.9-	21.9
- 1967-68	21.8					
- 1966-68						
Protein Content - 1968	39.8-	39.6-	38.9-	44.2+	43.8+	40.5
-1967-68	39.9					
-1966-68						
Seed size	13.6	15.6+	15.9+	12.1-	14.9	15.0
Maturity index	0	0	-1	-3	+5	0
Height	33	32	30	34	37	38
Shattering	3.0	1.2	2.0	2.8	1.3	1.0
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	2.0	3.0	3.0	1.0	1.0	1.0
Flower color	W	P	P	W	P	W
Pubescence color	T	T	T	T	T	T
Pod wall color	T	B	B	T	T	T

Table 44. - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1968

Location	Bragg	Semmes	D58-4384	F64-1683	F64-1881	N63-858	N63-1131
			East Coast				
Rocky Mount, N.C.	31.2	26.5	24.2-	28.8	25.9	29.5	29.8
Willard, N.C.	43.2	39.0	35.6	40.9	39.1	45.5	44.1
Florence, S.C.(A)	25.4	29.9	26.7	27.4	28.6	29.9	26.9
Florence, S.C.(B)	30.2	23.5	19.6-	25.6	23.9	28.6	21.2-
Myrtle Beach, S.C.	20.0	23.0	22.6	23.5	21.4	15.7	21.2
Hartsville, S.C.(A)	19.9	22.6	24.7	23.0	17.7	25.6+	24.7
Mean	28.3	27.4	25.6	28.2	26.1	29.1	28.0
			Southeast				
Blackville, S.C.*	6.6	6.1	6.1	7.8	7.5	10.3+	8.7
Tallassee, Ala.*	15.9	10.0	25.0+	19.3	18.4	10.2	11.8
Tifton, Ga.	23.0	23.7	20.9	23.5	21.2	31.5+	30.8+
Gainesville, Fla.	33.9	23.4	19.5-	25.8-	25.1-	30.6	30.4
Live Oak, Fla.	29.2	28.0	32.2	29.8	25.9	33.2	33.8
Marianna, Fla.	24.5	20.6-	23.0	21.5-	21.3-	23.0	20.3-
Quincy, Fla.	33.3	31.0	38.1	36.4	33.3	37.3	38.6+
Jay, Fla.	40.1	37.6	40.1	37.3	39.8	44.1	34.0
Fairhope, Ala.	27.7	29.4	34.8+	31.6	31.9	29.9	31.4
Baton Rouge, La.	26.1	30.1	37.5+	36.3+	38.9+	29.7	33.8
Mean	29.7	28.0	30.8	30.3	29.7	32.4	31.6
			Upper and Central South				
Clemson, S.C.	33.2	31.5	31.9	34.7	36.9	40.4+	41.9+
Experiment, Ga.	38.4	32.2	38.7	40.6	39.7	39.2	41.4
Mean	35.8	31.8	35.2	37.6	38.3	39.8	41.7+
			Delta and West				
Stoneville, Miss.(A)	43.8	43.6	42.2	47.6	45.2	49.6	49.3
Stoneville, Miss.(B)	46.8	37.8-	39.1-	41.0	41.5	43.9	43.2
Stuttgart, Ark.	40.8	35.0-	40.5	39.6	36.8-	40.3	37.0
Rohwer, Ark.	41.0	35.5	42.7	31.3-	39.1	37.9	32.3-
St. Joseph, La.	54.1	48.0	52.1	51.7	52.7	55.4	55.6
Curtis, La.	37.9	38.2	38.2	36.8	44.3	37.2	35.0
Crowley, La.	44.3	39.4-	39.9	32.9-	42.4	44.5	43.0
Beaumont, Texas	34.2	35.1	32.4	32.0	35.6	40.0	40.5
Mean	42.9	39.1-	40.9	39.1-	42.2	43.6	42.0

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

*Not included in mean.

Table 44. - (continued)

Location	N64-2430	N64-2451	D65-6765	F65-1376	F65-1753	L.S.D. (.05)	C.V.
			East Coast				
Rocky Mount, N.C.	36.5+	34.5	25.9	28.4	26.4	5.2	11%
Willard, N.C.	41.8	34.9	41.2	39.8	40.2	N.S.	12%
Florence, S.C.(A)	23.2	30.9	26.4	24.7	28.9	N.S.	16%
Florence, S.C.(B)	30.0	31.3	28.4	28.8	27.7	7.2	16%
Myrtle Beach, S.C.	26.7	21.2	21.0	25.4	19.2	N.S.	16%
Hartsville, S.C.(A)	25.3	28.0+	23.9	24.9	23.7	5.7	14%
Mean	30.6	30.1	27.8	28.7	27.7	N.S.	
			Southeast				
Blackville, S.C.*	12.7+	11.4+	9.9+	7.7	6.8	2.6	18%
Tallassee, Ala.	18.4	16.3	10.2	16.1	18.6	6.0	22%
Tifton, Ga.	26.9+	28.3+	22.9	26.4	22.5	3.4	8%
Gainesville, Fla.	28.5	25.6-	21.9-	31.3	35.2	5.8	13%
Live Oak, Fla.	34.2	28.1	24.8	31.8	28.9	5.9	8%
Marianna, Fla.	22.3	18.2-	17.6-	21.3-	22.8	2.9	8%
Quincy, Fla.	33.8	27.5-	26.0-	28.6	33.4	5.0	9%
Jay, Fla.	41.4	33.8	31.8	34.8	40.1	N.S.	12%
Fairhope, Ala.	30.6	35.4+	25.5	26.0	30.4	5.2	10%
Baton Rouge, La.	26.8	26.5	33.5	35.2+	32.0	8.5	16%
Mean	30.5	27.9	25.5-	29.4	30.7	3.4	
			Upper and Central South				
Clemson, S. C.	38.5+	38.1+	35.6	35.0	35.9	4.2	8%
Experiment, Ga.	43.6	36.8	31.8	38.5	40.2	N.S.	11%
Mean	41.1+	37.4	33.7	36.8	38.1	4.2	
			Delta and West				
Stoneville, Miss.(A)	49.6	48.1	46.7	42.9	45.5	N.S.	11%
Stoneville, Miss.(B)	42.8	34.9-	43.2	43.8	48.6	6.1	9%
Stuttgart, Ark.	43.0	38.9	39.9	35.3-	40.8	3.9	6%
Rohwer, Ark.	32.9-	28.0-	41.1	37.9	33.8	7.3	12%
St. Joseph, La.	58.2	63.3+	53.0	53.0	56.6	6.6	7%
Curtis, La.	49.1	45.2	38.1	37.3	38.6	N.S.	15%
Crowley, La.	45.5	43.3	39.6	40.5	42.8	4.8	7%
Beaumont, Texas	45.7	39.6	41.9	42.0	37.2	N.S.	14%
Mean	45.8	42.6	43.0	41.6	43.0	3.4	

Table 45. - Chemical composition and seed size for the strains in Uniform Group VII, 1968

Location	Bragg	Semmes	D58-4384	F64-1683	F64-1881	N63-858	N63-1131
			Oil Percentage				
Willard, N.C.	21.5	20.7	21.6	20.9	19.9	20.6	22.2
Hartsville, S.C.(A)	19.8	19.6	21.8	19.7	19.7	19.8	20.5
Myrtle Beach, S.C.	21.7	21.0	22.2	20.2	21.2	20.3	21.9
Live Oak, Fla.	22.8	22.5	23.6	21.5	21.6	21.9	23.8
Jay, Fla.	23.6	23.2	23.5	22.9	22.8	21.2	22.5
Clemson, S.C.	20.1	20.3	20.6	19.8	19.7	19.5	20.8
Stoneville, Miss.(A)	21.9	21.7	22.3	21.1	21.6	20.2	21.2
Stoneville, Miss.(B)	21.5	20.8	22.4	20.8	21.6	20.7	21.8
St. Joseph, La.	22.4	21.4	23.5	20.8	22.1	20.5	22.3
Beaumont, Texas	22.7	22.0	22.3	21.5	22.1	20.1	22.3
Mean	21.8	21.3	22.4+	20.9-	21.2-	20.5-	21.9
			Protein Percentage				
Willard, N.C.	41.7	42.2	40.5	44.4	42.8	43.4	41.0
Hartsville, S.C.(A)	43.0	43.1	43.0	42.4	42.7	42.6	41.1
Byrtle Beach, S.C.	41.3	41.3	38.1	42.8	37.8	40.8	40.3
Live Oak, Fla.	41.8	41.5	41.0	44.2	41.7	42.6	39.3
Jay, Fla.	41.2	40.5	41.9	41.6	39.4	42.5	40.6
Clemson, S.C.	42.2	43.1	42.1	43.2	42.9	42.9	40.4
Stoneville, Miss.(A)	37.2	39.4	39.2	40.2	37.9	39.9	38.4
Stoneville, Miss.(B)	36.8	38.6	36.9	39.2	36.6	37.6	35.2
St. Joseph, La.	41.4	41.3	40.0	43.4	41.0	43.0	40.0
Beaumont, Texas	42.0	42.3	41.5	43.7	41.7	43.5	41.5
Mean	40.9	41.3	40.4	42.5+	40.5	41.9+	39.8-
			Grams per 100 Seeds				
Willard, N.C.	13.1	13.2	11.9	13.6	10.6	14.4	14.1
Hartsville, S.C.(A)	10.8	11.9	12.8	11.7	9.4	11.5	10.4
Tallassee, Ala.	13.3	12.7	15.7	14.3	12.3	12.3	12.3
Live Oak, Fla.	15.6	15.9	12.8	15.3	12.9	16.2	14.5
Jay, Fla.	15.3	16.0	15.4	14.9	12.4	15.6	13.3
Clemson, S.C.	12.0	12.7	12.7	14.0	10.7	13.0	13.7
Stoneville, Miss.(A)	15.2	15.2	13.7	14.2	11.8	16.0	15.4
Stoneville, Miss.(B)	16.5	15.5	14.8	16.1	12.3	15.2	14.5
St. Joseph, La.	17.1	15.0	13.0	15.8	12.7	16.3	14.2
Beaumont, Texas	15.0	15.0	13.0	13.0	12.0	15.0	14.0
Mean	14.4	14.3	13.6	14.3	11.7-	14.6	13.6

Table 45. - (continued)

