U. S. REGIONAL SOYBEAN LABORATORY
URBANA, ILLINOIS

RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS, 1948 PART II. SOUTHERN STATES

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF PLANT INDUSTRY
SOILS, AND AGRICULTURAL ENGINEERING,
DIVISION OF FORAGE CROPS AND DISEASES
COOPERATING WITH
STATE AGRICULTURAL EXPERIMENT STATIONS

FEBRUARY, 1949
RSLM 149

RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

PART II. SOUTHERN STATES[1/2/]

****

1948

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Compiled by

Edgar E. Hartwig and Elaine Bounds

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 For this reason citation to particular statements in the Report should not be published unless permission has been granted previously by the Laboratory or the state station concerned.

2/The results of the program of cooperative soybean disease research, conducted by the Division of Forage Crops and Diseases in the Southern States, is included in this report, since the two programs are closely integrated.

INTRODUCTION

The program of the U. S. Regional Soybean Laboratory includes developing and evaluating soybean varieties for industrial utilization. As a means of evaluating present varieties and new strains developed through breeding, replicated plantings are made under a wide variety of environmental conditions. Because soybean strains are very sensitive to photoperiod, it has been necessary to classify types into maturity groups. For convenience these maturity groups are designated Group 0, I, II, - - VII, VIII, extending from north to south. This report includes a summary of agronomic and chemical characteristics of varieties and new strains for the Southern States. Maturity groups included are IV, V, VI, VII, and VIII.

The cooperative program between the Soybean Laboratory and the states in the southern region was initiated in 1943. At that time there was only limited information available showing the regions of adaptation of the existing varieties of soybeans. During the first few years most of the strains included in the uniform nurseries were established varieties. As agronomic and chemical data were accumulated on these strains, the poorer producers were eliminated from the tests. At the present time, the material grown in the regional nurseries comprises top-producing varieties and new selections from the breeding programs. This testing program gives agronomic and chemical data from a wide variety of conditions. Because of these tests, the breeder can get new strains into production in a minimum amount of time.

A wide range of soil and climatic conditions exist in the region. It is too much to expect that any one variety should give top performance in all areas where a particular maturity group is to be grown. 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 of Virginia, North Carolina, and the upper half of South Carolina; (2) the Southeast, consisting of the Coastal Plain soils of the lower half of South Carolina, Georgia, Florida, Alabama, and Mississippi; (3) the Upper and Central South, including the Piedmont soils between the Coastal Plain and Mississippi Delta; (4) the Delta area, composed of the alluvial soils from the Mississippi River in Missouri, Arkansas, Tennessee, Mississippi, and Louisiana; and (5) the West, or Southwest, comprising the western half of Arkansas and Louisiana, Oklahoma and Texas. A map is included to illustrate these areas.

As further aid in interpreting yield responses, rainfall data is reported for many of the locations where nurseries were grown. Since much of the summer rainfall is from local showers, rainfall is reported only for those locations where records were taken close to the nurseries. Daily minimum and maximum temperatures are reported from representative locations for the production areas.

Rates of fertilization is reported for those locations where the plots were fertilized. Soil type is reported for all locations.

COOPERATING AGENCIES AND PERSONNEL FOR THE SOUTHERN STATES

Bureau of Plant Industry, Soils and Agricultural Engineering,
Division of Forage Crops and Diseases[1]: W. J. Morse, J. L. Cartter, E. E. Hartwig, C. R. Adair, Herbert W. Johnson, R. B. Carr, J. L. Stephens, and Elaine Bounds.

Alabama Agricultural Experiment Station,
Agronomy Department: E. F. Schultz, Otto Brown, S. E. Gissendanner, Fred Stewart, J. K. Boseck.

Arkansas Agricultural Experiment Station,
Agronomy Department: C. R. Adair, J. L. Damerson, J. O. Dockins.

Georgia Agricultural Experiment Station,
Agronomy Department: U. R. Gore.

Louisiana Agricultural Experiment Station,
Agronomy Department: J. P. Gray.

Mississippi Agricultural Experiment Station,
Agronomy Department: J. F. O'Kelly, R. B. Carr.

North Carolina Agricultural Experiment Station,
Agronomy Department: Herbert W. Johnson.

Oklahoma Agricultural Experiment Station,
Agronomy Department: Chester Canode.

Tennessee Agricultural Experiment Station,
Agronomy Department: L. N. Skold.

Texas Agricultural Experiment Station,
Agronomy Department: R. C. Potts.

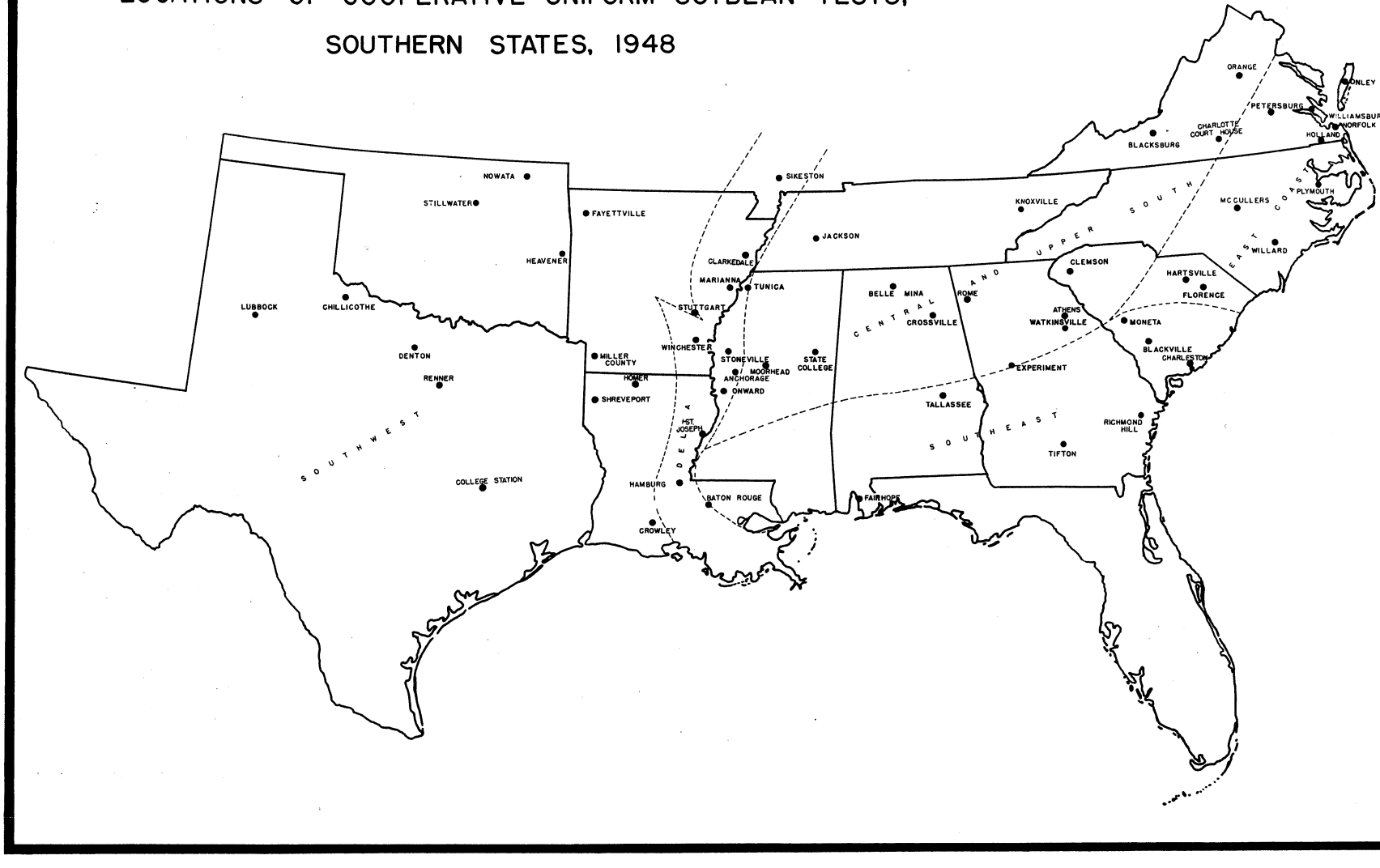
Virginia Agricultural Experiment Station,
Agronomy Department: T. J. Smith.

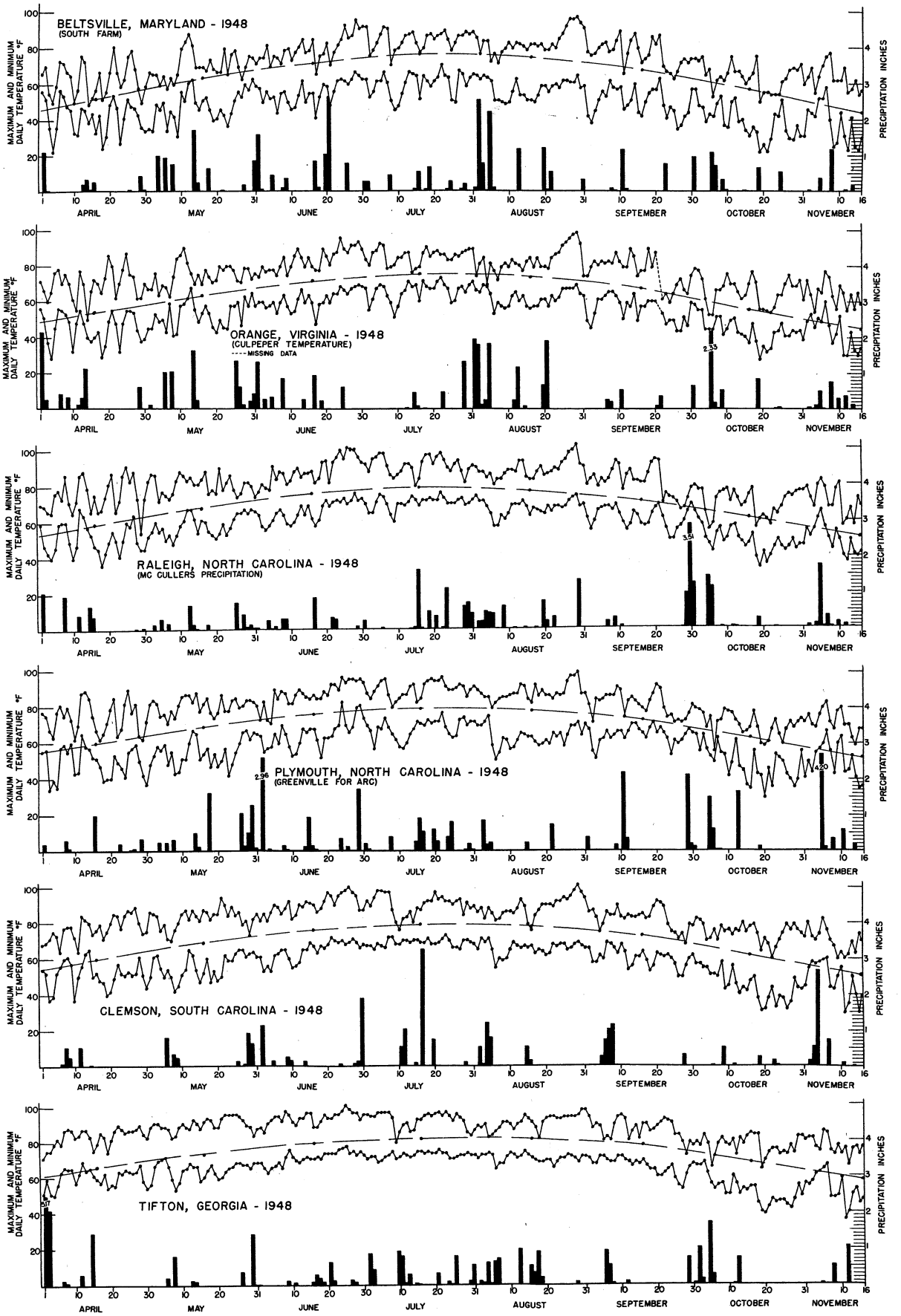
1/ The chemists at the U. S. Regional Soybean Laboratory, Urbana, Illinois, have run the chemical analyses. Breeding material received from the Laboratory staff members located at states in the northern program has aided the southern program appreciably.

LOCATION OF COOPERATIVE NURSERIES

Location	Cooperator	IV	V	VI	VII	VIII	Soil Type	Fertilizer 1/
	EAST COAST							
Petersburg, Va.	Virginia State Field Sta.		1		1		Norfolk F.S.L.	0-48-48
Williamsburg, Va.	Eastern Va. Field Sta.		1		1		Sassafras F.S.L.	0-84-42
Holland, Va.	Tidewater Field Sta		1		1		Onslow F.S.L.	0-42-21
Norfolk, Va.	Va. Truck Expt. Sta.		1		1		Norfolk Sandy Loam	-
Onley, Va.	Eastern Shore Br. Truck Expt. Sta.		1		1			
Plymouth, N. C.	Tidewater Branch Station		1	1	1		Bladen F.S.L.	0-60-60
Willard, N. C.	Lower Coastal Plain Expt. Sta.			1	1		Norfolk Sandy Loam	0-60-60
McCullers, N. C.	N. Car. Agr. Expt. Sta.			1	1		Norfolk Sandy Loam	0-60-60
Hartsville, S. C.	Coker Pedigreed Seed Co.				1	1	Norfolk F.S.L.	
Florence, S. C.	Pee Dee Expt. Station				1		Dunbar F.S.L.	0-40-80
	SOUTHEAST							
Monetta, S. C.	Miss Bessie Johnson			1	1	1	Norfolk Sandy Loam	0-40-80
Blackville, S. C.	Edisto Expt. Station				1		Ruston Sandy Loam	15-45-45
Charleston, S. C.	S. Car. Truck Expt. Station				1	1	Nosbig F.S.L.	- 2/
Tifton, Ga.	Georgia Coastal Plain Expt. Sta.				2	2	Tifton Sandy Loam	-
Tallassee, Ala.	Alabama Agr. Expt. Station			1	1	1		
Fairhope, Ala.	Gulf Coast Substation			1	1	1	Norfolk F.S.L.	2/
	UPPER AND CENTRAL SOUTH							
Beltsville, Md.	Plant Industry Station	1	1				Riverdale Silt Loam	-
Blacksburg, Va.	Virginia Agr. Expt. Station	1					Dunmore Silt Loam	0-84-42
Orange, Va.	Piedmont Field Sta.	1					Davidson Clay Loam	0-84-42
Charlotte C.H., Va.	Southside Va. Field Station		1				Cecil Sandy Loam	0-49-25
Knoxville, Tenn.	Tenn. Agr. Expt. Sta.	1	1	1			Cumberland Silt Loam	12-36-12
Jackson, Tenn.	West Tenn. Agr. Expt. Station	1	1	1			Lintonia Silt Loam	-
Belle Mina, Ala.	Tennessee Valley Substation		1	1	1			
Crossville, Ala.	Sand Mountain Substation		1	1	1			
Clemson, S. C.	S. Car. Agr. Expt. Station				1		Cecil Sandy Loam	16-40-24
Watkinsville, Ga.	Southern Piedmont Expt. Sta.		1	1	1		Cecil Sandy Loam	0-84-60
Athens, Ga.	University of Georgia			1	1			-
Experiment, Ga.	Georgia Experiment Station			1	1		Cecil Sandy Loam	-
Rome, Georgia	Berry College			1				-
State College, Miss.	Miss. Experiment Station		1	1	1		Kaufman Sandy Loam	-

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES, 1948

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(SOUTH FARM)
ORANGE, VIRGINIA - 1948
(CULPEPER TEMPERATURE)
----MISSING DATA
2.33
RALEIGH, NORTH CAROLINA - 1948
(MC CULLERS PRECIPITATION)
3.51
PLYMOUTH, NORTH CAROLINA - 1948
(GREENVILLE FOR ARC)
2.36
4.20
CLEMSON, SOUTH CAROLINA - 1948
TIFTON, GEORGIA - 1948
3.91
MAXIMUM AND MINIMUM DAILY TEMPERATURE °F
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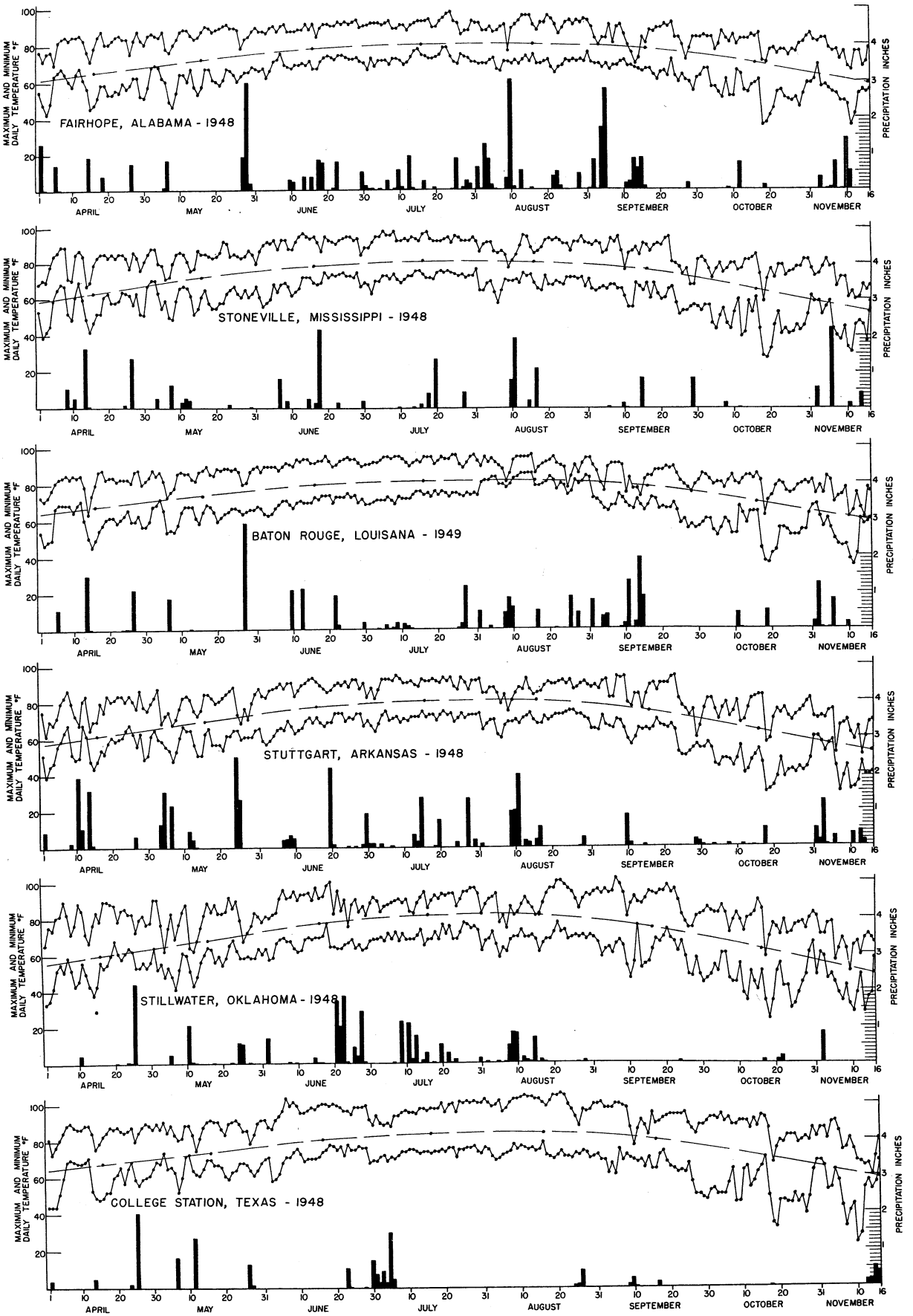
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