Location	N64-2430	N64-2451	D65-6765	F65-1376	F65-1753	L.S.D. (.05)
			Oil Content			
Willard, N.C.	24.3	22.9	19.2	20.8	21.6	
Hartsville, S.C.(A)	22.1	22.1	17.8	19.9	20.3	
Myrtle Beach, S.C.	23.7	21.9	19.5	20.8	22.4	
Live Oak, Fla.	24.7	24.4	19.9	21.7	22.7	
Jay, Fla.	23.7	25.7	21.8	22.5	23.2	
Clemson, S.C.	21.6	21.6	19.1	20.1	20.5	
Stoneville, Miss.(A)	23.4	23.4	19.1	20.9	21.4	
Stoneville, Miss.(B)	24.0	24.2	19.7	20.0	21.9	
St. Joseph, La.	24.8	24.6	19.7	21.0	22.4	
Beaumont, Texas	24.8	24.4	19.4	21.0	22.6	
Mean	23.7+	23.5+	19.5-	20.9-	21.9	0.5
			Protein Ceontent			
Willard, N.C.	41.1	39.8	47.8	40.6	41.9	
Hartsville, S.C.(A)	41.9	41.3	47.1	45.8	42.9	
Myrtle Beach, S.C.	40.5	41.5	44.4	44.2	40.0	
Live Oak, Fla.	39.6	38.5	44.1	45.1	41.5	
Jay, Fla.	40.8	37.8	41.9	42.5	40.6	
Clemson, S.C.	39.3	40.2	43.2	44.6	40.6	
Stoneville, Miss.(A)	37.7	37.3	42.4	42.4	38.2	
Stoneville, Miss.(B)	35.5	35.0	40.4	42.4	37.1	
St. Joseph, La.	38.6	37.3	45.2	45.1	40.5	
Beaumont, Texas	41.1	40.4	45.8	44.9	41.4	
Mean	39.6-	38.9-	44.2+	43.8+	40.5	0.9
			Grams per 100 Seeds			
Willard, N.C.	14.4	13.5	11.8	14.0	14.4	
Hartsville, S.C.(A)	12.2	13.2	9.5	14.2	11.7	
Tallassee, Ala.	14.3	15.0	9.7	16.0	14.0	
Live Oak, Fla.	17.6	17.2	11.8	16.5	16.0	
Jay, Fla.	16.5	15.6	13.8	14.7	15.4	
Clemson, S.C.	16.0	16.5	11.3	14.0	13.5	
Stoneville, Miss.(A)	15.2	16.8	14.5	14.8	14.6	
Stoneville, Miss.(B)	17.4	17.4	12.4	16.6	17.3	
St. Joseph, La.	15.8	16.6	13.1	14.5	18.1	
Beaumont, Texas	17.0	17.0	13.0	14.0	15.0	
Mean	15.6+	15.9+	12.1-	14.9	15.0	0.9

Table 46. - Relative maturity data, days earlier (-) or later (+), than Bragg for the strains in Uniform Group VII, 1968

Location	Date planted	Bragg matured	Semmes	D58-4384	F64-1683	F64-1881
		East Coast				
Rocky Mount, N.C.	5-8	10-24	-4	-2	+4	+2
Willard, N.C.	5-9	10-22	-2	-2	+4	0
Florence, S.C.(A)	5-15	10-31	-5	+3	+3	-4
Hartsville, S.C.(A)	5-30	10-30	-4	+9	+8	+1
Mean		10-27	-4	+2	+5	0
		Southeast				
Tallassee, Ala.	5-14	10-18	-8	+6	+2	+1
Tifton, Ga.	5-22	10-15	0	+5	+5	+1
Gainesville, Fla.	6-14	10-18	-5	+5	+2	+2
Live Oak, Fla.	6-13	10-14	+1	+5	+6	+7
Marianna, Fla.	6-4	10-18	-6	+5	+4	+4
Quincy, Fla.	6-13	10-12	-3	+5	+6	+4
Jay, Fla.	6-3	10-14	-4	+2	+1	+3
Fairhope, Ala.	6-12	10-15	0	+8	+8	-3
Baton Rouge, La.	5-8	10-19	-1	+9	+5	+3
Mean		10-15	-3	+6	+4	+2
		Upper and Central South				
Clemson, S.C.	5-22	10-21	+3	+10	+9	+5
Experiment, Ga.	5-23	10-27	-1	+2	-1	0
Mean		10-24	+1	+6	+4	+3
		Delta and West				
Stoneville, Miss.(A)	5-9	10-28	-2	+1	+2	-1
Stoneville, Miss.(B)	5-30	10-25	-1	+3	+4	+4
Stuttgart, Ark.	5-27	10-27	-2	+6	0	-3
Rohwer, Ark.	6-6	11-2	0	+1	0	-1
St. Joseph, La.	5-9	10-22	0	0	+7	+1
Curtis, La.	5-30	10-23	0	0	+2	-3
Crowley, La.	5-21	10-23	-1	+5	0	+1
Beaumont, Texas	5-22	10-27	-1	+6	+2	+4
Mean		10-26	-1	+3	+2	0

Table 46. - (continued)

Location	N63-858	N63-1131	N64-2430	N64-2451	D65-6765	F65-1376	F65-1753
			East Coast				
Rocky Mount, N.C.	-2	-8	0	-2	-4	+4	-2
Willard, N.C.	-2	-4	-2	-4	-4	-2	-2
Florence, S.C.(A)	-6	-8	-9	-9	-8	0	-1
Hartsville, S.C.	-7	-8	10	-5	-12	+8	+2
Mean	-4	-7	-5	-5	-7	+3	0
			Southeast				
Tallassee, Ala.	-3	-4	-2	-3	-6	+5	0
Tifton, Ga.	+1	0	+4	+2	-7	+4	0
Gainesville, Fla.	-1	+3	+1	-2	-7	+6	+5
Live Oak, Fla.	+1	+1	+4	-1	-6	+6	+1
Marianna, Fla.	-6	+4	+2	+3	-6	+9	0
Quincy, Fla.	+3	+1	+6	0	-4	+7	+1
Jay, Fla.	+5	+3	+1	-1	-5	+7	-2
Fairhope, Ala.	+2	+5	0	0	-3	+8	+2
Baton Rouge, La.	+5	+4	+3	+4	+4	+5	+3
Mean	0	+2	+2	0	-4	+6	+1
			Upper and Central South				
Clemson, S.C.	+3	+4	0	+1	+1	+6	+2
Experiment, Ga.	0	0	0	-2	-1	-1	-2
Mean	+2	+2	0	0	0	+3	0
			Delta and West				
Stoneville, Miss.(A)	-2	0	-2	-2	-5	+1	-2
Stoneville, Miss.(B)	-2	-3	0	+1	-4	+5	+2
Stuttgart, Ark.	-2	-4	0	-3	-4	+5	-1
Rohwer, Ark.	+2	-3	-2	-4	-2	+2	0
St. Joseph, La.	+7	+7	+3	0	+7	+8	+4
Curtis, La.	0	0	+3	0	-2	+3	-2
Crowley, La.	+9	+7	+6	+1	+8	+8	+1
Beaumont, Texas	+1	+1	+4	-1	+2	+3	+4
Mean	+1	0	+1	-1	0	+4	0

Table 47. - Plant height for the strains in Uniform Group VII, 1968

Location	Bragg	Semmes	D58-4384	F64-1683	F64-1881	N63-858
			East Coast			
Rocky Mount, N.C.	48	42	39	48	39	45
Willard, N.C.	38	30	29	39	34	35
Florence, S.C.(A)	27	30	23	26	25	25
Florence, S.C.(B)	38	27	29	35	34	31
Myrtle Beach, S.C.	22	23	18	27	21	23
Hartsville, S.C.(A)	49	38	40	45	40	41
Mean	37	32	30	37	32	33
			Southeast			
Tallassee, Ala.	45	35	37	42	36	34
Tifton, Ga.	31	23	23	28	26	22
Gainesville, Fla.	29	24	22	26	28	23
Live Oak, Fla.	33	33	33	37	33	32
Marianna, Fla.	36	35	38	38	37	36
Quincy, Fla.	29	25	25	30	26	24
Jay, Fla.	37	32	32	36	35	34
Fairhope, Ala.	41	31	38	33	38	34
Baton Rouge, La.	30	29	37	35	32	28
Mean	35	30	31	34	32	30
			Upper and Central South			
Clemson, S.C.	42	38	37	42	37	41
Experiment, Ga.	41	33	30	37	36	34
Mean	42	36	34	40	37	38
			Delta and West			
Stoneville, Miss.(A)	45	38	38	47	39	43
Stoneville, Miss.(B)	42	41	35	40	37	41
Stuttgart, Ark.	45	37	34	42	35	32
Rohwer, Ark.	44	39	37	41	42	39
St. Joseph, La.	41	44	44	49	42	48
Curtis, La.	32	27	33	31	30	34
Crowley, La.	35	30	33	38	34	34
Beaumont, Texas	34	28	26	27	30	34
Mean	40	36	35	39	36	38

Table 47. - (continued)

Location	N63-1131	N64-2430	N64-2451	D65-6765	F65-1376	F65-1753
			East Coast			
Rocky Mount, N.C.	42	40	39	43	45	47
Willard, N.C.	35	32	25	35	39	41
Florence, S. C.(A)	22	23	25	25	23	28
Florence, S. C.(B)	30	34	31	38	38	36
Myrtle Beach, S. C.	21	20	21	22	23	24
Hartsville, S.C.(A)	39	40	40	43	44	49
Mean	32	32	30	34	35	38
			Southeast			
Tallassee, Ala.	35	33	30	38	41	43
Tifton, Ga.	24	22	19	23	28	31
Gainesville, Fla.	22	23	21	25	28	30
Live Oak, Fla.	32	28	24	30	36	35
Marianna, Fla.	34	33	32	35	39	41
Quincy, Fla.	21	22	19	25	32	29
Jay, Fla.	33	31	27	33	38	36
Fairhope, Ala.	34	34	33	37	41	40
Baton Rouge, La.	33	26	27	33	38	37
Mean	30	28	26	31	36	36
			Upper and Central South			
Clemson, S. C.	39	37	37	41	40	41
Experiment, Ga.	34	35	29	39	40	43
Mean	37	36	33	40	40	42
			Delta and West			
Stoneville, Miss.(A)	42	38	39	40	46	41
Stoneville, Miss.(B)	40	37	37	38	41	41
Stuttgart, Ark.	34	33	34	35	38	46
Rohwer, Ark.	37	35	37	39	43	44
St. Joseph, La.	47	39	40	40	51	49
Curtis, La.	23	32	31	35	34	36
Crowley, La.	34	29	31	36	37	37
Beaumont, Texas	28	28	23	31	34	30
Mean	36	34	34	37	41	41

Table 48. - Lodging scores for the strains in Uniform Group VII, 1968

Location	Bragg	Semmes	D58-4384	F64-1683	F64-1881	N63-858
			East Coast			
Rocky Mount, N.C.	3.0	4.0	5.0	4.0	5.0	3.0
Willard, N.C.	3.0	2.0	2.0	4.0	4.0	3.0
Florence, S.C.(A)	1.0	1.0	1.0	1.0	1.0	1.0
Florence, S.C.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Myrtle Beach, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	2.5	2.0	2.3	3.0	3.2	2.5
			Southeast			
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Live Oak, Fla.	2.0	1.0	1.0	2.0	2.7	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
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.0	1.3	2.8	2.8	2.0	1.0
			Upper and Central South			
Clemson, S.C.	2.3	1.3	1.7	2.2	2.8	1.3
Experiment, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
			Delta and West			
Stoneville, Miss.(A)	3.3	3.3	3.0	3.7	3.3	3.0
Stoneville, Miss.(B)	3.3	2.7	3.0	3.3	3.3	2.7
Stuttgart, Ark.	3.0	3.0	3.0	3.0	3.3	1.7
Rohwer, Ark.	2.0	2.3	3.7	2.7	3.7	1.0
St. Joseph, La.	4.0	3.3	4.3	5.0	4.3	3.6
Curtis, La.	2.5	1.0	2.5	1.5	3.0	1.0
Crowley, La.	1.5	1.0	1.5	1.5	2.0	1.0
Beaumont, Texas	2.0	1.0	1.0	1.0	3.0	1.0

Table 48. - (continued)