FAIRHOPE, ALABAMA - 1948
STONEVILLE, MISSISSIPPI - 1948
BATON ROUGE, LOUISANA - 1949
STUTTGART, ARKANSAS - 1948
STILLWATER, OKLAHOMA - 1948
COLLEGE STATION, TEXAS - 1948
MAXIMUM AND MINIMUM DAILY TEMPERATURE °F
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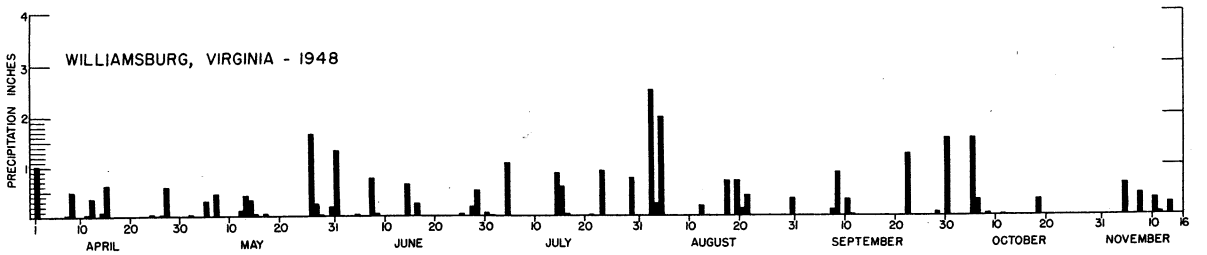
SEPTEMBER
OCTOBER
NOVEMBER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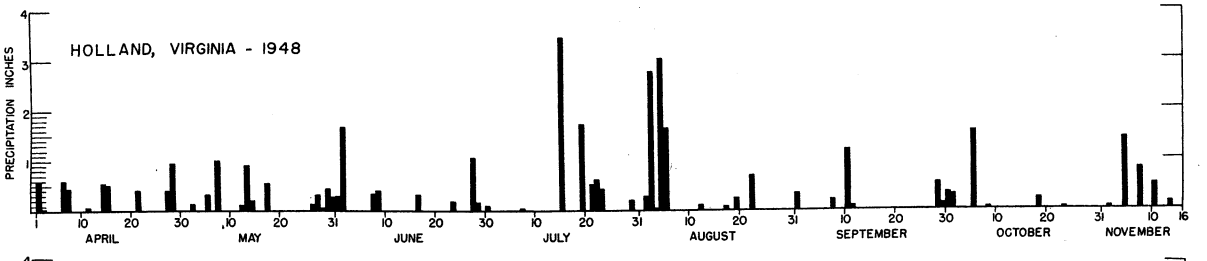
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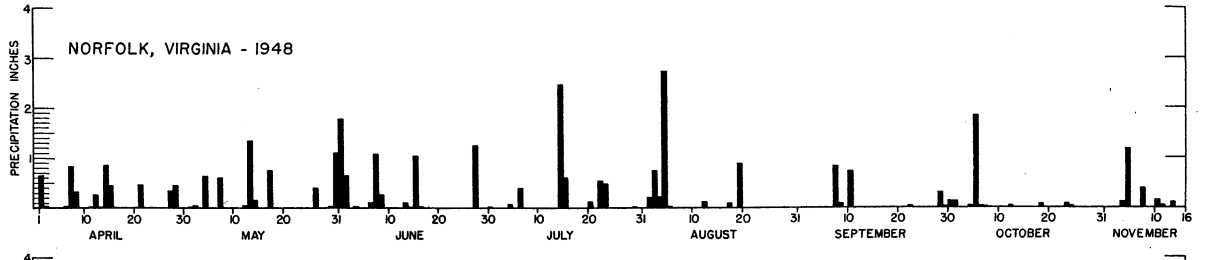
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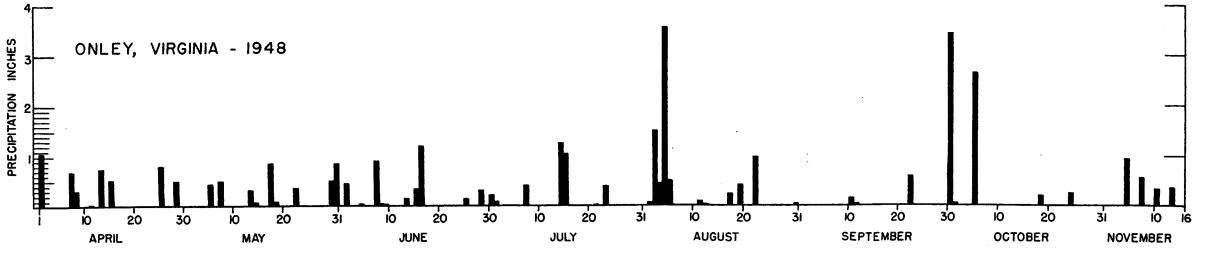
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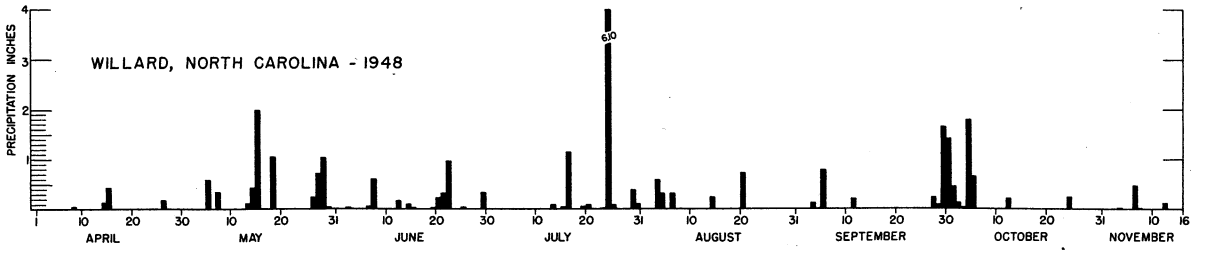
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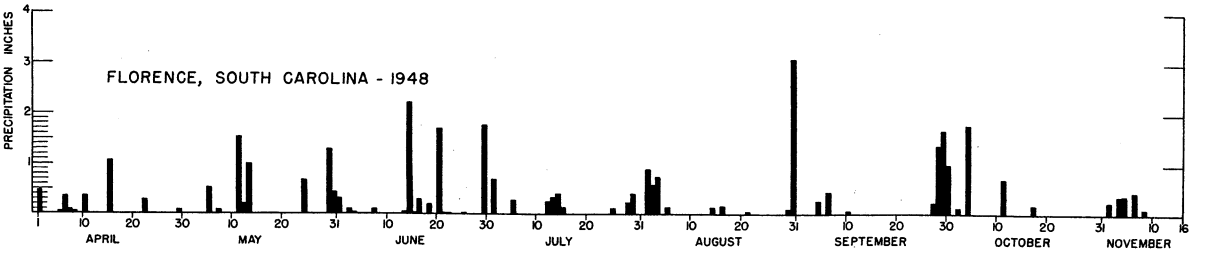
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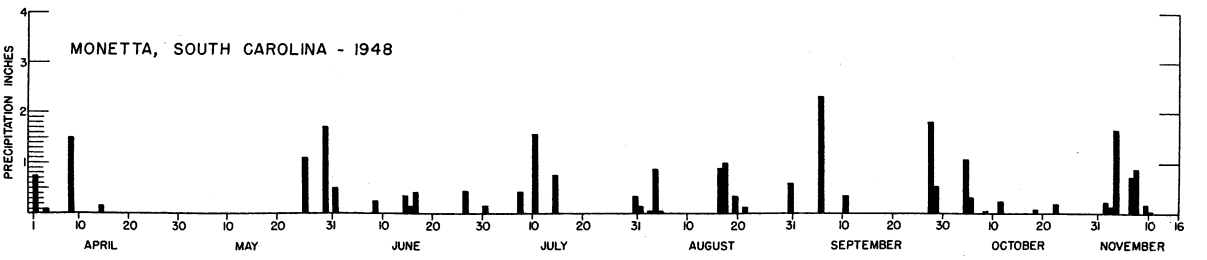
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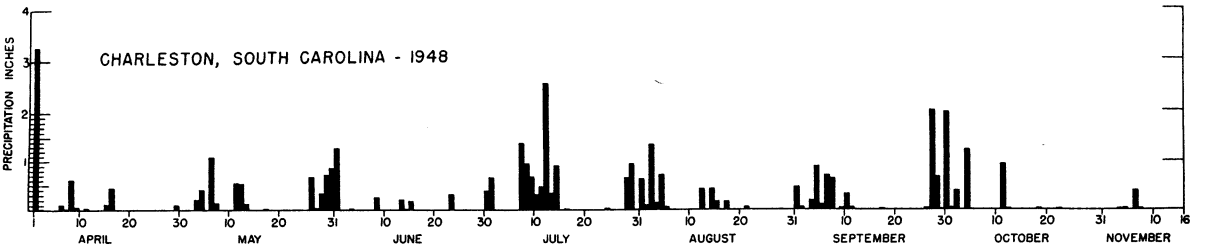
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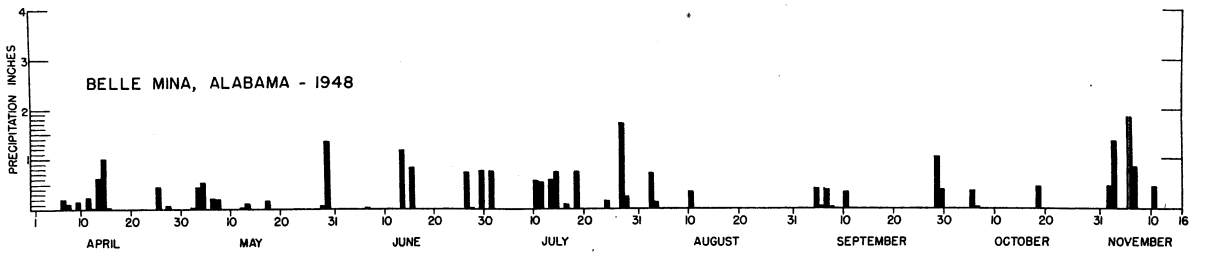
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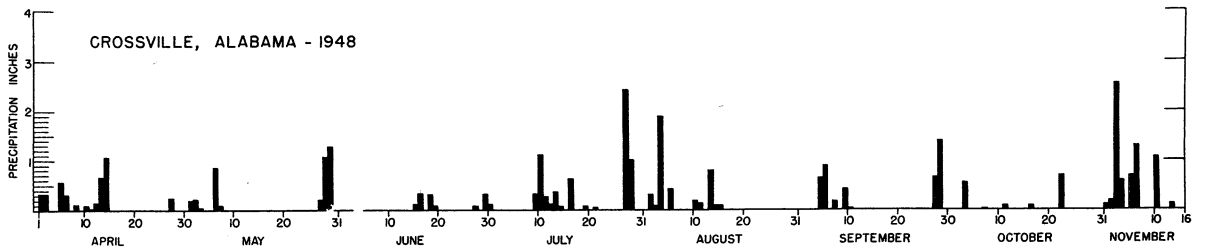
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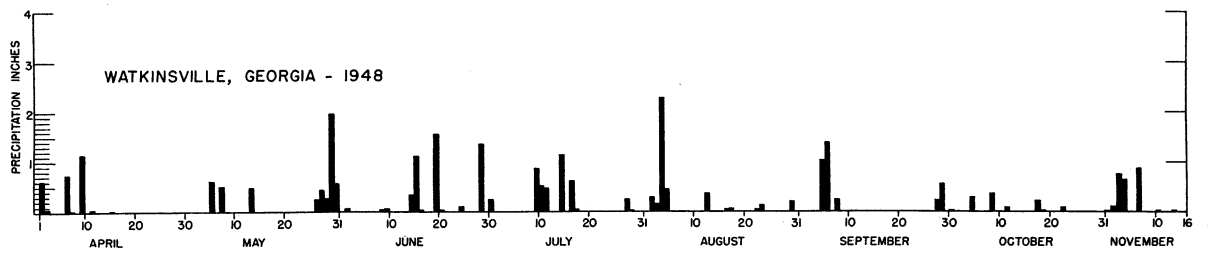
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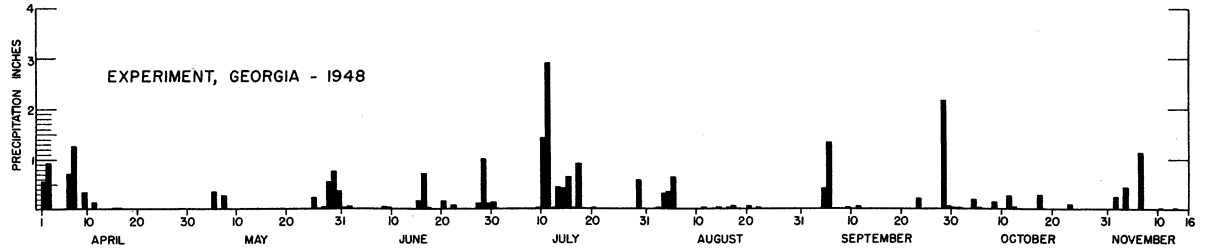
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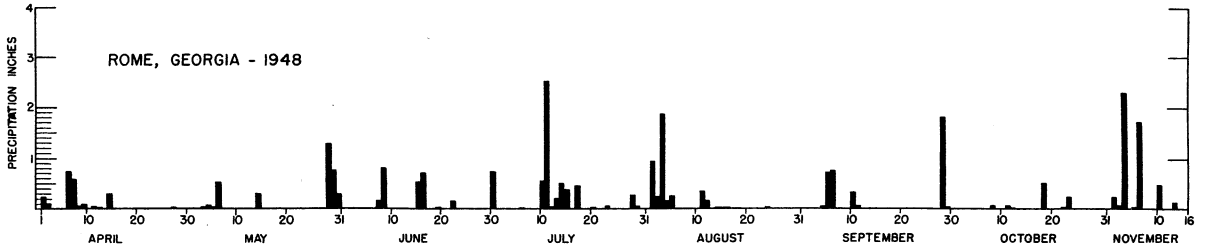
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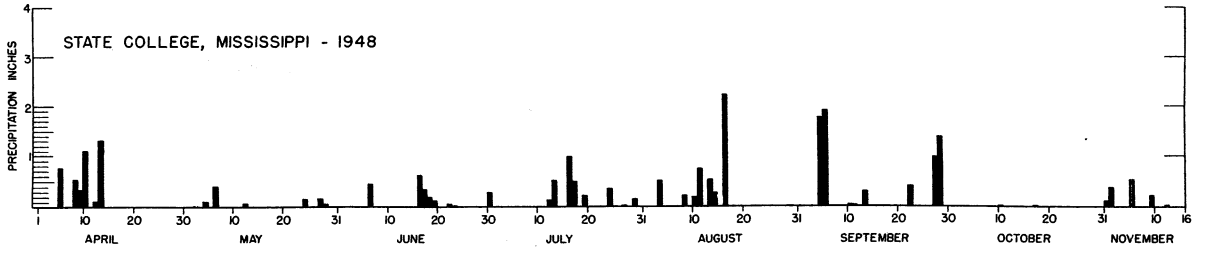
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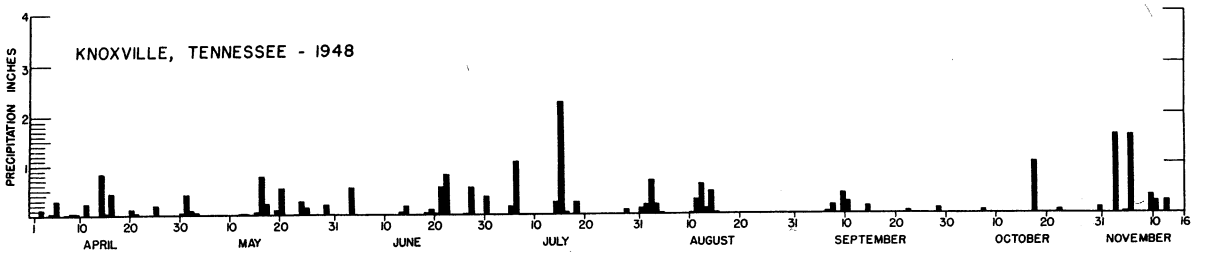
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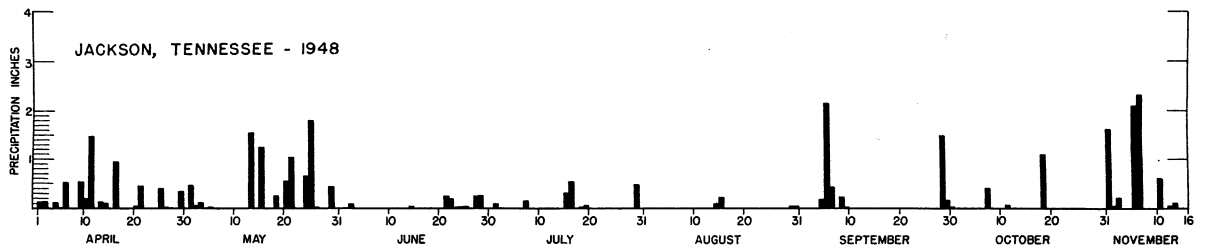
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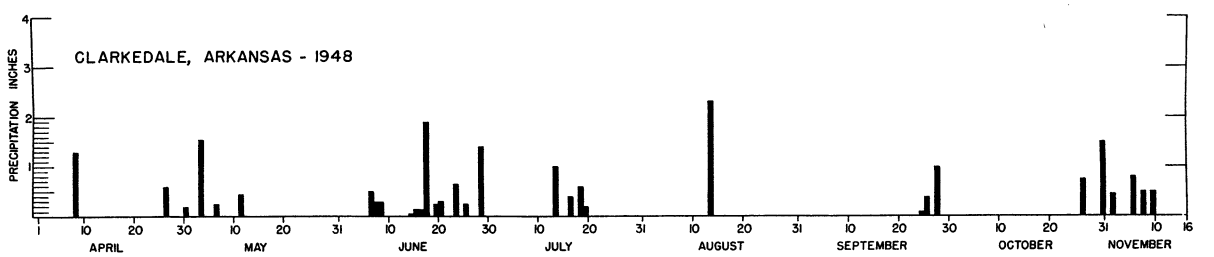
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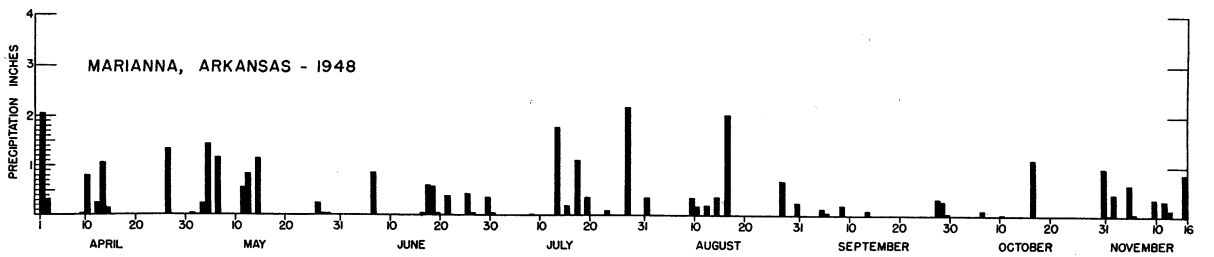
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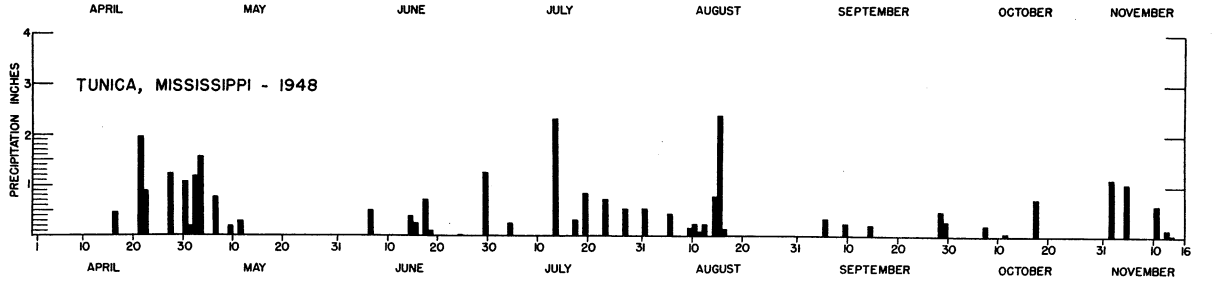
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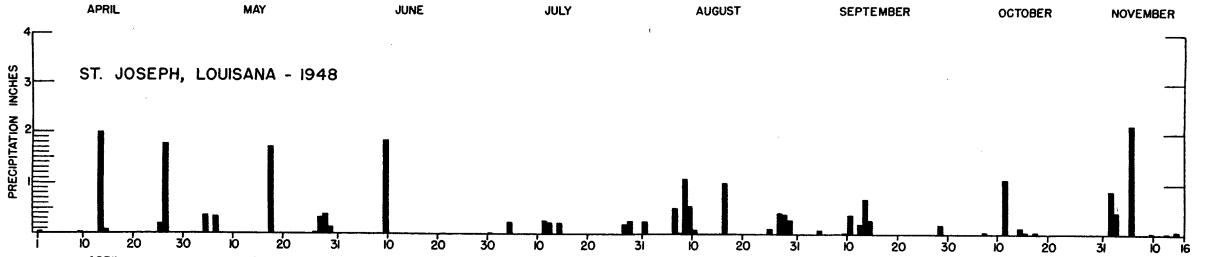
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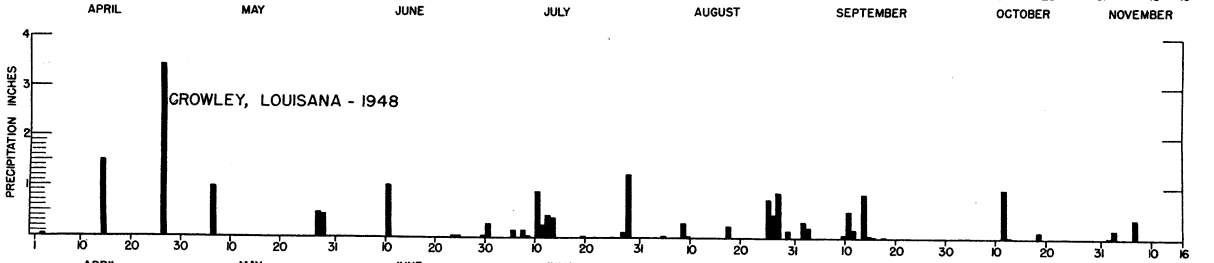
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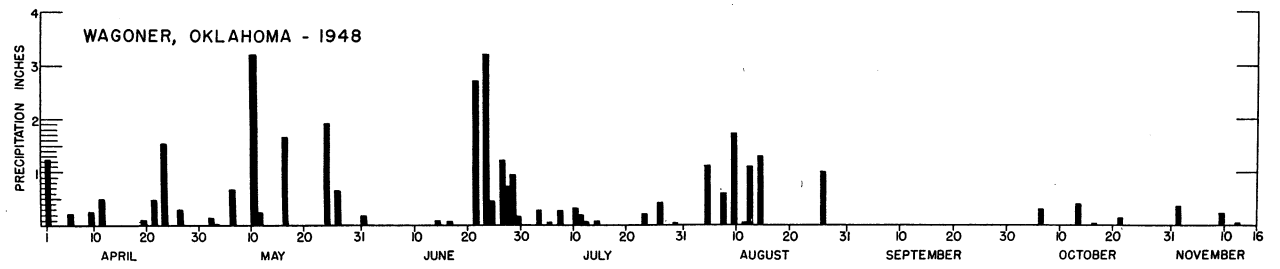
WAGONER, OKLAHOMA - 1948
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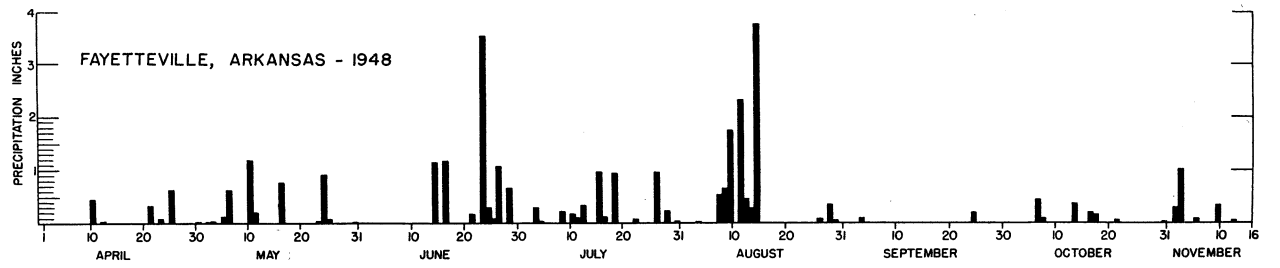
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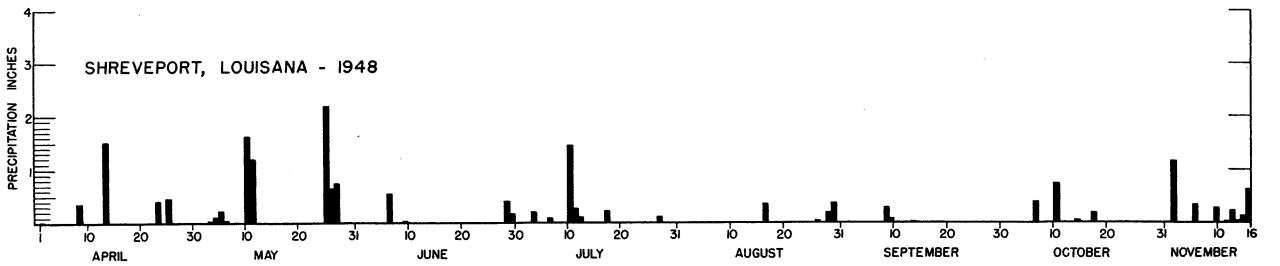
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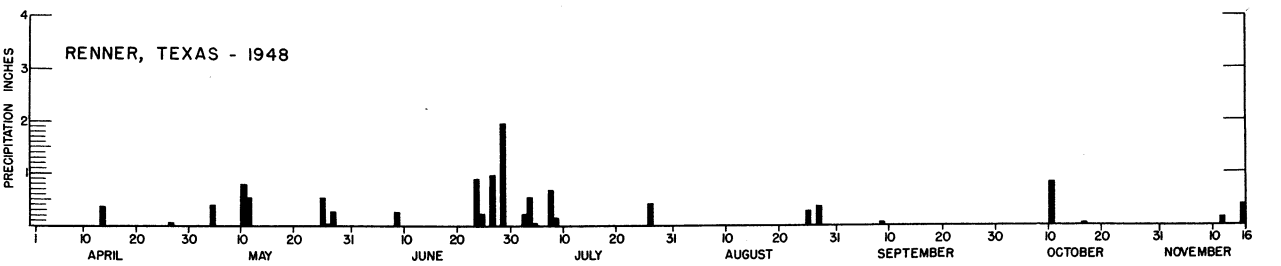
APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER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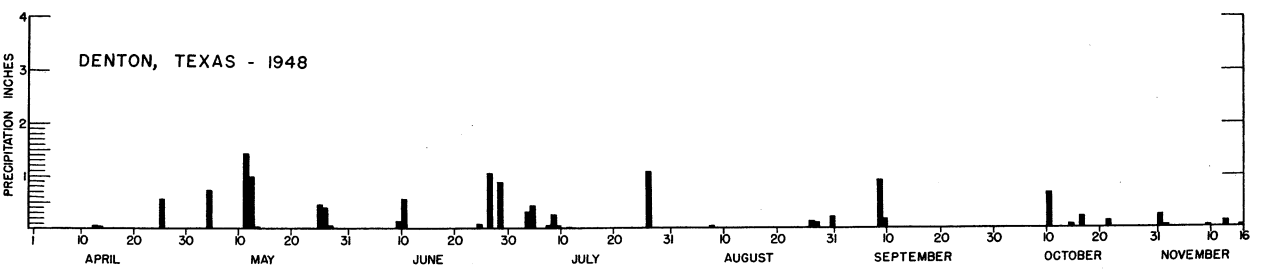
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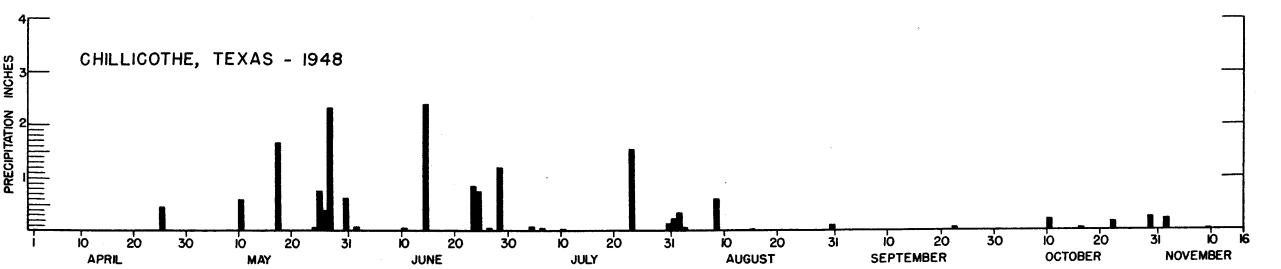
APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER


CHILLICOTHE, TEXAS - 1948
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APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER

Location	Cooperator	IV	V	VI	VII	VIII	Soil Type	Fertilizer
		DELTA						
Sikeston, Mo.	Missouri Agr. Expt. Sta.	1	1	1			Lintonia F.S.L.	9-36-36
Clarkedale, Ark.	Cotton Branch Station	1	1	1	2		Sharkey clay & sand	-
Marianna, Ark.	Cotton Branch Station		1	1	1	1	Richland silt loam	-
Tunica, Miss.	R. W. Owens	1	1	1	1		Dubbs silt loam	-
Stoneville, Miss.	Delta Branch Expt. Sta.	1	1	1	1	1	Robinsonville F.S.L.	-
Winchester, Ark.	J. A. Newton			1	1		Portland sandy loam	-
Moorhead, Miss.	Edgar Hobbs	1	1	1	1		Sharkey clay	-
Anchorage, Miss.	L. S. Stoner		1	1	1		Yazoo silt loam	-
Onward, Miss.	J. H. Hand, Jr.		1	1	1		Sharkey clay	-
St. Joseph, La.	Northeast Louisiana Expt. Sta.		1	1	1	1	Sarpy clay loam	-
Hamburg, La.	W. T. Nolin			1	1		Sharkey clay loam	12-36-36
Baton Rouge, La.	Louisiana Experiment Station		1	1	1	1	Lintonia Silt loam	15-60-60
		WEST						
Heavener, Okla.	Heavener Sub-station			1			Hanceville sandy loam	6-18-6
Stillwater, Okla.	Oklahoma Agr. Expt. Sta.		1	1			Miller F.S.L.	-
Nowata, Okla.	Paul O. Schultz		1				Verdigris sandy loam	-
Wagoner, Okla.	Gaston Franks		1	1			Parson clay loam	20-36-0
Stuttgart, Ark.	Rice Branch Expt. Sta.	1	1	1	2	1	Crowley silt loam	
Fayetteville, Ark.	Arkansas Agr. Expt. Sta.	1	1	1			Bolivar silt loam	
Curtis, La.	Red River Valley Expt. Sta.		1	1	1	1	Miller F.S.L.	6-24-24
Crowley, La.	Rice Experiment Station			1	1	1	Crowley silt loam	12-48-48
Renner, Texas	Texas State Research Foundation	1	1	1	1	1	Houston black clay	-
College Sta., Tex.	Texas Agric. Expt. Sta.		1				Yohola sandy loam	-
Miller County, Ark.	B. B. Lanier				1		Miller F.S.L.	-
Lubbock, Texas	Texas Sub-station No. 8		1	1	1	1	Richland F.S.L.	

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/Soybeans followed heavily fertilized vegetable crops.

METHODS

All uniform nurseries have been planted in replicated 20-foot single row or 3-row plots, using a randomized block design with four replications. Where 3-row plots were grown, only the center row was harvested. Row widths of the different locations have varied from 30 to 42 inches. Plantings are made at the rate of 10 viable seed per foot of row. An attempt is made to follow the best cultural and management practices in conducting these variety and strain comparisons.

Yields were taken by harvesting a 16-foot length from the midsection of each plot. Actual seed weights are recorded after the seed has dried to a uniform moisture content.

Shattering notes were taken on the remaining end plants of each row ten to fourteen days after maturity. The estimates are recorded on a scale of 1 to 5 as follows:

1. No shattering
2. 1 - 5% shattered
3. 6 - 10% shattered
4. 11 - 24% shattered
5. 25% or over shattered

Chemical composition, percent protein, percent oil, and iodine number of the oil was determined on each strain from representative locations. Percentage composition of the seed is expressed on a dry basis (moisture free). Seed weight from each strain was determined on the variety composite by individual locations and was recorded as weight in grams of 100 seeds.

Lodging notes were 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 was determined as the average length of plants in a plot from the ground to the top extremity at time of maturity.

Maturity was taken as the date when the leaves had dropped, the pods were ripe and the stems were 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, Gibson; Group V, S100; Group VI, Ogden; Group VII, Roanoke; and Group VIII, Acadian.

Seed Quality was rated from 1 to 5 according to the following scale:

1. Very good	3. Fair	5. Very Poor
2. Good	4. Poor	

The factors considered in estimating seed quality were development of seed, wrinkling damage, and color for the variety. While the seed quality scores indicate relative appearance of seed for the several varieties at one location, considerable differences can exist between factors responsible for the poorer grades in different areas.

Statistical analyses: Yield data were analyzed by analysis of variance. Differences necessary to indicate difference between strains (odds 19:1) are reported for each location.

UNIFORM GROUP IV, 1948

Strain or Variety	Source or Originating Agency	Origin
Gibson	Purdue A.E.S.	Sel. from Midwest x Dunfield
Chief	Illinois A.E.S.	Sel. from Illini x Manchu
Patoka	Purdue A.E.S.	Sel. from P.I. 70218-2
Wabash*	Purdue A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Mansoy
C490	Purdue A.E.S. & U.S.R.S.L.	Sel. from Patoka x X531-468-3-3-2
C499	Purdue A.E.S. & U.S.R.S.L.	Sel. fr. C143 x X531-468-3-3-2-3
C500	Purdue A.E.S. & U.S.R.S.L.	Sel. fr. C143 x X531-468-3-3-2-3
C501	Purdue A.E.S. & U.S.R.S.L.	Sel. fr. C143 x X531-468-3-3-2-3
C502	Purdue A.E.S. & U.S.R.S.L.	Sel. fr. C143 x X531-468-3-3-2-3
C508	Purdue A.E.S. & U.S.R.S.L.	Sel. fr. C143 x X531-468-3-3-2-3
C612	Purdue A.E.S. & U.S.R.S.L.	Sel. from Patoka x L7-1353
L3-2010	Ill. A.E.S. & U.S.R.S.L.	Sel. from C167 x L7-1355
L3-3427	Ill. A.E.S. & U.S.R.S.L.	Sel. from Scioto x Mukden

*Strain C463 has been given the name Wabash.

Eleven nurseries of Group IV maturity are summarized. Several other nurseries of this group were planted but are not included in the summary because of failure to have satisfactory stands for all of the varieties. For the western area yields were extremely low at several locations because of lack of rainfall. Since these data gave no varietal evaluation, they have not been included.

Included in these comparisons were the three named varieties, Gibson, Chief, and Patoka, and ten strains from the breeding programs being conducted at the Purdue and Illinois Agricultural Experiment Stations in cooperation with the Soybean Laboratory. One strain C463 has been released and has been given the name Wabash. Varieties of this maturity are grown to a very limited extent in the areas where the plantings were made. Gibson is grown to a greater extent than are either Chief or Patoka.

For the five locations in the Upper and Central South, Wabash yielded significantly more at four of the locations, averaging nearly eight bushels more per acre than Gibson. For the four locations in the Delta, Wabash did not differ significantly from Gibson at any location but averaged 1.5 bushels more per acre. Similar results were obtained from each of these areas in 1947. Wabash is of about the same maturity as Gibson in the Upper and Central area but is somewhat earlier than Gibson in the Delta section.

C490 was the latest strain in the group, averaging nearly a week later than Gibson. C490 makes good growth, stands well, and is superior to the other

strains in seed holding. Although C490 appeared outstanding for the group in field appearance, it yielded significantly more than Gibson at only two of the eleven locations.

The four strains C499, C500, C501, and C502 all gave good seed yields but appeared to be somewhat lacking in seed holding qualities.

The strain L3-2010 appears to be quite outstanding from the standpoint of oil content.