Location	N63-1131	N64-2430	N64-2451	D65-6765	F65-1376	F65-1753
			East Coast			
Rocky Mount, N.C.	3.0	3.0	2.0	3.0	3.0	4.0
Willard, N.C.	3.0	3.0	3.0	3.0	3.0	3.0
Florence, S.C.(A)	1.0	1.0	1.0	1.0	1.0	1.0
Florence, S.C.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Myrtle Beach, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	2.4	2.2	2.5	3.2	2.3	3.0
			Southeast			
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Live Oak, Fla.	1.0	1.0	1.0	1.7	1.7	2.7
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
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.0	1.0	1.0	1.0	1.3	1.8
			Upper and Central South			
Clemson, S. C.	1.0	1.5	1.5	2.0	1.5	2.5
Experiment, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
			Delta and West			
Stoneville, Miss.(A)	3.0	3.0	3.0	3.0	3.0	3.3
Stoneville, Miss.(B)	2.7	3.0	3.3	3.0	3.0	3.7
Stuttgart, Ark.	2.0	2.7	2.7	2.0	2.3	3.0
Rohwer, Ark.	1.0	1.0	1.0	1.7	1.3	2.7
St. Joseph, La.	5.0	2.0	2.0	3.0	3.6	5.0
Curtis, La.	1.0	1.5	1.5	1.5	1.0	1.5
Crowley, La.	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, Texas	1.0	1.0	1.0	1.0	2.0	1.0

Table 49. - Seed quality scores for the strains in Uniform Group VII, 1968

Location	Bragg	Semmes	D58-4384	F64-1683	F64-1881	N63-858
			East Coast			
Rocky Mount, N.C.	1.0	1.5	1.5	1.0	1.5	1.0
Willard, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	3.0	3.0	2.0	3.0	4.0	3.0
			Southeast			
Tallassee, Ala.	1.7	2.0	1.3	1.0	1.0	2.0
Tifton, Ga.	2.0	3.0	3.0	3.0	3.0	2.0
Gainesville, Fla.	1.7	1.3	1.7	1.7	1.7	1.3
Live Oak, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	2.0	1.0	3.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.7	2.3	2.3	1.3	2.0	3.0
Baton Rouge, La.	2.7	2.7	3.0	2.0	2.3	2.7
			Upper and Central South			
Clemson, S. C.	2.0	3.0	2.0	2.0	3.0	2.0
Experiment, Ga.	2.8	2.8	1.5	2.3	2.3	2.5
			Delta and West			
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	1.3	2.0	2.0	2.0	2.0	2.0
Stuttgart, Ark.	2.0	2.3	1.7	3.0	3.5	2.3
Rohwer, Ark.	2.7	3.3	3.0	3.5	3.5	3.5
St. Joseph, La.	3.0	3.0	3.0	3.0	3.0	3.0
Beaumont, Texas	2.0	2.0	2.0	3.0	2.0	2.0

Table 49. - (continued)

Location	N63-1131	N64-2430	N64-2451	D65-6765	F65-1376	F65-1753
			East Coast			
Rocky Mount, N.C.	1.0	1.0	1.0	1.5	1.0	1.0
Willard, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	3.0	3.0	4.0	3.0	3.0	3.0
			Southeast			
Tallassee, Ala.	2.0	1.3	2.0	1.7	1.7	1.3
Tifton, Ga.	4.0	3.0	4.0	3.0	3.0	3.0
Gainesville, Fla.	2.7	1.7	2.3	1.3	1.0	1.3
Live Oak, Fla.	1.3	1.3	1.3	1.0	1.7	1.0
Quincy, Fla.	2.0	2.0	2.0	2.0	1.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	3.0	1.7	2.3	2.0	2.3	1.7
Baton Rouge, La.	4.0	3.0	3.0	2.0	2.0	2.0
			Upper and Central South			
Clemson, S.C.	3.0	2.0	2.0	3.0	2.0	2.0
Experiment, Ga.	2.5	2.7	3.2	2.8	2.0	2.7
			Delta and West			
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	2.0
Stuttgart, Ark.	3.2	2.3	2.7	1.7	2.2	3.2
Rohwer, Ark.	3.5	2.8	3.2	3.2	2.8	3.2
St. Joseph, La.	3.0	2.3	2.0	2.0	3.7	2.0
Beaumont, Texas	2.0	2.0	1.0	3.0	2.0	2.0

PRELIMINARY GROUP VII

1968

Preliminary Group VII nurseries, including 34 experimental strains and the two check varieties Bragg and Lee, were grown at eight locations. The parentage of these strains is reported in Table 50. Performance data from seven locations are summarized in Tables 51 through 56. Differences among strains were significant at the 5% level of confidence at only four of the locations. The combined analysis of variance showed differences in seed yield means to be nonsignificant. Lee had a slightly higher mean seed yield than did Bragg. Nineteen strains had higher mean yields than Bragg. N65-65 was 3 days earlier in maturity than Lee and, consequently, should be with Group VI material.

Ten strains had a significantly higher protein percentage and lower oil percentage than Bragg. Five of these ranked above Bragg in seed yield. Eight strains had significantly lower protein percentage than Bragg. These would be of questionable value in present markets.

Five strains shattered somewhat more than is desired.

Strains which appear to offer most promise for further testing in Uniform Group VII are: F66-242, F66-550, F66-627, D66-8221, D66-8293, and D66-8666.

Table 50. - Parentage of strains in Preliminary Group VII, 1968

	Variety or strain	Parentage	Generation composited
1.	Bragg		
2.	Lee		
3.	Co63-208	Subline from Hampton	
4.	D55-4102	Ogden x CNS	F_7
5.	D61-4161	D49-2491(6) x Barchet	F_5
6.	D65-6731	D55-3358 x D59-9289	F_5
7.	D66-8221	Bragg x D61-3505	F_5
8.	D66-8258	Bragg x D61-3505	F_5
9.	D66-8273	Bragg x D60-8107	F_5
10.	D66-8293	Bragg x D60-8107	F_5
11.	D66-8316	Bragg x D60-8107	F_5
12.	D66-8457	Bragg x D60-8107	F_5
13.	D66-8539	Bragg x Semmes	F_5
14.	D66-8646	Bragg x Semmes	F_5
15.	D66-8666	Bragg x Semmes	F_5
16.	D66-8686	Bragg x Semmes	F_5
17.	F66-216	F55-822 x (Roanoke x CNS)	F_9
18.	F66-242	F55-822 x (Roanoke x CNS)	F_9
19.	F66-550	Ogden x D53-1301	F_6
20.	F66-578	Jackson x (Ogden x D53-1301)	F_6
21.	F66-586	Jackson x (Ogden x D53-1301)	F_6
22.	F66-608	Jackson x (Ogden x D53-1301)	F_6
23.	F66-626	Jackson x (Ogden x D53-1301)	F_6
24.	F66-627	Jackson x (Ogden x D53-1301)	F_6
25.	FB66-288	Bragg(3) x D60-7965	
26.	FB66-336	Bragg(3) x PI 96035	
27.	N63-877	D58-3358 x D59-9289	F_5
28.	N63-1130	D58-3358 x D59-9289	F_5
29.	N63-1210	D58-3358 x D59-9289	F_5
30.	N63-1712	D58-3358 x D59-9289	F_5
31.	N64-1722	(N55-3843 x N55-2908) x D56-1192	F_4
32.	N64-1839	(N55-3843 x N55-2908) x D56-1192	F_4
33.	N64-2408	(N55-5931 x N58-3818) x D56-1185	F_4
34.	N64-2411	(N55-5931 x N58-3818) x D56-1185	F_4
35.	N64-2423	(N55-5931 x N58-3818) x D56-1185	F_4
36.	N65-65	(D55-1899 x D55-2205) x (N55-47 x D56-1215)	F_4

Table 51. - General summary of performance for the strains in Preliminary Group VII, 1968

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	Seed holding	B.P.	P.R.
Bragg	35.0	10-22	37	23.0	39.5	1.0	1.0	1.0
Lee	36.4	-6	30	22.8	40.0	1.0	1.0	1.0
Co63-208	34.1	+2	30	23.5	37.1-	1.0	1.0	2.0
D55-4102	32.1	+3	34	20.3-	44.1+	1.5	1.0	1.0
D61-4161	35.2	0	34	22.0-	40.1	1.0	1.0	1.0
D65-5731	32.2	-4	35	21.6-	41.6+	3.0	1.0	1.0
D66-8221	36.9	-2	32	21.6-	41.6+	1.0	1.0	1.0
D66-8258	33.4	-5	29	21.2-	41.5+	1.0	1.0	1.0
D66-8273	31.8	-6	31	20.4-	42.0+	1.5	1.0	1.0
D66-8293	35.7	-3	37	20.3-	44.1+	2.0	1.0	1.0
D66-8316	32.6	-4	40	19.8-	42.5+	1.5	1.0	1.0
D66-8457	35.5	-1	36	21.8-	41.9+	2.0	1.0	1.0
D66-8539	32.5	-3	35	22.0-	39.5	1.0	1.0	1.0
D66-8646	32.1	-5	37	22.4	40.2	2.0	1.0	1.0
D66-8666	35.7	-1	36	22.1-	39.9	1.0	1.0	1.0
D66-8686	34.8	-3	37	22.6	38.7	2.0	1.0	1.0
F66-216	35.2	0	36	21.3-	41.0+	1.0	1.0	1.0
F66-242	41.3	+1	36	21.8-	41.3+	1.0	1.0	1.0
F66-550	36.8	+3	32	22.4	39.3	1.0	1.0	1.0
F66-578	36.2	+2	37	23.3	39.6	2.0	1.0	1.0
F66-586	34.4	0	33	24.1+	37.6-	1.5	1.0	1.0
F66-608	34.4	+2	40	22.7	37.5-	1.5	1.0	2.0
F66-626	33.9	+5	37	23.4	38.9	1.5	1.0	1.0
F66-627	36.7	+5	39	23.1	39.2	1.0	1.0	1.0
FB66-288	37.5	-2	37	22.6	40.1	1.5	1.0	1.0
FB66-336	38.2	-1	36	22.7	39.2	1.0	1.0	1.0
N63-877	42.5	-2	33	23.4	37.1-	3.0	1.0	1.0
N63-1130	39.1	-5	34	23.0	37.4-	3.5	1.0	1.0
N63-1210	34.8	-6	33	22.3	39.8	3.5	1.0	1.0
N63-1712	37.7	-2	34	23.0	38.1-	1.0	1.0	1.0
N64-1722	35.9	-6	35	23.2	38.9	2.5	1.0	1.0
N64-1839	34.8	-2	40	23.0	38.5	1.5	1.0	1.0
N64-2408	37.5	-2	33	23.8+	38.6	2.0	1.0	3.0
N64-2411	39.4	-3	33	23.9+	38.1-	2.0	1.0	1.0
N64-2423	41.1	-4	35	24.1+	37.9-	1.5	1.0	1.0
N65-65	33.2	-9	32	21.3-	40.8	1.5	1.0	1.0
L.S.D.(.05)	N.S.			0.8	1.4			
L.S.D.(.05)	N.S.			1.0	1.8			