Table 1: Yield in bushels per acre for the strains in Uniform Group IV, 1948

Location	Gibson	Chief	Patoka	Wabash (C463)	C490	C499	C500
			UPPER AND CENTRAL SOUTH				
Beltsville, Md.	32.7	38.6+	35.7	39.3+	37.1	40.2+	37.7
Orange, Va.	23.6	26.8	30.3+	25.2	31.8+	31.3+	25.5
Blacksburg, Va.	20.2	31.2	25.1	37.0+	21.5	29.4	29.5
Knoxville, Tenn.	17.6	26.9+	20.1	23.1+	20.2	21.1+	22.2+
Jackson, Tenn.	23.6	31.1+	28.7	31.9+	28.8	24.6	26.6
Mean	23.5	30.9	28.0	31.3	27.9	29.3	28.3
			DELTA				
Sikeston, Mo.	17.9	24.8+	20.3	21.6+	16.8	18.0	19.5
Tunica, Miss.	23.1	13.7-	22.9	26.0	31.4+	28.1	29.1
Stoneville, Miss.	26.7	14.7-	19.6	26.2	25.8	23.9	16.9-
Moorhead, Miss.	27.0	30.3	29.6	27.1	30.5	29.6	35.0+
Mean	23.7	20.9	23.1	25.2	26.1	24.9	25.1
			WEST				
Fayetteville, Ark.	16.2	19.2	20.9	19.9	24.2	22.5	16.9
Lubbock, Texas	17.2	16.0	13.3-	17.2	19.7	16.5	11.0-
Mean	16.7	18.6	17.1	18.5	21.9	19.5	13.9

+ = yield significantly more (odds 19:1) than Gibson.

- = yield significantly less (odds 19:1) than Gibson.

Table 1: (Continued)

Location	C501	C502	C508	C612	L3-2010	L3-3427	Bus. Nec. For Sig. (5% level)	Coef. of Var.
			UPPER AND CENTRAL SOUTH					
Beltsville, Md.	37.3	43.8+	44.7+	38.8+	40.2+	37.4	5.9	11%
Orange, Va.	25.0	23.5	24.1	28.0	23.2	23.5	4.8	13%
Blacksburg, Va.	24.2	21.7	30.7	31.8	26.3	26.4		
Knoxville, Tenn.	20.5	24.0+	22.5+	20.7+	26.2+	20.6	2.9	9%
Jackson, Tenn.	29.5+	32.6+	32.4+	27.1	26.5	26.5	5.4	13%
Mean	27.3	29.1	30.9	29.3	28.5	26.9		
			DELTA					
Sikeston, Mo.	21.0+	20.3	22.6+	20.9+	23.6+	18.5	2.8	9%
Tunica, Miss.	27.2	29.3	30.4	24.8	21.0	25.7	7.6	21%
Stoneville, Miss.	32.4	24.8	20.5	21.1	16.1-	21.1	8.5	23%
Moorhead, Miss.	32.2	33.5+	28.1	28.6	34.6+	21.2	6.0	14%
Mean	28.2	27.0	25.4	23.8	23.8	21.6		
			WEST					
Fayetteville, Ark.	21.2	19.4	20.7	22.9	21.5	22.0	N.S.	16%
Lubbock, Texas	17.8	15.0	15.3	17.2	17.8	17.7	3.6	16%
Mean	19.5	17.2	18.0	20.0	19.6	18.8		

Table 2: Chemical composition of strains in Uniform Group IV, 1948

Location	Gibson	Chief	Patoka	Wabash	C490	C499
			OIL PERCENTAGE			
Orange, Va.	22.2	21.7	21.5	21.8	21.9	22.1
Jackson, Tenn.	23.5	22.8	23.1	24.2	22.7	21.6
Stoneville, Miss.	22.9	23.2	23.2	24.3	23.1	22.7
Fayetteville, Ark.	22.0	21.0	21.5	22.3	21.2	21.2
Mean	22.7	22.2	22.3	23.2	22.2	21.9
			PROTEIN PERCENTAGE			
Orange, Va.	36.8	39.6	41.2	39.6	40.4	39.0
Jackson, Tenn.	34.1	37.0	39.1	36.3	39.7	40.2
Stoneville, Miss.	38.0	37.4	38.2	36.9	40.0	39.3
Fayetteville, Ark.	40.5	41.6	43.9	41.7	44.1	42.9
Mean	37.4	38.9	40.6	38.6	41.0	40.4
			IODINE NUMBER OF THE OIL			
Orange, Va.	134	131	132	129	131	129
Jackson, Tenn.	131	132	133	126	129	127
Stoneville, Miss.	132	128	133	121	129	128
Fayetteville, Ark.	134	130	134	128	131	127
Mean	133	130	133	126	130	128

Table 2: (Continued)

Location	C500	C501	C502	C508	C612	L3-2010	L3-3427
			OIL PERCENTAGE				
Orange, Va.	21.5	22.1	23.3	23.1	22.9	23.7	22.5
Jackson, Tenn.	22.4	23.2	24.0	23.8	23.5	25.1	24.7
Stoneville, Miss.	22.5	23.0	24.0	24.2	24.0	25.2	23.6
Fayetteville, Ark.	21.6	21.4	22.9	23.2	23.0	23.4	22.3
Mean	22.0	22.4	23.6	23.6	23.4	24.4	23.3
			PROTEIN PERCENTAGE				
Orange, Va.	40.9	40.1	38.2	38.4	38.8	36.5	37.8
Jackson, Tenn.	39.6	37.0	36.6	36.7	37.6	33.9	34.4
Stoneville, Miss.	40.4	38.0	37.3	37.7	37.7	34.4	38.7
Fayetteville, Ark.	43.7	42.6	41.3	42.1	41.3	38.5	41.3
Mean	41.2	39.4	38.4	38.7	38.9	35.8	38.0
			IODINE NUMBER OF THE OIL				
Orange, Va.	127	131	129	131	132	134	136
Jackson, Tenn.	124	127	129	130	131	132	131
Stoneville, Miss.	120	124	128	128	128	129	125
Fayetteville, Ark.	127	130	130	129	129	133	133
Mean	124	128	129	130	130	132	131

Table 3: Relative maturity, days earlier (-) or later (+) than Gibson, of the strains in Uniform Group IV, 1948

Location	Date Planted	Gibson Matured	Chief	Patoka	Wabash	C490	C499
		UPPER AND CENTRAL SOUTH					
Beltsville, Md.	5-28		-2	+2	-1	+7	+6
Orange, Va.	5-24	9-25	-6	0	0	+8	+2
Blacksburg, Va.	5-15	10-3	+1	+2	+2	+3	+2
Knoxville, Tenn.	5-20	9-18	+1	-1	-2	+1	+2
Jackson, Tenn.	5-1	9-1	-2	-2	+1	+6	+1
Mean			-0.8	+0.2	0	+5.0	+2.6
		DELTA					
Sikeston, Mo.	5-19	9-9	-6	0	-1	+9	+5
Tunica, Miss.	4-20	9-7	-13	0	-16	+5	-2
Stoneville, Miss.	4-21	8-20	-8	-4	-2	+6	+2
Moorhead, Miss.	5-5	8-23	-8	-3	-8	+8	+8
Mean			-9.0	-2.0	-7.0	+7.0	+3.0
		WEST					
Fayetteville, Ark.	5-27	9-16	0	0	-1	+3	+4
Lubbock, Texas	6-4	9-20	+5	0	+5	+5	0
Mean			+2.5	0	+2.0	+4.0	+2.0

Table 3: (Continued)

Location	C500	C501	C502	C508	C612	L3-2010	L3-3427
			UPPER AND CENTRAL SOUTH				
Beltsville, Md.	+7	+3	+2	+5	+8	-3	+5
Orange, Va.	-2	+4	0	+2	+4	-2	+6
Blacksburg, Va.	+2	+2	+2	+4	+6	+1	-1
Knoxville, Tenn.	+2	+4	+2	0	0	0	+1
Jackson, Tenn.	0	+2	0	+1	+2	-4	+6
Mean	+1.8	+3.0	+1.2	+2.4	+5.0	-1.6	+3.4
			DELTA				
Sikeston, Mo.	+5	+11	+4	+2	+1	-1	+3
Tunica, Miss.	-5	-2	-4	+8	+5	-15	+8
Stoneville, Miss.	-1	0	+3	0	0	-9	+5
Moorhead, Miss.	-4	+8	-7	+3	+6	-12	+8
Mean	-1.0	+4.0	-1.0	+3.0	+3.0	-9.0	+6.0
			WEST				
Fayetteville, Ark.	0	+4	0	0	0	0	+6
Lubbock, Texas	-5	0	-5	-5	0	+5	+5
Mean	-2.5	+2.0	-2.5	-2.5	0	+2.5	+5.5

Table 4: Mean plant height of strains in Uniform Group IV, 1948

Location	Gibson	Chief	Patoka	Wabash (C463)	C490	C499	C500
			UPPER AND CENTRAL SOUTH				
Beltsville, Md.	45	54	40	45	41	43	43
Orange, Va.	37	42	31	35	37	37	34
Blacksburg, Va.	35	43	35	38	34	37	35
Knoxville, Tenn.	47	50	41	46	44	48	48
Jackson, Tenn.	40	42	32	43	43	42	43
Mean	41	46	36	41	40	41	41
			DELTA				
Sikeston, Mo.	44	55	42	49	44	49	49
Tunica, Miss.	35	35	29	35	37	40	35
Stoneville, Miss.	31	33	26	35	31	31	29
Moorhead, Miss.	36	41	29	39	39	43	39
Mean	36	41	32	40	38	41	38
			WEST				
Fayetteville, Ark.	26	37	24	32	31	34	32
Lubbock, Texas	25	21	19	26	26	19	18
Mean	26	29	22	29	28	22	20

Table 4: (Continued)

Location	C501	C502	C508	C612	L3-2010	L3-3427
			UPPER AND CENTRAL SOUTH			
Beltsville, Md.	45	40	42	43	48	49
Orange, Va.	36	39	31	33	38	37
Blacksburg, Va.	38	34	39	36	40	38
Knoxville, Tenn.	48	43	44	46	52	48
Jackson, Tenn.	47	38	36	37	40	47
Mean	43	39	38	39	44	44
			DELTA			
Sikeston, Mo.	49	46	44	44	51	51
Tunica, Miss.	38	34	31	31	36	38
Stoneville, Miss.	35	27	26	27	34	32
Moorhead, Miss.	43	36	31	33	38	43
Mean	41	36	33	34	40	41
			WEST			
Fayetteville, Ark.	35	32	29	30	32	35
Lubbock, Texas	26	23	18	21	25	27
Mean	31	29	24	26	29	31

Table 5: Lodging scores for strains in Uniform Group IV, 1948

Location	Gibson	Chief	Patoka	Wabash	C490	C499
UPPER AND CENTRAL SOUTH						
Beltsville, Md.	3.5	3.5	3.0	3.0	3.5	3.5
Orange, Va.	1.5	1.5	1.0	1.0	1.0	1.0
Blacksburg, Va.	2.0	2.0	1.0	1.0	1.0	2.5
Knoxville, Tenn.	2.5	2.3	2.8	1.8	2.8	1.5
Jackson, Tenn.	1.8	1.0	1.0	1.5	1.0	1.0
DELTA						
Sikeston, Mo.	3.0	3.0	2.0	1.3	2.0	1.3
Tunica, Miss.	2.5	3.3	1.5	2.5	2.0	2.0
Stoneville, Miss.	2.7	2.3	2.0	2.0	2.3	2.3
Moorhead, Miss.	2.5	3.8	2.0	2.0	2.0	2.0
WEST						
Fayetteville, Ark.	1.5	1.5	1.0	1.0	1.2	1.0
Lubbock, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 5: (Continued)

Location	C500	C501	C502	C508	C612	L3-2010	L3-3427
			UPPER AND CENTRAL SOUTH				
Beltsville, Md.	3.0	3.0	2.0	3.0	3.0	3.5	4.0
Orange, Va.	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Blacksburg, Va.	2.0	2.5	3.0	2.0	3.0	2.0	3.0
Knoxville, Tenn.	1.3	2.3	2.3	2.5	2.8	2.8	3.0
Jackson, Tenn.	1.2	2.2	1.2	1.5	1.0	1.0	2.2
			DELTA				
Sikeston, Mo.	1.5	1.8	1.3	1.5	1.0	2.5	2.5
Tunica, Miss.	1.8	1.7	1.3	1.0	1.0	3.0	3.0
Stoneville, Miss.	2.0	2.5	2.0	2.0	2.0	2.7	2.0
Moorhead, Miss.	2.3	1.8	2.0	2.0	2.0	2.8	2.0
			WEST				
Fayetteville, Ark.	1.0	1.5	1.2	1.0	1.0	1.2	1.2
Lubbock, Texas	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Table 6: Mean seed weight for strains in Uniform Group IV, 1948

Location	Gibson	Chief	Patoka	Wabash	C490	C499
UPPER AND CENTRAL SOUTH						
Orange, Va.	14.0	15.0	19.5	14.5	18.0	18.5
Knoxville, Tenn.	12.3	13.5	13.8	12.9	12.4	13.7
Jackson, Tenn.	13.2	13.2	16.0	14.5	12.9	15.1
Mean	13.2	13.9	16.4	14.0	14.4	11.8
DELTA						
Sikeston, Mo.	9.4	9.2	11.5	10.3	11.0	11.4
Tunica, Miss.	13.3	13.4	15.3	12.9	13.2	15.3
Stoneville, Miss.	12.6	11.6	13.8	12.2	13.7	14.0
Moorhead, Miss.	13.5	11.8	13.7	12.6	14.3	15.9
Mean	12.2	11.5	13.6	12.0	13.0	14.2
WEST						
Fayetteville, Ark.	14.6	15.3	18.9	16.0	17.4	19.2
Lubbock, Texas	15.0	15.0	17.0	16.0	16.0	18.0
Mean	14.8	15.2	18.0	16.0	16.7	18.6

Table 6: (Continued)

Location	C500	C501	C502	C508	C612	L3-2010	L3-3427
			UPPER AND CENTRAL SOUTH				
Orange, Va.	20.0	17.0	17.5	18.0	15.5	13.5	17.0
Knoxville, Tenn.	14.9	12.7	12.0	12.7	12.6	12.1	11.8
Jackson, Tenn.	16.2	13.1	14.6	14.2	14.5	13.5	14.3
Mean	12.8	14.3	14.7	15.0	14.2	13.0	14.4
			DELTA				
Sikeston, Mo.	11.8	10.8	10.1	11.0	9.7	10.1	9.3
Tunica, Miss.	15.9	11.7	13.3	15.1	14.6	13.1	14.7
Stoneville, Miss.	14.2	13.0	12.9	13.7	13.9	12.3	15.4
Moorhead, Miss.	15.7	13.7	12.4	13.7	14.4	12.8	15.0
Mean	14.4	12.3	12.2	13.4	13.2	12.1	13.6
			WEST				
Fayetteville, Ark.	20.6	15.7	16.7	18.0	17.7	15.0	16.2
Lubbock, Texas	17.0	16.0	17.0	17.0	18.0	15.0	16.0
Mean	18.8	15.8	16.8	17.5	17.8	15.0	16.1

Table 7: Seed quality scores for strains in Uniform Group IV, 1948

Location	Gibson	Chief	Patoka	Wabash	C490	C499	C500
			UPPER AND CENTRAL SOUTH				
Beltsville, Md.	3.0	3.0	2.0	2.0	2.0	2.0	2.0
Orange, Va.	1.0	1.5	1.3	2.0	1.3	1.0	1.3
Blacksburg, Va.	2.0	1.5	3.0	1.0	2.0	1.5	2.0
Knoxville, Tenn.	1.2	2.0	1.0	1.8	1.0	1.2	2.2
Jackson, Tenn.	2.5	3.5	3.0	2.0	2.0	2.0	2.0
			DELTA				
Sikeston, Mo.	2.0	2.8	3.0	2.0	1.8	1.0	1.5
Tunica, Miss.	4.0	5.0	4.0	3.0	4.0	3.0	4.0
Stoneville, Miss.	4.0	4.0	3.0	4.0	3.0	3.0	5.0
Moorhead, Miss.	3.0	4.0	3.0	3.0	3.0	2.0	4.0
			WEST				
Fayetteville, Ark.	2.0	2.5	2.5	1.8	2.0	1.8	2.0
Lubbock, Texas	2.0	4.0	5.0	2.0	3.0	3.0	3.0

Table 7: (Continued)

Location	C501	C502	C508	C612	L3-2010	L3-3427
			UPPER AND CENTRAL SOUTH			
Beltsville, Md.	2.0	1.0	2.0	2.0	3.0	2.0
Orange, Va.	1.5	2.0	2.0	2.0	2.0	2.8
Blacksburg, Va.	2.0	1.5	1.5	1.5	2.0	2.0
Knoxville, Tenn.	1.8	1.0	1.2	1.0	1.8	1.5
Jackson, Tenn.	1.0	2.0	3.0	2.0	3.0	2.0
			DELTA			
Sikeston, Mo.	1.0	2.0	2.3	2.3	3.0	2.0
Tunica, Miss.	3.0	4.0	4.0	4.0	4.0	5.0
Stoneville, Miss.	3.0	4.0	4.0	4.0	5.0	5.0
Moorhead, Miss.	3.0	4.0	3.0	4.0	5.0	5.0
			WEST			
Fayetteville, Ark.	1.8	1.5	2.0	2.0	2.0	2.0
Lubbock, Texas	3.0	4.0	3.0	5.0	4.0	3.0

Preliminary Group IV

Twenty-seven strains from the breeding programs in Indiana, Illinois, Missouri, and Mississippi were grown at two locations in the southern area along with Chief, Gibson, Wabash and C508, which are in regional group IV, and S-100 which is in group V.

Six strains L4-6238, L4-6259, L4-6290, D56-8, D523-30, and D523-55 are of Group V maturity. Each of these strains is as tall or taller than S-100 but lodged more. All except D523-55 have distinctly higher oil content than S-100.

Of the strains of group IV maturity, L6-5679 and L6-5680 appeared quite outstanding from the standpoint of yield, growth type, seed holding and seed quality. One other strain of IV maturity, CX6742-20, yielded significantly more than Gibson at Stoneville. All three of these strains have good oil content, although somewhat lower than Wabash.

Table 8: Seed yield and oil percentage for strains in Preliminary Group IV, 1948

Strain and Parentage		Seed Yield in Bushels per Acre		Percent Oil	
		Stillwater Okla.	Stoneville, Miss.	Stillwater, Okla.	Stoneville, Miss.
Chief		28.8	26.3-	21.8	22.3
Gibson		27.3	29.6	21.3	22.4
Wabash		25.3	33.2	22.4	23.3
C508		30.1	33.8	22.5	23.6
S-100	Rogue from Ellett	28.8	30.9	19.4	19.1
CX6742-11	Lincoln x Patoka	30.1	32.1	22.0	21.8
CX6742-16	Lincoln x Patoka	26.1	31.3	20.9	21.8
CX6742-20	Lincoln x Patoka	29.7	37.4+	22.0	22.3
CX6742-22	Lincoln x Patoka	28.9	26.0-	22.9	22.8
CX6742-34	Lincoln x Patoka	29.9	29.9	20.9	21.5
CX6842-17	Gibson x Lincoln	27.8	28.9	22.1	21.6
CX7342-27	C143 x Lincoln	28.0	29.8	21.8	22.5
CX7342-39	C143 x Lincoln	27.9	26.0-	22.3	23.4
CX7342-42	C143 x Lincoln	25.9	26.4	21.7	22.1
CX7342-53	C143 x Lincoln	27.6	28.7	22.2	23.2
D56-8	Boone x Magnolia	24.2	30.8	21.3	22.4
D523-30	Dunfield x Arksoy	26.1	32.3	20.2	20.9
D523-55	Dunfield x Arksoy	21.5-	33.5	19.5	20.4
D536-4	Tokyo x Dunfield	24.3	28.4	22.0	22.3
L4-6238	L7-1355/Macoupin x L7-1355	22.2-	36.6+	20.5	21.5
L4-6259	L7-1355/Mcpn. x L7-1355	23.5	35.7+	20.9	22.1
L4-6290	L7-1355/Mcpn. x L7-1355	26.2	38.3+	20.7	21.5
L6-5002	C143 x Lincoln	26.6	26.0-	21.6	22.6
L6-5658	Lincoln x Richland	30.1	32.5	22.0	22.3
L6-5679	Lincoln x Richland	32.9	38.1+	21.8	22.1
L6-5680	Lincoln x Richland	30.3	35.6+	21.8	22.1
L6-5683	Lincoln x Richland	26.9	32.0	20.9	21.2
S4-241	Chief/Macoupin x Chief	27.1	29.9	21.0	21.7
S4-307	Chief/Macoupin x Chief	27.7	23.0-	21.7	22.3
S4-374	Chief/Chief x Boone	26.2	24.9-	21.7	22.1
S5-41	Lincoln x Patoka	17.9-	19.4-	20.9	22.0
S5-234	C149-L7-1355	28.3	29.0	21.1	22.2
Bus. Nec. for Significance (5% level)		6.5	4.6		
Bus. Nec. for Significance (1% level)		N.S.	6.0		
Coefficient of variation		17%	11%		

(+)Strains yielding significantly more (odds 19:1) than S-100.
(-)Strains yielding significantly less (odds 19:1) than S-100.

Uniform Group V, 1948

Strain or Variety	Source or Originating Agency	Origin
S-100	Missouri A.E.S.	Sel. from rogue in Illini
D417-721	Delta Br. E.S. & U.S.R.S.L.	Sel. from Arksoy x Patoka
D418-177	Delta Br. E.S. & U.S.R.S.L.	Sel. from Patoka x Arksoy
D421-737	Delta Br. E.S. & U.S.R.S.L.	Sel. from L7-1355 x Magnolia
D512-3	Delta Br. E.S. & U.S.R.S.L.	Sel. from C171 x Arksoy 2913
D514-13	Delta Br. E.S. & U.S.R.S.L.	Sel. from Chief x Arksoy 2913
D514-20	Delta Br. E.S. & U.S.R.S.L.	Sel. from Chief x Arksoy 2913
D517-3	Delta Br. E.S. & U.S.R.S.L.	Sel. from Arksoy x Patoka
D523-41	Delta Br. E.S. & U.S.R.S.L.	Sel. from Dunfield x Arksoy
N45-1466	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Ralsoy x Ogden
Ogden	Tennessee A.E.S.	Sel. from Tokyo x P.I. 54610

The maturity represented by Group V extends from approximately three or four days earlier than S-100 to ten days later. S-100 is a full-season variety in northeastern Oklahoma and north central Virginia. In areas where Ogden will mature, S-100 is usually about 14 to 18 days earlier in maturity.

In areas where adapted, S-100 has a rather tall, slender plant type and stands quite satisfactorily for combine harvesting. Although S-100 will produce good seed yields, it would be desirable to develop strains of similar maturity having higher oil content and a greater degree of resistance to the two bacterial leaf diseases, pustule and wildfire. Under some conditions, the stems of S-100 tend to remain green for some time after the leaves have shed and the seed appears to be mature.

S-100 gave a lower average seed yield than Ogden in all areas except in the Upper and Central South. In this area, Ogden did not yield significantly more than S-100 at any location. The greatest difference between S-100 and Ogden was in the East Coast area. Here, Ogden averaged 12 bushels more per acre. Seed quality for S-100 is poorer than for Ogden, particularly in the East Coast and Delta sections.

Of the new strains, D417-721, D418-177, D421-737, and D423-41 are extremely variable for height and maturity. Where lodging was a factor, all four of these strains lodged more than S-100.

N45-1466 yielded significantly more than S-100 at eight of the thirty-seven locations where these nurseries were grown. Its relative rank in 1948 was better

than in 1947. N45-1466 has a higher oil content than S-100, but is somewhat later in maturity. The seed coat color for this strain is a mixture of green and yellow.

D512-3 yielded well in the Delta and has an oil content comparable to Ogden. It is slightly later than N45-1466.

Table 9: Yield in bushels per acre for the strains in Uniform Group V, 1948

Location	S-100	D417-721	D418-177	D421-737	D512-3	D514-13
			EAST COAST			
Petersburg, Va.	39.4	46.5+	43.0	46.5+	42.1	44.8
Williamsburg, Va.	26.4	37.0+	28.1	29.7	33.7+	25.3
Holland, Va.	38.2	55.9+	39.0	39.2	40.6	39.4
Norfolk, Va.	12.2	17.3+	15.6+	14.1	13.4	13.4
Plymouth, N. C.	40.6	39.6	34.6	38.4	38.0	32.9
Mean	31.4	39.3	32.1	33.6	33.6	31.2
			UPPER AND CENTRAL SOUTH			
Beltsville, Md.	34.3	21.2-	31.3	34.8	22.8-	33.7
Charlotte C.H., Va.	21.0	20.0	17.1	17.1	21.9	14.4-
Knoxville, Tenn.	23.0	17.4-	16.8-	19.3-	17.9-	15.4-
Jackson, Tenn.	18.4	15.4	14.9	20.1	14.0	14.9
Belle Mina, Ala.	17.5	13.2-	13.9-	14.8	13.9-	15.4
Crossville, Ala.	27.4	35.0+	25.2	28.9	28.7	22.6
Watkinsville, Ga.	17.0	16.9	11.1-	16.6	18.3	16.5
State College, Miss.	29.8	23.5-	18.7-	20.8-	27.3	27.7
Mean	23.6	20.3	18.6	21.6	20.6	20.1
			DELTA			
Sikeston, Mo.	20.1	24.6+	20.7	25.7+	28.7+	14.3-
Clarkedale, Ark.	22.0	18.8	22.8	18.4	22.9	16.5
Marianna, Ark.	17.8	26.8+	25.1+	23.4+	28.0+	22.7
Tunica, Miss.	29.0	23.1	25.4	27.3	29.3	29.0
Stoneville, Miss.	22.1	22.7	25.8	27.6+	32.2+	26.3
Moorhead, Miss.	37.6	29.0-	30.4-	33.8	42.3	26.5-
Anchorage, Miss.	24.6	21.6	20.4	22.4	23.9	24.6
Onward, Miss.	25.9	26.7	24.4	26.9	22.8	26.2
St. Joseph, La.	48.3	32.5-	26.4-	36.6	35.3	35.9
Baton Rouge, La.	13.5	17.6+	10.2	14.0	12.9	8.9-
Mean	26.1	24.3	23.2	25.6	27.8	23.1
			WEST			
Wagoner, Okla.[1]	9.8	11.5	10.1	10.4	11.1	-
Nowata, Okla.	34.3	38.1	24.2-	32.4	27.4-	30.9
Stillwater, Okla.	25.0	18.2-	19.9-	15.9-	10.8-	21.8
Fayetteville, Ark.	21.7	18.8-	17.5-	21.8	18.0-	22.4
Stuttgart, Ark.	19.5	24.7+	15.2-	21.4	20.7	17.8
Curtis, La.	16.3	27.0+	16.4	23.5	31.1+	21.8
Lubbock, Texas	18.5-	23.8	17.3-	27.5+	28.0+	15.3-
Mean	22.6	25.1	18.4	23.8	22.7	21.7

(+) Strains yielding significantly more (odds 19:1) than S-100.
(-) Strains yielding significantly less (odds 19:1) than S-100.

1/ Not included in mean.