Table 52. - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1968

Strain	Tallassee, Ala.*	Live Oak, Fla.	Jay, Fla.	Stone-ville, Miss.(A)	Stone-ville Miss.(B)	Beaumont, Texas
Bragg	18.7	28.5	35.6	35.0	44.2	31.8
Lee	17.0	29.0	28.8	44.9+	44.8	34.5
Co63-208	15.3	27.1	40.1	37.2	37.0-	29.3
D55-4102	15.7	29.4	26.9	26.7-	37.8-	39.6
D61-4161	14.7	29.4	34.1	31.2	44.3	27.2
D65-5731	12.9	29.4	32.2	33.5	41.4	24.7
D66-8221	22.5	29.8	35.9	34.5	43.2	41.0
D66-8258	7.8	24.1	25.7	35.8	45.5	35.9
D66-8273	14.6	21.9-	20.5	35.1	43.9	37.7
D66-8293	18.7	29.5	23.1	39.7	44.1	42.3
D66-8316	20.8	26.3	35.6	28.5	38.6	33.9
D66-8457	14.0	26.3	26.1	37.6	44.9	42.7
D66-8539	26.6	29.5	27.3	32.2	39.1	34.7
D66-8646	14.0	27.7	21.6	43.8+	39.5	27.9
D66-8666	21.5	27.3	38.2	34.7	41.5	37.0
D66-8686	22.1	30.1	29.1	37.9	40.6	36.2
F66-216	18.4	34.3	34.8	39.8	40.2	27.1
F66-242	27.2	29.9	34.4	41.1	49.5	31.7
F66-550	35.7+	33.2	32.2	30.1	44.4	34.3
F66-578	25.5	35.5+	44.6	34.5	41.7	24.8
F66-586	29.6	35.8+	30.6	29.9	41.8	33.9
F66-608	24.9	37.5+	30.6	37.2	36.8-	29.9
F66-626	26.6	32.0	27.3	35.6	47.4	27.4
F66-627	22.1	31.2	40.5	30.2	48.5	33.0
FB66-288	14.7	28.3	34.8	32.9	44.8	46.5
FB66-336	16.0	32.3	27.2	45.2+	47.0	39.5
N63-877	16.0	34.7+	36.7	47.4+	47.6	46.0
N63-1130	8.5	35.7+	28.8	47.9+	47.9	35.2
N63-1210	10.9	28.1	40.5	31.0	39.9	34.8
N63-1712	20.4	28.9	22.3	49.9+	45.4	42.2
N64-1722	23.2	31.7	29.1	41.0	43.0	34.5
N64-1839	14.7	29.8	25.8	42.4	43.0	32.9
N64-2408	16.7	33.6	36.3	34.8	39.7	43.1
N64-2411	14.0	30.4	43.5	33.3	44.9	40.5
N64-2423	20.1	32.2	33.7	49.0+	44.5	46.1
N65-65	11.9	25.4	28.8	32.5	44.5	34.9
L.S.D.(.05)	11.5	6.2	N.S.	8.3	6.3	N.S.
C.V.	30%	10%	24%	11%	7%	21%

*Not included in mean

Table 53. - Oil percentages for the strains in Preliminary Group VII, 1968

Strain	Live Oak, Fla.	Jay, Fla.	Stoneville, Miss.(A)	Stoneville, Miss.(B)	Beaumont, Texas
Bragg	23.0	23.5	22.6	22.4	23.6
Lee	22.6	23.0	21.9	22.0	24.5
Co63-208	23.0	23.7	22.3	22.1	26.2
D55-4102	20.1	21.1	19.4	19.1	21.7
D61-4161	22.2	22.8	21.8	21.6	21.7
D65-6731	22.0	22.2	20.4	20.4	22.9
D66-8221	21.7	21.9	20.2	21.1	22.9
D66-8258	20.8	20.6	20.6	20.5	23.3
D66-8273	21.2	19.9	20.1	20.5	20.5
D66-8293	21.3	20.4	19.9	19.7	20.2
D66-8316	19.8	23.2	17.9	18.5	19.5
D66-8457	22.5	21.7	21.0	21.4	22.4
D66-8539	22.1	22.9	21.1	20.1	24.0
D66-8646	22.9	21.9	22.3	21.7	23.4
D66-8666	23.4	22.7	21.3	20.2	22.7
D66-8686	22.4	23.3	22.3	21.4	23.7
F66-216	21.5	21.9	20.8	20.2	22.1
F66-242	22.1	22.2	21.4	20.7	22.6
F66-550	22.7	23.7	21.7	21.0	23.1
F66-578	23.4	24.4	22.4	22.2	24.2
F66-586	25.2	24.7	22.8	23.2	24.8
F66-608	23.1	22.7	21.7	22.4	23.4
F66-626	24.1	23.2	22.8	22.3	24.7
F66-627	23.5	23.5	22.5	22.3	23.9
FB66-288	23.3	23.0	21.6	21.7	23.4
FB66-336	23.3	23.1	22.3	21.6	23.1
N63-877	24.1	23.9	22.4	22.6	24.0
N63-1130	23.6	22.9	22.3	22.7	23.4
N63-1210	22.9	22.8	21.2	21.6	22.9
N63-1712	24.3	22.8	22.1	22.2	23.6
N64-1722	24.2	23.4	22.7	22.4	23.4
N64-1839	23.5	23.9	22.1	21.9	23.4
N64-2408	24.7	23.9	22.5	22.8	24.9
N64-2411	24.6	24.9	21.6	23.2	25.1
N64-2423	25.4	24.8	22.9	23.6	23.9
N65-65	22.2	21.0	19.8	21.3	22.3

Table 54. - Protein percentages for the strains in Preliminary Group VII, 1968

Strain	Live Oak, Fla.	Jay, Fla.	Stoneville Miss.(A)	Stoneville, Miss.(B)	Beaumont, Texas
Bragg	41.6	42.1	37.2	36.3	40.4
Lee	43.0	42.0	37.9	38.4	38.9
Co63-208	39.7	40.0	35.5	35.0	35.2
D55-4102	46.7	45.9	42.5	43.2	42.1
D61-4161	42.9	40.3	38.8	36.8	41.5
D65-6731	44.5	42.6	39.7	39.9	41.5
D66-8221	45.3	43.1	40.8	38.5	40.1
D66-8258	45.8	43.0	40.1	39.9	38.6
D66-8273	44.4	45.8	36.7	40.3	42.6
D66-8293	46.6	45.5	42.7	41.4	44.3
D66-8316	46.0	42.1	39.0	40.7	44.5
D66-8457	44.9	42.5	40.5	39.3	42.3
D66-8539	41.4	40.0	38.5	38.5	38.9
D66-8646	42.0	41.7	38.2	38.1	40.9
D66-8666	41.3	42.7	39.1	38.2	38.4
D66-8686	41.1	41.3	36.4	36.5	38.3
F66-216	44.4	43.1	38.2	39.1	40.1
F66-242	44.5	42.8	38.8	38.5	41.8
F66-550	40.5	38.5	38.0	38.4	41.0
F66-578	41.4	40.2	39.2	37.4	40.0
F66-586	38.3	39.2	37.6	35.2	37.9
F66-608	39.6	38.6	36.5	34.0	38.6
F66-626	42.1	40.5	37.1	36.6	38.6
F66-627	41.7	40.2	37.5	37.3	39.2
FB66-288	42.2	41.5	38.4	37.6	40.9
FB66-336	41.8	41.4	37.6	36.5	38.8
N63-877	39.2	38.7	36.0	34.2	37.6
N63-1130	39.5	39.0	36.1	34.3	38.2
N63-1210	42.3	41.8	39.1	35.8	39.9
N63-1712	39.3	40.9	34.3	35.9	40.0
N64-1722	40.5	40.8	38.3	34.7	40.4
N64-1839	39.6	38.9	37.8	36.8	39.2
N64-2408	40.4	40.2	37.7	35.4	39.4
N64-2411	38.9	39.2	37.5	35.8	39.2
N64-2423	38.8	39.5	36.8	34.8	39.8
N65-65	41.7	43.7	39.8	37.7	40.9

Table 55. - Plant height for the strains in Preliminary Group VII, 1968

Strain	Tallassee, Ala.	Live Oak, Fla.	Jay, Fla.	Stoneville, Miss.(A)	Stoneville, Miss.(B)	Beaumont, Texas
Bragg	44	31	38	39	40	30
Lee	32	25	27	35	35	26
Co63-208	30	26	29	33	35	26
D55-4102	40	27	33	38	36	29
D61-4161	35	29	33	39	37	28
D65-6731	38	31	34	42	39	28
D66-8221	36	26	31	35	37	25
D66-8258	28	24	28	34	35	24
D66-8273	36	24	29	33	35	26
D66-8293	42	29	34	42	46	30
D66-8316	44	35	38	46	45	32
D66-8457	42	31	37	38	43	26
D66-8539	37	29	32	44	42	28
D66-8646	39	32	36	43	39	30
D66-8666	36	30	36	42	43	29
D66-8686	37	34	34	41	43	30
F66-216	40	31	37	42	40	27
F66-242	39	30	36	43	39	27
F66-550	35	26	34	38	34	27
F66-578	40	31	37	43	40	31
F66-586	36	27	33	36	36	31
F66-608	45	33	39	47	46	31
F66-626	41	33	37	44	40	28
F66-627	38	34	36	44	40	40
FB66-288	40	32	37	40	42	28
FB66-336	41	30	37	39	38	28
N63-877	34	28	32	38	41	26
N63-1130	37	28	34	42	38	27
N63-1210	34	28	31	39	40	28
N63-1712	38	27	32	41	38	29
N64-1722	39	26	33	40	42	29
N64-1839	42	33	39	46	46	33
N64-2408	33	26	33	37	40	27
N64-2411	37	27	32	39	37	28
N64-2423	36	28	35	39	42	29
N65-65	33	27	33	36	35	28

Table 56. - Seed quality scores for the strains in Preliminary Group VII, 1968

Strain	Tallassee, Ala.	Live Oak, Fla.	Jay, Fla.	Stoneville, Miss.(A)	Stoneville, Miss.(B)	Beaumont, Texas
Bragg	2.0	1.5	1.0	2.0	2.0	1.0
Lee	2.0	1.5	1.0	2.0	2.0	2.0
Co63-208	2.5	1.0	1.0	2.0	2.0	2.0
D55-4102	1.5	1.0	1.0	2.0	2.0	2.0
D61-4161	1.0	1.0	1.0	2.0	2.0	1.0
D65-6731	1.5	1.0	1.0	2.0	1.5	2.0
D66-8221	1.0	1.5	1.0	2.0	1.5	2.0
D66-8258	1.0	2.5	1.0	2.0	2.0	2.0
D66-8273	1.5	1.0	1.0	2.0	2.0	2.0
D66-8293	1.5	2.0	1.0	2.0	2.0	1.0
D66-8316	2.0	2.0	1.0	2.0	1.5	2.0
D66-8457	2.0	3.0	1.0	2.0	2.0	2.0
D66-8539	2.0	1.5	1.0	2.0	2.0	2.0
D66-8646	2.0	1.5	1.0	2.0	1.5	2.0
D66-8666	1.5	1.0	1.0	2.0	2.0	2.0
D66-8686	2.0	1.5	1.0	2.0	2.0	2.0
F66-216	1.0	1.0	1.0	2.0	1.0	1.0
F66-242	1.0	1.5	1.0	2.0	1.5	2.0
F66-550	1.0	2.0	1.0	2.0	2.0	2.0
F66-578	2.0	1.0	1.0	2.0	2.0	2.0
F66-586	1.0	1.0	1.0	2.0	2.0	2.0
F66-608	1.0	1.5	1.0	2.0	2.0	2.0
F66-626	1.0	1.0	1.0	2.0	2.0	1.0
F66-627	1.5	1.0	1.0	2.0	2.0	2.0
FB66-288	2.5	2.0	1.0	2.0	2.0	2.0
FB66-336	2.0	2.0	1.0	2.0	1.5	2.0
N63-877	2.0	1.0	1.0	2.0	2.0	2.0
N63-1130	2.0	1.0	1.0	2.0	2.0	2.0
N63-1210	2.5	1.0	1.0	2.0	2.0	2.0
N63-1712	1.5	1.0	1.0	2.0	2.0	2.0
N64-1722	2.0	1.0	1.0	2.0	2.0	2.0
N64-1839	2.0	1.5	1.0	2.0	2.0	2.0
N64-2408	1.5	2.0	1.0	2.0	2.0	2.0
N64-2411	2.0	2.0	1.0	2.0	2.0	2.0
N64-2423	2.0	2.0	1.0	2.0	2.0	2.0
N65-65	2.0	2.0	1.0	2.0	2.0	2.0