Table 9: (Continued)

Location	D514-20	D517-3	D523-41	N45-1466	Ogden	Bu.Nec. Sig.(5%)	C.V.
			EAST COAST				
Petersburg, Va.	45.9	41.5	46.0	49.1+	49.7+	6.7	11%
Williamsburg, Va.	25.1	26.4	32.9+	31.7+	41.6+	5.4	12%
Holland, Va.	38.2	43.8	36.7	44.0	51.9+	7.2	12%
Norfolk, Va.	13.0	16.5+	16.1+	20.0+	25.4+	2.4	10%
Plymouth, N. C.	36.6	35.0	37.0	44.5	46.3	8.0	14%
Mean	31.8	32.6	33.7	37.9	43.0		
			UPPER AND CENTRAL SOUTH				
Beltsville, Md.	35.6	34.4	30.2	31.0	27.8-	5.6	12%
Charlotte C.H., Va.	17.5	19.9	18.0	14.6-	21.9	4.3	16%
Knoxville, Tenn.	18.1-	19.6	17.2-	20.5	23.3	3.6	13%
Jackson, Tenn.	17.6	22.5	14.2	17.0	21.2	N.S.	20%
Belle Mina, Ala.	19.4	15.1	14.0-	13.6-	13.5-	2.8	13%
Crossville, Ala.	24.7	21.6-	28.8	27.4	32.5	5.2	13%
Watkinsville, Ga.	17.7	16.2	21.9+	14.7-	16.3	1.9	8%
State College, Miss.	25.2-	24.5-	24.2-	28.2	30.2	4.6	13%
Mean	22.0	21.7	21.1	20.9	23.3		
			DELTA				
Sikeston, Mo.	12.0-	20.7	22.9	27.2+	34.6+	3.2	10%
Clarkedale, Ark.	17.2	22.7	17.4	19.0	20.1	N.S.	22%
Marianna, Ark.	23.1+	20.4	25.1+	24.8+	23.4+	5.1	15%
Tunica, Miss.	27.3	20.6-	29.5	28.2	31.8	6.2	16%
Stoneville, Miss.	24.6	24.3	27.9+	29.6+	34.4+	4.7	13%
Moorhead, Miss.	34.8	31.8-	33.9	34.4	37.9	4.9	10%
Anchorage, Miss.	23.4	23.0	24.7	29.7+	30.5+	5.0	14%
Onward, Miss.	25.5	22.9	26.9	25.1	38.3+	6.6	17%
St. Joseph, La.	38.3	25.6-	40.0	35.3	58.1	13.7	25%
Baton Rouge, La.	9.3-	11.0	11.5	11.0	18.3+	3.6	20%
Mean	23.6	22.3	26.0	26.4	32.7		
			WEST				
Wagoner, Okla.[1/]	11.0	10.5	9.9	9.3	9.2	N.S.	10%
Nowata, Okla.	31.1	29.8	28.8	29.6	38.7	6.2	14%
Stillwater, Okla.	20.6-	20.6-	13.8-	16.3-	16.9-	3.5	16%
Fayetteville, Ark.	19.8	20.1	20.3	20.1	23.0	2.8	10%
Stuttgart, Ark.	16.6	13.2-	17.4	17.7	25.5+	3.3	12%
Curtis, La.	25.8+	12.3	19.4	39.0+	40.5+	7.5	21%
Lubbock, Texas	19.6-	18.5-	22.6	23.3	26.8+	5.6	18%
Mean	22.3	19.1	20.2	24.3	28.6		

Table No. 10: Chemical composition of strains in Uniform Group V, 1948

Location	S-100	D417-721	D418-177	D421-737	D512-3
		OIL PERCENTAGE			
Petersburg, Va.	19.1	20.8	19.7	19.7	21.1
Knoxville, Tenn.	17.3	18.3	18.4	18.1	17.6
Watkinsville, Ga.	21.7	22.7	21.8	20.8	21.7
Stoneville, Miss.	20.5	20.7	21.2	19.5	21.3
Stuttgart, Ark.	19.5	21.3	20.1	20.5	21.5
Nowata, Okla.	18.5	20.6	20.0	19.5	19.7
Mean	19.4	20.7	20.2	19.7	20.5
		PROTEIN PERCENTAGE			
Petersburg, Va.	43.6	40.9	43.7	41.7	39.4
Knoxville, Tenn.	47.1	46.1	48.2	46.4	47.3
Watkinsville, Ga.	38.2	38.7	40.8	37.1	38.9
Stoneville, Miss.	40.8	41.7	42.4	42.8	40.2
Stuttgart, Ark.	45.4	43.6	46.6	43.3	41.7
Nowata, Okla.	45.5	42.2	45.0	43.3	41.4
Mean	43.4	42.2	44.4	42.4	41.5
		IODINE NUMBER OF OIL			
Petersburg, Va.	130	132	133	134	134
Knoxville, Tenn.	134	132	132	132	134
Watkinsville, Ga.	131	130	130	132	127
Stoneville, Miss.	129	131	134	132	130
Stuttgart, Ark.	134	127	129	129	130
Nowata, Okla.	127	129	129	130	130
Mean	131	130	131	132	131

Table 10: (Continued)

Location	D514-13	D514-20	D517-3	D523-41	N45-1466	Ogden
			OIL PERCENTAGE			
Petersburg, Va.	19.6	21.2	20.6	21.4	21.1	20.5
Knoxville, Tenn.	16.9	18.8	17.7	18.7	18.6	18.1
Watkinsville, Ga.	22.6	23.1	22.0	23.1	22.5	21.1
Stoneville, Miss.	21.4	22.2	21.5	22.0	21.6	21.9
Stuttgart, Ark.	21.2	21.8	21.3	22.0	20.7	20.0
Nowata, Okla.	19.9	20.4	20.1	19.4	20.1	20.3
Mean	20.3	21.2	20.5	21.1	20.8	20.3
			PROTEIN PERCENTAGE			
Petersburg, Va.	43.0	40.7	43.4	41.7	40.2	40.4
Knoxville, Tenn.	47.8	45.7	48.5	47.4	47.6	44.9
Watkinsville, Ga.	37.7	37.7	40.8	37.3	36.1	39.2
Stoneville, Miss.	39.4	38.0	40.1	40.2	39.9	39.4
Stuttgart, Ark.	43.7	43.7	40.7	43.3	43.6	43.6
Nowata, Okla.	44.2	43.3	46.2	45.0	40.3	42.3
Mean	42.6	41.5	43.3	42.5	41.3	41.6
			IODINE NUMBER OF OIL			
Petersburg, Va.	132	128	128	127	134	138
Knoxville, Tenn.	134	131	128	128	132	138
Watkinsville, Ga.	132	129	127	129	131	134
Stoneville, Miss.	134	131	130	128	133	133
Stuttgart, Ark.	130	129	123	126	123	135
Nowata, Okla.	130	128	126	125	129	132
Mean	132	129	127	127	130	135

Table 11: Relative maturity, days earlier (-) or later (+) than S-100, of strains in Uniform Group V, 1948

Location	Date Planted	S-100 Matured	D417-721	D418-177	D421-737	D512-3
			EAST COAST			
Petersburg, Va.	5-11	9-29	+30	+9	+16	+19
Williamsburg, Va.	5-24	10-1	+22	+3	+13	+20
Holland, Va.	5-22	10-5	+10	+6	+2	+10
Plymouth, N. C.	5-4	9-27	+12	+2	+6	+6
Mean			+18.5	+5.0	+9.2	+13.8
			UPPER AND CENTRAL SOUTH			
Beltsville, Md.	5-28		+5	0	0	+5
Charlotte C. H., Va.	5-7	10-13	+3	-13	+1	+2
Knoxville, Tenn.	5-20	10-1	+13	+5	+9	+13
Jackson, Tenn.	5-1	9-15	+24	-2	+12	+12
Mean			+11.2	-2.5	+5.5	+8.0
			DELTA			
Sikeston, Mo.	5-19	9-28	+26	+9	+18	+19
Marianna, Ark.	5-26	9-16	+22	+8	+15	+16
Tunica, Miss.	4-20	9-15	+12	+3	+11	+9
Stoneville, Miss.	4-21	9-6	+19	+7	+19	+13
Moorhead, Miss.	5-5	9-18	+7	-3	+7	+1
Anchorage, Miss.	5-1	9-5	+26	+7	+14	+26
St. Joseph, La.	5-10	9-13	0	+2	+5	0
Baton Rouge, La.	6-4	9-19	+11	-10	+11	+8
Mean			+15.4	+2.9	+12.5	+11.5
			WEST			
Nowata, Okla.	5-27	10-1	+6	+3	+3	+4
Stillwater, Okla.	5-4	9-18	+4	+4	+7	+2
Fayetteville, Ark.	5-27	9-27	+9	-1	+8	+9
Stuttgart, Ark.	5-29	9-22	+21	+10	+12	+10
Curtis, La.	5-5	9-20	+7	+5	+10	+10
Lubbock, Texas	6-4	10-10	0	-5	0	+5
Mean			+7.8	+2.7	+6.7	+6.7

Table 11: (Continued)

Location	D514-13	D514-20	D517-3	D523-41	N45-1466	Ogden
			EAST COAST			
Petersburg, Va.	+7	+11	+2	+14	+17	+7
Williamsburg, Va.	+2	0	+4	+4	+13	+20
Holland, Va.	+10	+5	0	+5	+13	+10
Plymouth, N. C.	0	-1	-1	+2	+10	+12
Mean	+4.8	+3.5	+1.2	+6.2	+13.2	+12.2
			UPPER AND CENTRAL SOUTH			
Beltsville, Md.	0	0	0	0	+5	+5
Charlotte C.H., Va.	-22	-22	-18	-9	-1	+4
Knoxville, Tenn.	-2	-2	-1	-8	-7	+12
Jackson, Tenn.	-5	-2	-5	0	+16	+30
Mean	-7.2	-6.5	-6.0	-4.2	+0.8	+12.7
			DELTA			
Sikeston, Mo.	-10	-12	-8	+11	+12	+24
Marianna, Ark.	+1	+5	+1	+5	+17	+23
Tunica, Miss.	0	+3	0	0	+10	+12
Stoneville, Miss.	0	+2	+22	+7	+12	+18
Moorhead, Miss.	-3	-3	-3	-3	0	+4
Anchorage, Miss.	+1	+3	-4	+7	+26	+26
St. Joseph, La.	-3	-3	0	+2	+2	+10
Baton Rouge, La.	-10	-10	-8	0	+3	+11
Mean	-3.0	-1.9	0	+3.6	+10.2	+16.0
			WEST			
Nowata, Okla.	0	0	0	0	+3	+10
Stillwater, Okla.	+2	+2	+2	+2	+4	+6
Fayetteville, Ark.	-5	+3	-4	+6	+8	+11
Stuttgart, Ark.	-1	-1	-1	+12	+10	+21
Curtis, La.	0	-5	-5	-5	+5	+8
Lubbock, Texas	-10	0	-10	0	+5	+5
Mean	-2.3	-0.2	-3.0	+2.5	+5.8	+10.2

Table 12: Mean plant height of strains in Uniform Group V, 1948

Location	S-100	D417-721	D418-177	D421-737	D512-3
		EAST COAST			
Petersburg, Va.	46	48	41	54	35
Williamsburg, Va.	40	41	36	45	38
Holland, Va.	44	42	36	45	32
Norfolk, Va.	37	33	30	40	32
Plymouth, N. C.	48	48	46	50	44
Mean	43	42	38	47	36
		UPPER AND CENTRAL SOUTH			
Beltsville, Md.	50	48	60	52	48
Charlotte C.H., Va.	31	35	31	38	34
Knoxville, Tenn.	53	45	48	54	40
Jackson, Tenn.	51	45	47	54	45
Belle Mina, Ala.	44	38	38	45	35
Watkinsville, Ga.	32	36	30	38	30
State College, Miss.	47	39	38	45	30
Mean	44	41	42	46	37
		DELTA			
Sikeston, Mo.	52	42	47	52	43
Clarkedale, Ark.	33	32	34	35	34
Marianna, Ark.	40	40	38	41	37
Tunica, Miss.	44	37	40	37	38
Stoneville, Miss.	45	44	48	45	36
Moorhead, Miss.	43	44	40	47	42
Anchorage, Miss.	42	38	39	38	33
Onward, Miss.	42	38	38	36	30
St. Joseph, La.	45	40	36	50	24
Baton Rouge, La.	30	36	29	42	28
Mean	42	39	39	42	34
		WEST			
Wagoner, Okla.	35	34	33	38	35
Nowata, Okla.	43	39	33	39	33
Stillwater, Okla.	57	52	42	45	41
Fayetteville, Ark.	39	38	34	37	35
Stuttgart, Ark.	29	31	-	-	24
Curtis, La.	45	50	45	52	27
Lubbock, Texas	32	31	24	37	32
Mean	40	39	35	41	32

Table 12: (Continued)

Location	D514-13	D514-20	D517-3	D523-41	N45-1466	Ogden
			EAST COAST			
Petersburg, Va.	39	46	33	54	32	28
Williamsburg, Va.	40	40	35	48	30	40
Holland, Va.	36	40	35	40	30	42
Norfolk, Va.	37	33	31	34	28	30
Plymouth, N. C.	42	44	42	50	40	36
Mean	39	41	35	45	32	35
			UPPER AND CENTRAL SOUTH			
Beltsville, Md.	44	42	43	58	42	48
Charlotte C. H., Va.	30	31	27	36	27	33
Knoxville, Tenn.	44	43	46	52	38	40
Jackson, Tenn.	45	48	48	46	43	42
Belle Mina, Ala.	38	38	35	41	32	33
Watkinsville, Ga.	30	28	30	36	28	24
State College, Miss.	38	37	35	41	30	28
Mean	38	38	38	44	34	35
			DELTA			
Sikeston, Mo.	44	43	45	45	41	42
Clarkedale, Ark.	29	32	28	34	30	30
Marianna, Ark.	38	39	38	40	36	36
Tunica, Miss.	40	40	36	44	35	35
Stoneville, Miss.	41	42	32	44	30	34
Moorhead, Miss.	40	42	36	40	38	36
Anchorage, Miss.	39	39	34	42	31	32
Onward, Miss.	34	40	32	34	31	33
St. Joseph, La.	32	30	37	45	27	26
Baton Rouge, La.	24	26	28	42	27	20
Mean	36	37	35	41	33	32
			WEST			
Wagoner, Okla.	-	34	29	37	30	30
Nowata, Okla.	31	35	37	43	34	34
Stillwater, Okla.	45	43	42	39	34	42
Fayetteville, Ark.	32	33	32	35	33	34
Stuttgart, Ark.	25	24	24	-	18	22
Curtis, La.	33	34	22	35	26	25
Lubbock, Texas	23	32	23	36	22	26
Mean	32	34	30	38	28	30

Table 13: Lodging scores for strains in Uniform Group V, 1948

Location	S-100	D417-721	D418-177	D421-737	D512-3
		EAST COAST			
Petersburg, Va.	2.0	3.0	3.0	3.0	2.0
Williamsburg, Va.	2.0	2.0	2.0	2.0	3.0
Holland, Va.	1.0	2.0	1.0	4.0	1.0
Norfolk, Va.	1.2	1.8	2.5	3.0	2.8
Plymouth, N. C.	2.0	3.0	3.0	4.0	3.0
		UPPER AND CENTRAL SOUTH			
Beltsville, Md.	2.5	4.0	4.0	4.5	4.0
Charlotte C.H., Va.	1.2	2.0	1.5	2.0	1.5
Knoxville, Tenn.	1.5	2.8	2.5	2.5	2.5
Jackson, Tenn.	2.0	1.0	1.0	2.0	2.0
Belle Mina, Ala.	1.0	1.0	2.0	1.8	1.0
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0
State College, Miss.	2.0	2.8	2.3	2.8	2.0
		DELTA			
Sikeston, Mo.	1.0	1.3	1.5	1.8	1.8
Clarkedale, Ark.	1.8	1.8	2.2	2.5	2.0
Marianna, Ark.	2.8	2.0	3.8	3.2	3.2
Stoneville, Miss.	2.5	3.5	2.8	4.0	2.3
Moorhead, Miss.	3.5	4.0	3.5	3.5	2.5
Anchorage, Miss.	3.0	4.0	3.0	4.0	3.0
Onward, Miss.	4.0	3.5	4.5	4.5	4.0
St. Joseph, La.	4.0	2.0	2.0	4.0	2.0
Baton Rouge, La.	2.0	2.0	1.0	4.0	2.0
		WEST			
Wagoner, Okla.	1.0	1.0	1.0	1.0	1.0
Nowata, Okla.	1.0	2.0	2.0	2.0	2.0
Stillwater, Okla.	1.0	2.0	2.0	3.0	3.0
Fayetteville, Ark.	1.5	1.8	1.5	3.2	2.5
Stuttgart, Ark.	1.0	1.0	1.0	1.5	1.0
Curtis, La.	3.0	3.0	3.0	4.0	2.0
Lubbock, Texas	1.0	1.0	1.0	1.0	1.0