UNIFORM GROUP VIII

1968

	Variety or strain	Parentage	Generation composited
1.	Hampton 266	Majos x Lee	
2.	Hardee	D49-772 x Improved Pelican	F_7
3.	F63-4000	F55-822 x (Roanoke x CNS-4)	F_6
4.	Coker 318	Jackson x Co56-251	F_4
5.	F64-1928	F57-1471 x D53-1301	F_5
6.	F64-2571	F57-1471 x F58-3726	F_5
7.	Co5322	Jackson x Co56-251	F_6
8.	Co6307	Stuart x F56-3492	F_3
9.	F64-1917	F57-1471 x D53-1301	F_6
10.	F64-3494	D49-2491(2) x Biloxi	F_6
11.	F65-1120	(F55-224 x D55-4073) x (F58-5788 x D56-4065)	F_6
12.	F65-1133	(F55-224 x D55-4073) x (F58-5788 x D56-4065)	F_6

Background of strains used as parents:

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

F55-822 is the parent line of Bragg.

Co56-251 is a selection from Majos x Lee.

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

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

F58-3726 is from the same cross as Hardee.

F56-3492 is a selection from Jackson x D49-2491.

F55-224 is a selection from the same cross as Hardee.

D55-4073 is a selection from Volstate x Biloxi.

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

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

Twenty-five Uniform Group VIII nurseries were planted. Results from 19 nurseries are summarized in Tables 57 through 63. Table 57 gives a general summary of agronomic qualities, chemical composition of the seed, and field reaction to several diseases. Two and three year data are reported for seed yield and oil and protein percentages.

Seed yield differences were significant at the 5% level of confidence at 15 of the 19 locations. Seed yields were low at five locations, because of drouth stress. F64-2571, which is 7 days later than Hampton, had a mean seed yield slightly higher than Hampton in 1968, but the 2-year mean was slightly below Hampton. Two composites from F64-2571, which differed slightly in maturity, were grown in Preliminary Group VIII. Composite B, the later of the two, ranked above Hampton in seed yield at four of the seven locations but yielded significantly less at Beaumont.

Hardee and seven experimental strains had mean yields significantly lower than Hampton. Of the four strains grown 2 years, F63-4000 and F64-2571 were only slightly lower in yield than Hampton. F63-4000 is similar to Hampton in maturity and height. F64-1917 was the only one of the six first year strains which did not yield significantly lower than Hardee.

Table 57. - General summary of performance for the strains in Uniform Group VIII, 1968

	Hampton 266	Hardee	F63-4000	Coker 318	F64-1928	F64-2571
Seed Yield - 1968	34.0	29.8-	32.8	30.3-	30.1-	34.2
- 1967-68	39.0	33.9	38.4	34.7	33.8	38.3
- 1966-68	40.4	36.1	39.8			
Oil Content - 1968	22.4	21.4	20.7	21.2	22.2	21.3
- 1967-68	22.4	21.5	20.8	21.0	21.9	21.0
- 1966-68	22.5	21.5	20.9			
Protein Content - 1968	39.0	42.2	42.4	40.4	40.0	40.5
- 1967-68	38.9	41.8	42.5	40.4	40.0	40.3
- 1966-68	38.7	41.4	42.3			
Seed size	14.7	13.8-	15.9+	13.3-	12.6-	15.0
Maturity index	10-24	+3	0	+2	+8	+7
Height	35	41	34	42	47	41
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	3.5	1.0	1.5	5.0	1.0	1.0
Seed holding	1.3	2.0	1.3	1.7	1.2	2.1
Flower color	P	W	P	W	W	P
Pubescence color	G	G	T	G	G	G

Table 57. - (continued)

	Co5322	Co6307	F64-1917	F64-3494	F65-1120	F65-1133
Seed Yield - 1968	30.2-	30.8-	31.6	28.9-	29.6-	28.5-
- 1967-68						
- 1966-68						
Oil Content - 1968	22.5	22.1	22.4	20.6	20.2	19.4
- 1967-68						
- 1966-68						
Protein Content-1968	39.5	40.2	39.9	43.1	43.6	44.5
-1967-68						
-1966-68						
Seed size	16.1+	16.2+	12.9-	13.5-	12.8-	14.3
Maturity index	+4	+6	+2	-1	+1	+5
Height	44	42	38	33	37	37
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	5.0	1.5	2.0	3.5	1.0	1.0
Seed holding	1.3	1.3	1.5	1.8	1.8	1.2
Flower color	P	P	S	P	P	P
Pubescence color	T	G	T	T	G	G

Table 58. - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1968

Location	Hampton 266	Hardee	F63-4000	Coker 318	F64-1928	F64-2571	Co5322
			South				
Florence, S.C.	33.9	22.4-	32.0	26.7-	31.8	33.0	25.1-
Myrtle Beach, S.C.	38.2	29.5	37.8	35.3	35.5	41.5	38.0
Hartsville, S.C.(A)	21.5	13.6-	18.9	22.3	19.5	17.3	20.7
Hartsville, S.C.(B)	30.0	25.2-	26.8	29.5	21.3-	27.0	30.0
Blackville, S.C.	13.5	14.0	12.8	14.3	11.4	15.0	15.7
Experiment, Ga.	43.6	33.3	46.1	40.6	36.0	45.9	35.5
Tallassee, Ala.*	18.4	21.8	15.9	14.7	24.5	23.6	13.4
Tifton, Ga.	25.4	21.2-	22.8	24.1	19.3-	24.1	23.8
Live Oak, Fla.	33.3	31.2	28.1	30.3	30.8	29.1	30.4
Gainesville, Fla.	17.1	17.9	24.9+	23.1+	20.4	23.0+	23.9+
Marianna, Fla.	17.8	21.4	19.6	25.9+	24.3+	27.7+	25.0+
Quincy, Fla.	43.1	37.6-	38.0-	39.1-	36.6-	42.1	39.1-
Jay, Fla.	30.2	26.2	29.5	26.2	31.0	28.8	27.2
Fairhope, Ala.	34.6	30.1-	34.3	30.9	27.4-	37.0	36.2
Baton Rouge, La.	34.2	38.8	36.1	29.8	31.6	40.4	29.7
St. Joseph, La.	57.5	39.7-	55.1	45.8-	47.8-	48.2-	36.1-
Curtis, La.	47.2	58.4+	55.6	42.7	40.2	47.7	40.6
Crowley, La.	52.1	42.2-	40.1-	27.3-	39.1-	47.9	28.0-
Beaumont, Texas	45.4	34.6-	32.7-	32.2-	37.2	40.5	38.7
Mean	34.0	29.8-	32.8	30.3-	30.1-	34.2	30.2-

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

*Not included in mean

Table 58. - (continued)

Location	Co6307	F64-1917	F64-3494	F65-1120	F65-1133	L.S.D. (.05)	C.V.
			South				
Florence, S.C.	27.4-	33.4	25.8-	26.3-	24.0-	6.2	13%
Myrtle Beach, S.C.	38.0	35.5	28.8	36.4	32.3	N.S.	13%
Hartsville, S.C.(A)	17.2	22.1	16.3-	16.4	16.0-	5.2	17%
Hartsville, S.C.(B)	26.1-	24.7-	23.8-	22.4-	25.3-	3.4	8%
Blackville, S.C.	11.4	12.8	12.4	11.1-	12.3	2.4	11%
Experiment, Ga.	39.2	44.1	45.5	38.4	38.6	N.S.	14%
Tallassee, Ala.*	22.0	15.9	14.7	15.0	14.0	7.6	26%
Tifton, Ga.	22.0	23.8	21.6	24.2	21.3-	4.1	11%
Live Oak, Fla.	30.8	29.2	25.2	26.9	27.6	N.S.	16%
Gainesville, Fla.	17.7	20.0	18.9	13.8	18.1	5.1	15%
Marianna, Fla.	22.1+	20.7	24.6+	16.6	19.6	4.3	12%
Quincy, Fla.	37.4-	38.9-	36.5-	35.5-	34.5-	3.6	6%
Jay, Fla.	29.0	30.3	28.8	25.7	25.9	N.S.	13%
Fairhope, Ala.	30.1-	30.2-	31.1	30.9	37.3	4.3	8%
Baton Rouge, La.	37.2	40.6	30.2	28.6	27.5	7.2	13%
St. Joseph, La.	50.2-	49.7-	42.2-	43.5-	41.2-	6.4	8%
Curtis, La.	47.2	45.2	45.0	44.5	42.2	8.5	11%
Crowley, La.	45.8	37.5-	30.7-	45.9	34.9-	6.4	10%
Beaumont, Texas	25.6-	29.9-	32.0-	45.1	34.0-	9.7	16%
Mean	30.8-	31.6	28.9-	29.6-	28.5-	2.5	

Table 59. - Chemical composition and seed size for the strains in Uniform Group VIII, 1968

Location	Hampton 266	Hardee	F63-4000	Coker 318	F64-1928	F64-2571
			Oil Percentage			
Hartsville, S.C.(A)	20.5	19.3	18.7	20.6	22.3	20.2
Hartsville, S.C.(B)	22.8	21.3	20.4	21.9	21.8	21.6
Blackville, S.C.	21.0	21.0	20.2	21.3	21.3	21.3
Myrtle Beach, S.C.	22.7	21.5	21.3	21.2	21.5	21.2
Tifton, Ga.	19.8	19.5	18.5	19.1	21.6	18.8
Live Oak, Fla.	23.4	21.9	21.9	22.6	22.5	22.1
Jay, Fla.	23.5	22.7	21.9	21.6	23.3	22.3
Baton Rouge, La.	24.4	22.7	21.6	21.5	22.9	22.2
Beaumont, Texas	23.9	22.5	21.8	21.4	22.4	22.3
Mean	22.4	21.4-	20.7-	21.2-	22.2	21.3-
			Protein Percentage			
Hartsville, S.C.(A)	41.3	43.0	43.4	40.0	39.7	40.9
Hartsville, S.C.(B)	36.3	40.9	40.0	38.0	39.4	38.6
Blackville, S.C.	40.7	43.6	44.0	41.5	41.0	40.6
Myrtle Beach, S.C.	37.2	39.8	40.9	37.8	39.1	39.5
Tifton, Ga.	41.3	44.1	44.3	43.1	40.8	42.7
Live Oak, Fla.	37.1	42.6	42.7	40.0	39.8	40.5
Jay, Fla.	39.6	41.5	43.0	41.3	40.1	40.6
Baton Rouge, La.	36.7	40.9	41.6	40.7	39.8	40.5
Beaumont, Texas	40.8	43.1	41.9	40.9	40.6	40.8
Mean	39.0	42.2+	42.4+	40.4+	40.0+	40.5+
			Grams per 100 Seeds			
Hartsville, S.C.(A)	13.5	11.2	12.8	13.0	12.4	13.3
Hartsville, S.C.(B)	15.1	16.8	13.3	15.0	13.7	16.8
Blackville, S.C.	13.5	15.0	13.7	14.0	12.7	15.2
Myrtle Beach, S. C.	16.3	15.7	17.7	15.7	14.7	17.3
Tifton, Ga.	12.0	11.0	14.0	10.0	11.0	12.0
Live Oak, Fla.	14.7	14.7	18.3	13.6	13.4	15.5
Jay, Fla.	16.3	14.3	15.8	13.9	12.8	16.0
Baton Rouge, La.	14.4	15.2	18.2	14.0	13.0	16.3
Beaumont, Texas	17.0	13.0	17.0	12.0	11.0	14.0
Mean	14.7	13.8-	15.9+	13.3-	12.6-	15.0

Table 59. - (continued)

Location	Co5322	Co6307	F64-1917	F64-3494	F65-1120	F65-1133	L.S.D. (.05)
			Oil Percentage				
Hartsville, S.C.(A)	21.0	20.9	21.1	19.3	19.7	18.4	
Hartsville, S.C.(B)	22.	21.9	21.6	20.6	19.8	19.3	
Blackville, S.C.	22.1	21.3	21.8	19.7	19.3	19.7	
Myrtle Beach, S.C.	22.4	22.2	21.8	21.1	20.1	19.1	
Tifton, Ga.	21.1	20.1	20.9	18.2	18.7	18.5	
Live Oak, Fla.	22.8	22.7	23.0	20.8	21.1	19.5	
Jay, Fla.	23.6	23.0	23.2	22.2	20.9	20.3	
Baton Rouge, La.	23.8	24.1	24.3	21.8	21.3	20.1	
Beaumont, Texas	23.3	22.7	23.7	21.7	20.9	19.8	
Mean	22.5	22.1	22.4	20.6-	20.2-	19.4-	0.5
			Protein Percentage				
Hartsville, S.C.(A)	40.0	40.3	41.9	44.9	44.3	44.7	
Hartsville, S.C.(B)	37.5	39.5	37.0	40.7	40.6	43.7	
Blackville, S.C.	40.5	41.5	41.6	45.0	44.7	45.3	
Myrtle Beach, S.C.	38.5	38.4	39.2	41.7	42.5	44.3	
Tifton, Ga.	41.1	41.9	41.8	44.4	45.8	45.4	
Live Oak, Fla.	40.3	40.5	40.5	45.3	44.9	45.7	
Jay, Fla.	39.4	41.0	39.4	42.4	44.4	43.0	
Baton Rouge, La.	39.2	38.1	38.8	42.0	43.4	43.8	
Beaumont, Texas	39.3	40.5	38.9	41.3	42.0	44.9	
Mean	39.5	40.2+	39.9+	43.1+	43.6+	44.5+	0.8
			Grams per 100 Seeds				
Hartsville, S.C.(A)	13.6	14.7	11.3	12.3	11.3	12.7	
Hartsville, S.C.(B)	18.8	18.8	13.3	14.2	11.8	16.3	
Blackville, S.C.	16.7	16.8	13.0	12.5	12.0	14.0	
Myrtle Beach, S.C.	19.3	19.3	15.0	13.7	15.3	15.7	
Tifton, Ga.	13.0	14.0	10.0	11.0	11.0	12.0	
Live Oak, Fla.	17.0	16.6	14.2	13.5	13.9	15.4	
Jay, Fla.	16.8	16.2	13.2	15.5	14.1	14.9	
Baton Rouge, La.	17.4	16.7	14.7	14.5	12.6	15.7	
Beaumont, Texas	15.0	15.0	12.0	15.0	12.0	14.0	
Mean	16.1+	16.2+	12.9-	13.5-	12.8-	14.3	0.9

Table 60. - Relative maturity, days earlier (-) or later (+) than Hampton, for the strains in Uniform Group VIII, 1968

Location	Date planted	Hampton 266 matured	Hardee	F63-4000	Coker 318	F64-1928
			South			
Hartsville, S.C.(A)	5-30	10-6	+4	0	+6	+11
Hartsville, S.C.(B)	6-24	11-6	+10	+4	+7	+14
Experiment, Ga.	5-23	11-1	+1	-3	+8	+9
Tallassee, Ala.	5-14	10-25	+2	+2	+4	+6
Tifton, Ga.	5-22	10-23	+1	0	+2	+11
Live Oak, Fla.	6-14	10-22	+3	0	+2	+9
Gainesville, Fla.	6-14	10-26	-1	-2	+1	+7
Marianna, Fla.	6-4	10-30	+1	+3	+4	+1
Quincy, Fla.	6-13	10-21	+4	-1	+5	+16
Jay, Fla.	6-3	10-18	+6	0	+4	+7
Fairhope, Ala.	6-12	10-23	0	0	0	+2
Baton Rouge, La.	5-8	10-25	+5	0	0	+10
St. Joseph, La.	5-19	11-2	+6	0	+4	+5
Curtis, La.	5-30	11-3	+2	+3	-2	+3
Crowley, La.	5-21	11-1	+5	-2	-4	+13
Beaumont, Texas	5-22	11-2	-1	-2	-2	+5
Mean		10-28	+3	0	+2	+8

Table 60. - (continued)

Location	F64-2571	Co5322	Co6307	F64-1917	F64-3494	F65-1120	F65-1133
			South				
Hartsville, S.C.(A)	+10	+5	+7	+3	0	+2	+3
Hartsville, S.C.(B)	+11	+9	+13	+5	0	-2	+12
Experiment, Ga.	+8	+9	+8	+1	-1	-1	+1
Tallassee, Ala.	+5	+3	+4	+3	+1	+1	+3
Tifton, Ga.	+4	+1	+10	+6	0	0	+5
Live Oak, Fla.	+5	+4	+6	+4	-3	+3	+5
Gainesville, Fla.	+1	+3	+6	+2	-2	-2	+1
Marianna, Fla.	+4	+5	+5	-2	-5	-1	+3
Quincy, Fla.	+16	+13	+12	+6	-3	0	+9
Jay, Fla.	+8	+6	+6	+3	0	+5	+8
Fairhope, Ala.	+7	+2	+2	0	-3	0	+7
Baton Rouge, La.	+9	+3	+5	+3	0	0	+9
St. Joseph, La.	+4	0	+4	+4	-1	+4	+4
Curtis, La.	+4	+3	+2	+1	+4	-2	+3
Crowley, La.	+13	-2	+2	+2	-3	+10	+6
Beaumont, Texas	-3	+4	+3	-2	0	0	+3
Mean	+7	+4	+6	+2	-1	+1	+5

Table 61. - Plant height for the strains in Uniform Group VIII, 1968

Location	Hampton 266	Hardee	F63--4000	Coker 318	F64-1928	F64-2571
			South			
Florence, S. C.	33	38	32	36	38	37
Myrtle Beach, S.C.	29	40	34	38	43	37
Hartsville, S.C.(A)	41	43	37	49	50	41
Hartsville, S.C.(B)	33	39	33	37	43	38
Blackville, S.C.	30	34	29	37	38	33
Experiment, Ga.	38	40	40	46	45	39
Tallassee, Ala.	37	47	39	45	51	42
Tifton, Ga.	27	38	29	36	47	36
Live Oak, Fla.	33	40	30	38	45	39
Gainesville, Fla.	23	25	22	29	33	29
Marianna, Fla.	39	44	38	46	50	42
Quincy, Fla.	32	40	29	40	51	42
Jay, Fla.	39	42	37	44	50	41
Fairhope, Ala.	36	47	31	47	54	51
Baton Rouge, La.	38	40	34	45	52	47
St. Joseph, La.	45	57	50	54	59	52
Curtis, La.	42	44	42	50	52	44
Crowley, La.	38	47	37	47	50	45
Beaumont, Texas	34	38	30	37	44	37
Mean	35	41	34	42	47	41

Table 61. - (continued)

Location	Co5322	Co6307	F64-1917	F64-3494	F65-1120	F64-1133
		South				
Florence, S.C.	40	34	35	30	35	34
Myrtle Beach, S.C.	41	39	35	26	32	37
Hartsville, S.C.(A)	50	45	40	35	37	36
Hartsville, S.C.(B)	43	43	37	32	35	37
Blackville, S.C.	40	35	37	33	33	32
Experiment, Ga.	42	44	43	33	39	39
Tallassee, Ala.	46	45	39	33	38	38
Tifton, Ga.	41	38	32	26	27	30
Live Oak, Fla.	40	41	37	29	36	33
Gainesville, Fla.	30	27	30	25	25	26
Marianna, Fla.	51	43	41	38	42	40
Quincy, Fla.	47	42	39	31	35	36
Jay, Fla.	45	44	42	36	40	40
Fairhope, Ala.	48	42	45	35	37	48
Baton Rouge, La.	46	45	40	31	39	41
St. Joseph, La.	55	55	46	45	51	48
Curtis, La.	49	45	36	36	40	42
Crowley, La.	50	46	43	35	39	37
Beaumont, Texas	39	37	34	30	35	37
Mean	44	42	38	33	37	37

Table 62. - Lodging scores for the strains in Uniform Group VIII, 1968

Location	Hampton 266	Hardee	F63-4000	Coker 318	F64-1928	F64-2571
			South			
Florence, S.C.	2.0	2.0	2.0	2.0	3.0	3.0
Myrtle Beach, S.C.	2.0	2.0	2.0	2.0	2.0	4.0
Hartsville, S.C.(A)	2.5	2.3	2.1	3.0	2.9	2.5
Hartsville, S.C.(B)	1.5	2.5	1.8	2.1	2.2	2.8
Blackville, S.C.	1.2	1.0	1.3	1.7	1.2	1.5
Experiment, Ga.	1.0	1.3	1.3	1.0	2.0	2.0
Tallassee, Ala.	1.0	2.0	1.0	1.0	2.0	1.0
Tifton, Ga.	1.0	2.3	1.0	1.0	1.3	2.3
Live Oak, Fla.	3.0	1.7	2.0	2.7	2.0	2.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	2.0	1.0
Marianna, Fla.	1.0	1.0	1.0	2.0	2.0	1.0
Quincy, Fla.	1.0	2.0	1.0	1.0	2.0	2.0
Jay, Fla.	1.0	1.0	1.0	1.0	2.0	2.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.3	1.8	1.0	1.3	3.3	3.0
St. Joseph, La.	4.0	5.0	4.6	4.0	4.6	4.6
Curtis, La.	4.0	5.0	3.0	1.0	4.0	3.0
Crowley, La.	1.5	2.5	2.0	1.3	3.0	3.0
Beaumont, Texas	2.0	2.0	2.0	1.0	2.0	3.0

Table 62. - (continued)

Location	Co5322	Co6307	F64-1917	F64-3494	F65-1120	F65-1133
			South			
Florence, S.C.	2.0	1.0	3.0	4.0	2.0	2.0
Myrtle Beach, S.C.	3.0	2.0	4.0	2.0	2.0	2.0
Hartsville, S.C.(A)	2.5	2.2	2.4	2.3	2.3	2.3
Hartsville, S.C.(B)	2.2	2.1	2.5	1.8	2.2	2.4
Blackville, S.C.	1.0	1.2	2.0	1.3	1.8	1.7
Experiment, Ga.	1.0	1.3	1.7	1.7	1.7	1.0
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.3	1.7	2.3	1.0	1.7	1.7
Live Oak, Fla.	2.0	2.0	3.0	2.7	3.3	3.0
Gainesville, Fla.	1.0	1.0	1.3	1.0	1.0	1.0
Marianna, Fla.	2.0	1.0	2.0	1.0	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	2.0
Jay, Fla.	1.0	1.0	2.0	1.0	1.0	2.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	2.8	1.8	3.0	2.0	2.0	1.3
St. Joseph, La.	4.0	4.0	4.0	4.3	4.0	4.3
Curtis, La.	3.0	3.0	4.0	4.0	2.0	2.0
Crowley, La.	1.5	1.5	2.5	2.0	2.8	3.5
Beaumont, Texas	2.0	1.0	3.0	4.0	1.0	1.0

Table 63.- Seed quality scores for the strains in Uniform Group VIII, 1968

Location	Hampton 266	Hardee	F63-4000	Coker 318	F64-1928	F64-2571
		South				
Hartsville, S.C.(A)	1.0	3.0	3.0	1.0	2.0	2.0
Hartsville, S.C.(B)	1.0	2.0	2.0	1.0	2.0	1.0
Experiment, Ga.	2.2	1.2	1.3	1.8	1.5	1.5
Tallassee, Ala.	2.0	1.0	1.7	2.0	1.0	1.0
Tifton, Ga.	2.0	3.0	2.0	2.0	3.0	3.0
Live Oak, Fla.	1.7	2.0	1.7	2.0	2.3	2.0
Gainesville, Fla.	3.0	2.0	2.0	2.0	1.0	1.7
Quincy, Fla.	1.0	4.0	3.0	2.0	3.0	4.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	2.3	2.0	1.0	2.0	1.3	2.3
Baton Rouge, La.	2.0	2.0	2.0	2.0	1.7	3.0
St. Joseph, La.	2.7	3.3	3.0	2.7	3.0	3.7
Curtis, La.	1.2	1.5	1.4	1.2	1.8	1.5
Beaumont, Texas	2.0	2.0	2.0	2.0	2.0	2.0

Table 63. - (continued)

Location	Co5322	Co6307	F64-1917	F64-3494	F65-1120	F65-1133
			South			
Hartsville, S.C.(A)	2.0	2.0	1.0	2.0	3.0	2.0
Hartsville, S.C.(B)	1.0	2.0	1.0	2.0	3.0	1.0
Experiment, Ga.	1.5	2.3	1.5	2.2	2.2	1.5
Tallassee, Ala.	1.3	2.0	1.0	1.7	1.7	1.0
Tifton, Ga.	2.0	2.0	3.0	3.0	3.0	2.0
Live Oak, Fla.	2.3	2.0	1.3	2.0	1.7	1.7
Gainesville, Fla.	1.3	2.3	2.3	1.7	1.3	1.3
Quincy, Fla.	4.0	3.0	3.0	2.0	2.0	2.0
Jay, Fla.	1.0	1.0	2.0	1.0	1.0	1.0
Fairhope, Ala.	1.3	2.7	1.3	2.7	1.3	2.0
Baton Rouge, La.	2.0	3.0	3.0	2.0	2.0	2.0
St. Joseph, La.	2.3	4.0	2.3	3.0	2.3	3.0
Curtis, La.	2.3	1.5	3.7	1.3	1.3	1.6
Beaumont, Texas	2.0	2.0	2.0	2.0	2.0	1.0

PRELIMINARY GROUP VIII

1968

Preliminary Group VIII nurseries, including 34 experimental strains and the check varieties Hampton and Hardee, were grown at seven locations. A planting was made on clay at Stoneville to evaluate field reaction to phytophthora rot. The parentage of these strains is reported in Table 64. Performance data are summarized in Tables 65 through 70. Differences in seed yield were significant at the 5% level of confidence in six of the seven plantings. The combined analysis of variance for seed yield showed differences to be significant at the 5% level of confidence. Two strains ranked above Hampton in seed yield and Hardee and nine experimental strains produced mean yields significantly below Hampton. Five strains ranked above Hampton in oil content and 21 strains ranked above it for protein content of the seed. Only five strains appeared to be weak in seed holding. Hampton and 15 experimental strains were susceptible to phytophthora rot.

Among the strains which appear to merit being advanced to Uniform Group VIII are: F66-1713, F66-1166, F66-1689, F66-1080, F64-2571B, F66-648, and F66-1109. It is of interest that all of these strains, except F64-2571B, have Jackson as a parent.

Table 64. - Parentage of strains in Preliminary Group VIII, 1968

	Variety or strain	Parentage	Generation composited
1.	Hampton 266		
2.	Hardee		
3.	Co4504	Jackson x Co56-251	
4.	Co6718	Stuart x F56-3492	
5.	Co6721	Yelnanda x Hampton	
6.	F64-2571A	Sublines F64-2571 - early maturity	
7.	F64-2571B	Sublines F64-2571 - late maturity	
8.	F65-1019	(F55-224 x D55-4073) x F58-5788 x D56-4065)	F_6
9.	F65-1974	Composite of crosses involving germplasm lines	F_8
10.	F66-601	Jackson x (Ogden x D53-1301)	F_6
11.	F66-609	Jackson x (Ogden x D53-1301)	F_6
12.	F66-648	Jackson x (Ogden x D53-1301)	F_6
13.	F66-720	Bragg x D60-8107	F_5
14.	F66-1002	Hardee x D58-3358	F_6
15.	F66-1080	F57-735 x D58-3358	F_6
16.	F66-1109	F57-735 x D58-3358	F_6
17.	F66-1166	F57-735 x D58-3358	F_6
18.	F66-1353	Hardee x D53-1301	F_7
19.	F66-1381	F57-1471 x D53-1301	F_7
20.	F66-1430	F57-1471 x D53-1301	F_7
21.	F66-1485	F57-1471 x D53-1301	F_7
22.	F66-1553	F57-1471 x F58-3726	F_7
23.	F66-1555	F57-1471 x F58-3726	F_7
24.	F66-1557	F57-1471 x F58-3726	F_7
25.	F66-1565	F57-1471 x F58-3726	F_7
26.	F66-1590	F57-1471 x F58-3726	F_7
27.	F66-1642	F57-1471 x F58-3726	F_7
28.	F66-1655	F57-1471 x F58-3726	F_7
29.	F66-1682	Hardee x D58-3358	F_6
30.	F66-1689	Hardee x D58-3358	F_6
31.	F66-1692	Hardee x D58-3358	F_6
32.	F66-1703	Hardee x D58-3358	F_6
33.	F66-1713	Hardee x D58-3358	F_6
34.	F66-1742	Hardee x D58-3358	F_6
35.	F66-1748	Hardee x D58-3358	F_6
36.	FB66-197	Bragg(3) x D60-7965	F_3

Table 65. - General summary of performance for the strains in Preliminary Group VIII, 1968

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	Seed holding	B.P.	P.R.
Hampton 266	33.0	10-28	31	23.6	40.1	1.0	1.0	3.5
Hardee	27.7-	+7	39	22.2-	42.9+	1.3	1.0	1.0
Co4504	30.0	+4	35	22.9	41.0	1.3	1.0	5.0
Co6718	30.2	0	32	22.8-	40.3	1.8	1.0	1.0
Co6721	31.9	-3	33	24.5	39.9	1.8	1.0	3.5
F64-2571A	28.6	+6	32	22.2-	40.9	1.8	1.0	2.0
F64-2571B	31.5	+7	37	22.1-	40.7	1.5	1.0	1.5
F65-1019	25.8-	+1	35	21.0-	43.8+	3.0	1.0	1.0
F65-1974	28.7	0	33	23.2	40.3	1.5	1.0	1.0
F66-601	30.5	0	35	23.6	38.4-	1.0	1.0	5.0
F66-609	27.1-	+1	35	22.1-	42.1+	2.3	1.0	1.0
F66-648	30.6	+3	34	23.5	39.5	1.0	1.0	1.5
F66-720	25.7-	+2	37	21.7-	42.6+	1.0	1.0	1.0
F66-1002	27.2-	0	34	23.6	40.0	2.5	1.0	1.0
F66-1080	32.2	+6	37	24.2	39.9	1.0	1.0	2.5
F66-1109	30.5	0	33	23.3	41.6+	1.3	1.0	1.5
F66-1166	34.2	+4	38	23.9	40.1	1.3	1.0	3.0
F66-1353	28.2	+4	37	22.9	41.2	1.0	1.0	1.0
F66-1381	24.2-	+2	33	23.4	39.0	1.0	1.0	5.0
F66-1430	27.4-	+1	33	22.6-	40.4	1.0	1.0	1.5
F66-1485	29.6	+5	30	22.7-	39.7	1.0	1.0	3.0
F66-1553	24.8-	0	27	23.5	40.5	1.5	1.0	4.5
F66-1555	28.3	+6	41	23.8	40.4	1.3	1.0	1.0
F66-1557	30.6	+5	39	--	--	1.0	1.0	5.0
F66-1565	29.1	+5	37	20.4-	43.1+	1.0	1.0	4.0
F66-1590	27.8	+5	35	--	--	1.0	1.0	2.5
F66-1642	32.3	+4	32	21.8-	42.0+	1.3	1.0	4.5
F66-1655	26.4-	0	37	22.6-	40.5	1.5	1.0	1.5
F66-1682	30.6	+4	34	23.9	40.1	1.3	1.0	4.5
F66-1689	31.9	0	32	23.3	40.6	1.8	1.0	1.0
F66-1692	26.6-	-2	29	23.1	40.5	3.0	1.0	2.5
F66-1703	30.2	+3	38	22.7-	41.6+	1.5	1.0	1.0
F66-1713	37.1	+3	33	23.3	38.7-	1.3	1.0	1.0
F66-1742	31.2	+1	35	22.2-	40.0	2.0	1.0	1.0
F66-1748	30.3	+3	34	23.4	39.8	1.0	1.0	1.0
FB66-197	27.8	+3	34	21.8-	42.0+	1.0	1.0	2.0
L.S.D.(.05)	5.3			0.8	1.3			
L.S.D.(.01)	6.9			1.1	1.7			

Table 66. - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1968

Strain	Blackville, S.C.*	Live Oak, Fla.	Gaines-ville, Fla.	Quincy, Fla.	Jay, Fla.	Baton Rouge, La.	Beaumont, Texas
Hampton 266	14.5	31.9	28.1	43.9	29.9	30.0	34.5
Hardee	15.5	22.0-	23.9	32.1-	31.0	36.4	20.9-
Co4504	15.0	29.9	30.8	35.3-	31.8	28.4	23.6-
Co6718	13.5	31.8	27.9	39.0	24.6	31.6	26.2-
Co6721	14.6	28.0	22.9	37.5	42.0	31.8	29.1
F64-2571A	12.9	31.8	25.9	37.6	31.0	17.0-	28.5
F64-2571B	17.3+	37.5	25.4	37.3	30.3	33.4	25.1-
F65-1019	13.2	29.4	15.2-	36.7	26.9	25.9	20.7-
F65-1974	12.3	28.3	20.6	36.2	29.5	31.1	26.4-
F66-601	13.6	29.3	32.2	36.4	25.0	32.4	28.0-
F66-609	15.4	29.3	26.0	36.0	25.0	18.9	27.2-
F66-648	13.7	31.5	23.0	40.1	31.0	30.5	27.4-
F66-720	13.3	31.0	30.8	29.4-	29.9	15.4-	17.6-
F66-1002	12.5	30.1	21.5	35.1-	25.0	30.1	21.5-
F66-1080	14.4	32.7	28.8	40.4	27.3	34.2	29.6
F66-1109	15.4	29.0	24.6	39.7	30.6	28.7	30.2
F66-1166	15.5	30.2	34.3	40.9	28.8	39.2	32.2
F66-1353	12.7	28.3	24.5	32.7-	24.6	30.4	28.9
F66-1381	15.6	23.6-	18.0-	28.5-	32.5	25.6	16.8-
F66-1430	12.0	23.2-	24.3	34.0-	26.1	32.3	24.6-
F66-1485	14.3	24.7-	23.2	40.0	31.4	27.6	30.7
F66-1553	13.1	20.7-	22.5	33.9-	28.0	20.2	23.8-
F66-1555	14.2	27.6	26.4	30.9	31.0	34.0	19.7-
F66-1557	14.7	--	33.7	36.8	28.0	--	25.1-
F66-1565	11.3-	28.1	29.3	36.8	28.8	34.1	17.6-
F66-1590	12.8	--	25.3	41.0	26.9	24.9	18.9-
F66-1642	16.2	27.9	34.3	33.2	29.9	37.2	31.2
F66-1655	14.7	25.9	27.2	35.9	29.2	27.2	12.9-
F66-1682	16.0	34.4	21.0	39.3	27.6	37.4	24.2-
F66-1689	13.2	33.0	21.7	43.0	40.1	29.0	24.7-
F66-1692	14.6	27.6	18.9-	39.8	31.0	18.7-	24.0-
F66-1703	17.7+	30.7	22.6	36.9	29.9	35.4	25.6-
F66-1713	16.1	38.4+	29.0	46.4	31.4	44.7+	33.0
F66-1742	17.2+	33.0	16.9-	44.7	35.2	31.4	26.2-
F66-1748	12.5	32.4	26.7	46.2	33.7	37.9	4.8-
FB66-197	13.0	34.9	24.3	31.0-	31.4	18.5-	27.0-
L.S.D.(.05)	2.6	6.5	8.8	8.3	N.S.	11.3	6.3
C.V.	9%	11%	17%	11%	19%	19%	13%

* Not included in mean.

Table 67. - Oil percentages for the strains in Preliminary Group VIII, 1968

Strain	Live Oak, Fla.	Gainesville, Fla.	Jay, Fla.	Baton Rouge, La.
Hampton 266	22.9	23.7	23.9	23.9
Hardee	21.0	22.9	22.7	22.0
Co4504	22.4	23.4	23.1	22.6
Co6718	22.8	23.1	22.8	22.5
Co6721	23.8	23.8	25.1	25.2
F64-2571A	22.4	22.5	21.7	22.0
F64-2571B	23.0	21.8	21.6	22.0
F65-1019	20.8	19.6	21.9	21.7
F65-1974	22.8	22.8	23.6	23.6
F66-601	23.5	23.7	23.9	23.2
F66-609	22.3	21.8	22.7	21.7
F66-648	23.3	23.7	23.3	23.6
F66-720	21.9	22.1	22.4	20.2
F66-1002	23.2	23.8	23.6	23.7
F66-1080	24.2	24.3	23.9	24.2
F66-1109	22.5	23.7	23.6	23.5
F66-1166	24.2	23.5	23.9	23.9
F66-1353	22.3	23.5	22.7	22.9
F66-1381	22.5	22.5	24.3	24.1
F66-1430	22.0	21.7	23.5	23.1
F66-1485	22.3	22.7	22.6	23.1
F66-1553	22.5	24.6	23.8	23.1
F66-1555	23.3	23.8	23.8	24.1
F66-1557	--	21.2	22.2	--
F66-1565	19.8	20.1	21.2	20.4
F66-1590	--	23.5	23.1	24.3
F66-1642	21.7	22.0	22.2	21.4
F66-1655	22.4	22.3	22.7	22.8
F66-1682	24.4	23.8	23.3	24.2
F66-1689	22.9	23.5	23.9	22.9
F66-1692	22.2	23.1	23.9	23.0
F66-1703	22.9	22.2	24.0	21.7
F66-1713	23.2	24.2	22.3	23.6
F66-1742	22.4	22.2	22.8	21.4
F66-1748	23.4	24.1	22.7	23.3
FB66-197	20.6	22.7	22.3	21.5

Table 68. - Protein percentages for the strains in Preliminary Group VIII, 1968

Strain	Live Oak, Fla.	Gainesville, Fla.	Jay, Fla.	Baton Rouge, La.
Hampton 266	40.0	39.7	40.5	40.2
Hardee	44.6	41.3	42.8	42.7
Co4504	40.8	40.5	41.4	41.1
Co6718	39.6	39.6	41.5	40.5
Co6721	40.6	41.3	39.1	38.6
F64-2571A	40.1	41.5	41.6	40.3
F64-2571B	39.9	40.5	41.4	41.1
F65-1019	43.5	45.7	42.9	42.9
F65-1974	39.7	41.7	40.5	39.4
F66-601	37.9	38.8	39.5	37.5
F66-609	42.0	42.9	41.9	41.7
F66-648	39.6	40.5	39.5	38.2
F66-720	43.3	41.0	42.4	43.6
F66-1002	39.6	39.4	40.5	40.5
F66-1080	39.5	39.1	41.0	40.1
F66-1109	42.6	41.8	40.0	42.0
F66-1166	39.0	41.0	40.3	40.0
F66-1353	42.0	41.2	40.8	40.6
F66-1381	39.8	40.6	36.4	39.2
F66-1430	41.0	41.1	40.2	39.3
F66-1485	39.9	39.1	39.9	39.9
F66-1553	41.4	40.8	40.1	39.6
F66-1555	41.0	41.1	39.8	39.7
F66-1557	--	41.9	41.5	--
F66-1565	43.2	42.2	44.3	42.7
F66-1590	--	39.1	41.4	38.5
F66-1642	41.4	41.9	42.0	42.6
F66-1655	41.2	40.1	40.6	40.2
F66-1682	39.8	40.0	41.1	39.5
F66-1689	40.9	41.1	40.0	40.4
F66-1692	42.2	40.9	39.1	39.8
F66-1703	40.9	41.9	41.6	42.1
F66-1713	36.4	39.3	39.1	40.0
F66-1742	39.9	41.1	40.1	38.9
F66-1748	40.2	39.3	40.5	39.2
FB66-197	41.1	41.5	42.8	42.4

Table 69. - Plant height for the strains in Preliminary Group VIII, 1968

Strain	Live Oak, Fla.	Gainesville, Fla.	Quincy, Fla.	Jay, Fla.	Baton Rouge, La.	Beaumont, Texas
Hampton 266	30	23	36	30	36	33
Hardee	37	26	41	42	48	37
Co4504	34	25	40	39	43	30
Co6718	32	24	31	35	32	35
Co6721	33	24	35	37	34	34
F64-2571A	32	24	39	38	30	30
F64-2571B	37	26	48	40	36	37
F65-1019	33	25	36	38	39	36
F65-1974	31	23	37	39	33	32
F65-601	33	26	39	40	40	34
F66-609	33	27	37	41	38	36
F66-648	31	22	39	37	41	34
F66-720	35	29	39	42	35	40
F66-1002	29	21	38	36	44	35
F66-1080	36	25	43	42	41	36
F66-1109	31	25	34	38	34	34
F66-1166	36	27	46	42	39	39
F66-1353	34	29	38	44	42	35
F66-1381	33	26	30	40	32	38
F66-1430	31	25	37	39	33	35
F66-1485	29	21	37	35	27	33
F66-1553	26	18	28	34	24	30
F66-1555	39	31	45	44	49	39
F66-1557	35	27	49	45	--	37
F66-1565	34	27	39	44	40	35
F66-1590	36	27	38	42	34	34
F66-1642	37	29	39	42	43	42
F66-1655	36	27	36	44	35	44
F66-1682	32	24	37	39	33	36
F66-1689	31	22	33	37	34	32
F66-1692	26	20	30	35	35	30
F66-1703	36	25	44	43	43	38
F66-1713	31	23	34	38	42	32
F66-1742	34	23	42	38	41	34
F66-1748	35	22	39	39	40	27
FB66-197	35	28	37	41	32	32

Table 70. - Seed quality scores for the strains in Preliminary Group VIII, 1968

Strain	Live Oak, Fla.	Gainesville, Fla.	Quincy, Fla.	Jay, Fla.	Baton Rouge, La.	Beaumont, Texas
Hampton 266	1.5	3.0	1.0	1.0	3.0	1.0
Hardee	2.5	1.0	2.0	1.0	3.0	1.0
Co4504	1.0	2.0	1.0	1.0	3.0	1.0
Co6718	1.0	2.0	1.0	1.0	3.0	1.0
Co6721	1.5	2.0	1.0	1.0	3.0	1.0
F64-2571A	1.5	2.0	2.0	1.0	2.5	2.0
F64-2571B	2.0	1.5	3.0	1.0	3.0	3.0
F65-1019	2.0	2.5	3.0	1.0	2.0	1.0
F65-1974	1.5	3.0	3.0	1.0	2.0	1.0
F65-601	1.5	1.5	1.0	1.0	3.0	1.0
F66-609	1.5	3.0	1.0	1.0	3.0	1.0
F66-648	1.5	1.5	2.0	1.0	2.0	1.0
F66-720	2.0	2.0	1.0	1.0	3.5	1.0
F66-1002	1.5	1.5	1.0	1.0	3.0	1.0
F66-1080	2.0	1.5	1.0	1.0	3.0	1.0
F66-1109	1.5	1.5	1.0	1.0	2.5	1.0
F66-1166	1.5	1.5	2.0	1.0	3.0	1.0
F66-1353	1.5	1.5	2.0	1.0	3.0	2.0
F66-1381	1.5	2.5	1.0	1.0	1.5	3.0
F66-1430	1.5	1.5	1.0	1.0	1.5	2.0
F66-1485	2.0	1.5	1.0	1.0	3.0	1.0
F66-1553	2.0	2.5	1.0	1.0	3.0	1.0
F66-1555	2.0	2.0	1.0	1.0	3.0	2.0
F66-1557	---	1.0	4.0	1.0	---	1.0
F66-1565	2.0	1.5	2.0	1.0	3.0	2.0
F66-1590	---	1.0	3.0	1.0	3.0	2.0
F66-1642	2.0	2.0	2.0	1.0	3.0	2.0
F66-1655	1.0	1.5	3.0	1.0	2.5	1.0
F66-1682	1.0	2.5	1.0	1.0	3.0	1.0
F66-1689	1.5	1.5	1.0	1.0	2.0	1.0
F66-1692	1.0	1.5	1.0	1.0	3.0	2.0
F66-1703	1.0	2.0	2.0	1.0	3.5	1.0
F66-1713	1.5	2.0	1.0	1.0	3.0	1.0
F66-1742	1.5	2.0	1.0	1.0	1.5	1.0
F66-1748	1.0	2.5	1.0	1.0	3.0	1.0
FB66-197	2.5	2.5	1.0	1.0	2.5	1.0