Table 13: (Continued)

Location	D514-13	D514-20	D517-3	D523-41	N45-1466	Ogden
			EAST COAST			
Petersburg, Va.	5.0	3.0	3.0	4.0	2.0	1.0
Williamsburg, Va.	2.0	3.0	2.0	3.0	3.0	1.0
Holland, Va.	4.0	1.0	1.0	5.0	3.0	1.0
Norfolk, Va.	2.5	2.5	2.8	2.8	1.2	1.2
Plymouth, N. C.	4.0	4.0	2.0	4.0	2.0	2.0
			UPPER AND CENTRAL SOUTH			
Beltsville, Md.	4.2	5.0	3.3	4.0	4.0	4.0
Charlotte C.H., Va.	1.0	1.0	1.0	1.5	1.2	1.0
Knoxville, Tenn.	4.5	3.3	2.5	3.5	2.5	1.0
Jackson, Tenn.	2.7	2.7	2.0	3.0	1.0	1.0
Belle Mina, Ala.	2.0	1.7	1.3	1.8	1.5	1.0
Watkinsville, Ga.	1.0	1.0	1.0	2.0	1.0	1.0
State College, Miss.	2.8	2.5	2.8	3.0	1.0	1.0
			DELTA			
Sikeston, Mo.	1.5	1.8	2.0	2.5	1.0	1.0
Clarkedale, Ark.	1.2	2.2	1.2	2.2	2.2	1.5
Marianna, Ark.	2.8	3.0	2.5	3.2	3.8	1.0
Stoneville, Miss.	3.0	3.0	2.0	2.8	2.5	2.0
Moorhead, Miss.	4.0	3.0	3.5	3.7	3.0	2.5
Anchorage, Miss.	3.5	3.5	2.8	3.7	3.5	2.0
Onward, Miss.	5.0	4.0	4.0	5.0	4.0	3.5
St. Joseph, La.	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, La.	1.0	1.0	1.0	2.0	1.0	2.0
			WEST			
Wagoner, Okla.	-	1.0	1.0	1.0	1.0	1.0
Nowata, Okla.	1.0	2.0	1.0	1.0	2.0	1.0
Stillwater, Okla.	2.0	2.0	2.0	4.0	2.0	1.0
Fayetteville, Ark.	2.2	2.2	2.0	3.0	2.5	1.0
Stuttgart, Ark.	1.0	1.0	1.0	1.2	1.0	1.0
Curtis, La.	2.0	2.0	2.0	3.0	2.0	2.0
Lubbock, Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 14: Mean seed weight, per 100 seeds, for strains in Uniform Group V, 1948

Location	S-100	D417-721	D418-177	D421-737	D512-3
		EAST COAST			
Petersburg, Va.	15.5	18.0	18.0	16.5	14.0
Williamsburg, Va.	16.5	19.0	18.0	18.0	15.0
Mean	16.0	18.5	18.0	17.2	14.5
		UPPER AND CENTRAL SOUTH			
Charlotte C. H., Va.	13.0	13.5	11.0	13.5	11.5
Knoxville, Tenn.	13.7	14.1	14.8	13.4	12.1
Jackson, Tenn.	11.4	11.3	11.3	10.5	10.4
Mean	12.7	13.0	12.4	12.5	11.3
		DELTA			
Sikeston, Mo.	11.9	15.6	15.1	14.6	14.1
Clarkedale, Ark.	16.2	15.2	17.3	17.8	17.3
Marianna, Ark.	14.0	14.0	16.0	14.5	12.4
Tunica, Miss.	12.4	11.4	12.8	11.4	10.4
Stoneville, Miss.	12.2	11.0	13.6	11.6	11.6
Moorhead, Miss.	14.2	12.5	14.5	13.5	12.5
Anchorage, Miss.	12.4	10.9	13.2	11.6	10.7
Onward, Miss.	12.6	13.1	12.4	12.9	11.3
Mean	13.2	13.0	14.4	13.5	12.5
		WEST			
Wagoner, Okla.	9.3	9.6	11.2	9.6	8.1
Nowata, Okla.	16.2	15.2	14.7	15.4	12.2
Stillwater, Okla.	13.1	11.0	13.3	11.1	9.7
Fayetteville, Ark.	15.7	12.1	14.7	14.6	10.3
Stuttgart, Ark.	13.1	12.8	14.3	13.0	11.4
Lubbock, Texas	17.0	14.0	15.0	16.0	16.0
Mean	14.1	12.4	13.9	13.3	11.3

Table 14: (Continued)

Location	D514-13	D514-20	D517-3	D523-41	N45-1466	Ogdon
			EAST COAST			
Petersburg, Va.	15.5	17.5	19.0	15.0	16.5	17.5
Williamsburg, Va.	17.0	18.0	22.0	16.0	17.0	18.5
Mean	16.2	17.8	20.5	15.5	16.8	18.0
			UPPER AND CENTRAL SOUTH			
Charlotte C. H.,Va.	8.0	14.5	14.5	12.0	15.0	17.5
Knoxville, Tenn.	11.7	12.8	15.3	13.0	13.6	14.0
Jackson, Tenn.	9.7	10.9	13.2	10.2	10.5	13.8
Mean	9.8	12.7	14.3	11.7	13.0	15.1
			DELTA			
Sikeston, Mo.	9.8	9.1	15.0	12.6	15.1	17.3
Clarkedale, Ark.	16.7	14.6	16.7	15.7	16.5	14.2
Marianna, Ark.	12.5	14.2	15.5	12.5	14.5	15.6
Tunica, Miss.	11.6	12.6	14.7	11.3	11.9	12.7
Stoneville, Miss.	11.6	11.5	12.9	12.5	12.4	13.0
Moorhead, Miss.	12.4	13.8	15.2	14.0	13.2	14.4
Anchorage, Miss.	11.3	12.2	13.4	11.7	11.8	12.7
Onward, Miss.	11.6	11.6	12.8	12.6	13.5	15.4
Mean	12.2	12.4	14.5	12.9	13.6	14.4
			WEST			
Wagoner, Okla.	-	9.0	11.3	8.6	9.4	10.8
Nowata, Okla.	14.5	14.9	18.8	13.3	16.0	18.6
Stillwater, Okla.	12.3	13.3	12.3	16.3	10.2	9.3
Fayetteville, Ark.	14.4	15.3	18.5	12.8	12.5	11.9
Stuttgart, Ark.	13.3	14.4	15.1	13.0	12.5	13.0
Lubbock, Texas	14.0	15.0	16.0	14.0	18.0	17.0
Mean	13.7	13.6	15.3	13.0	13.1	13.4

Table 15: Seed quality scores for strains in Uniform Group V, 1948

Location	S-100	D417-721	D418-177	D421-737	D512-3
		EAST COAST			
Petersburg, Va.	2.0	2.0	1.0	1.0	1.0
Williamsburg, Va.	3.0	1.0	2.0	2.0	1.0
Holland, Va.	3.0	1.0	2.0	2.0	2.0
Norfolk, Va.	3.0	2.0	3.0	2.0	2.0
Plymouth, N. C.	4.0	4.0	4.0	4.0	3.0
		UPPER AND CENTRAL SOUTH			
Beltsville, Md.	1.0	1.0	1.0	2.0	1.0
Charlotte C. H., Va.	1.5	3.0	1.5	1.5	2.0
Knoxville, Tenn.	1.5	1.0	1.8	1.5	1.2
Jackson, Tenn.	1.5	1.3	1.0	1.0	1.3
State College, Miss.	1.0	1.0	1.0	1.0	1.0
		DELTA			
Sikeston, Mo.	1.3	1.5	1.5	1.8	1.0
Clarkedale, Ark.	2.5	3.0	2.8	2.8	3.0
Marianna, Ark.	2.0	2.5	3.0	2.5	2.3
Tunica, Miss.	4.0	2.0	2.0	2.0	2.0
Stoneville, Miss.	4.0	3.0	2.0	3.0	2.0
Moorhead, Miss.	3.0	3.0	3.0	3.0	2.0
Anchorage, Miss.	3.0	2.0	3.0	2.0	2.0
Onward, Miss.	4.0	2.0	2.0	2.0	2.0
St. Joseph, La.	3.0	2.0	3.0	2.0	2.0
Baton Rouge, La.	5.0	3.0	5.0	3.0	3.0
		WEST			
Wagoner, Okla.	2.0	2.0	2.0	2.0	2.0
Nowata, Okla.	2.0	2.0	2.0	2.0	2.0
Stillwater, Okla.	2.0	4.0	3.0	3.0	2.0
Fayetteville, Ark.	2.0	1.5	1.5	1.5	1.2
Stuttgart, Ark.	2.0	2.5	3.0	2.0	2.2
Curtis, La.	3.0	2.0	2.0	2.0	1.0
Lubbock, Texas	4.0	2.0	5.0	2.0	3.0

Table 15: (Continued)

Location	D514-13	D514-20	D517-3	D523-41	N45-1466	Ogden
			EAST COAST			
Petersburg, Va.	2.0	1.0	1.0	2.0	1.0	1.0
Williamsburg, Va.	2.0	2.0	2.0	2.0	2.0	1.0
Holland, Va.	3.0	3.0	3.0	3.0	2.0	2.0
Norfolk, Va.	4.0	3.0	3.0	3.0	2.0	2.0
Plymouth, N. C.	4.0	3.0	4.0	3.0	3.0	3.0
			UPPER AND CENTRAL SOUTH			
Beltsville, Md.	2.0	2.0	1.0	2.0	2.0	-
Charlotte C.H., Va.	2.0	1.5	2.0	2.0	3.0	3.0
Knoxville, Tenn.	1.2	1.0	2.2	2.0	1.2	1.0
Jackson, Tenn.	1.0	1.5	1.8	1.3	1.0	1.3
State College, Miss.	1.0	1.0	1.0	1.0	1.0	1.0
			DELTA			
Sikeston, Mo.	1.8	1.5	1.5	2.0	1.5	1.0
Clarkedale, Ark.	3.0	2.8	3.0	2.8	2.8	2.5
Marianna, Ark.	2.0	2.8	2.8	2.8	2.2	2.0
Tunica, Miss.	3.0	2.0	4.0	3.0	2.0	2.0
Stoneville, Miss.	3.0	3.0	3.0	3.0	3.0	2.0
Moorhead, Miss.	2.0	2.0	4.0	2.0	3.0	2.0
Anchorage, Miss.	3.0	2.0	3.0	2.0	2.0	2.0
Onward, Miss.	2.0	2.0	3.0	3.0	3.0	2.0
St. Joseph, La.	3.0	2.0	4.0	4.0	2.0	2.0
Baton Rouge, La.	5.0	5.0	5.0	5.0	4.0	2.0
			WEST			
Wagoner, Okla.	-	2.0	2.0	1.0	3.0	3.0
Nowata, Okla.	2.0	2.0	2.0	2.0	3.0	2.0
Stillwater, Okla.	2.0	2.0	4.0	3.0	3.0	3.0
Fayetteville, Ark.	1.5	2.0	2.5	1.8	1.5	1.8
Stuttgart, Ark.	2.8	2.0	2.0	3.0	2.2	1.5
Curtis, La.	2.0	2.0	3.0	2.0	1.0	2.0
Lubbock, Texas	4.0	2.0	4.0	3.0	3.0	3.0

Table 16: Two-year summary of yield and oil content for strains in Uniform Group V, 1947-48.

Location	S-100	D417-721	D418-177	N45-1466	Ogden
		YIELD (Bushels per Acre)			
Plymouth, N. C.	30.4	27.4	30.0	34.6	41.3
Knoxville, Tenn.	24.2	21.0	21.6	19.8	26.6
Jackson, Tenn.	18.4	15.6	15.9	15.3	21.0
Watkinsville, Ga.	16.3	16.7	13.5	15.5	17.4
Sikeston, Mo.	22.3	23.2	21.8	25.1	30.9
Tunica, Miss.	26.0	20.9	22.7	22.7	27.6
Stoneville, Miss.	26.8	21.0	26.8	26.8	32.4
St. Joseph, La.	32.4	26.4	24.8	29.2	35.4
Stuttgart, Ark.	15.2	12.4	12.2	13.8	18.5
		PERCENTAGE OIL			
Knoxville, Tenn.	18.1	18.6	19.0	19.3	19.7
Stoneville, Miss.	20.2	20.7	21.1	21.2	21.5

Preliminary Uniform Group V

Twenty-three new strains were grown along with S-100 and Ogden at six locations. None of these strains were outstandingly superior to S-100 in yield, but nearly all had higher oil content. The only strains which yielded significantly more than S-100 were R46-2271 and D523-88 at Sikeston, Missouri, and D523-25 at Stoneville, Mississippi. R46-2271 yielded significantly less than S-100 at three other locations, while D523-88 was segregating for both height and maturity. Apparently, S-100 is much better adapted to the conditions existing at Stillwater, Oklahoma, as it yielded significantly higher than 20 of the 23 new strains.

Six strains which appear to possess sufficient merit to be included in Group V are S5-5569, R46-2062, R46-2076, D523-25, D523-30, and D524-57. These are of similar maturity as S-100, yielded as well as S-100 in at least four of the locations, and the seed had higher oil content.

Other promising new strains of Group V maturity are L4-6238, L4-6259, and L4-6290 which were included in Preliminary Group IV.

Table 17: Yield data for the strains of Preliminary Uniform Group V, 1948

STAIN AND PARENTAGE		LOCATIONS					
		Still-water, Okla.	Sikes-ton, Mo.	Jackson Tenn.	Stutt-gart, Ark.	Tunica, Miss.	Stone-ville, Miss.
Ogden		14.7-	39.6+	26.5	26.1	25.2	29.8
S-100		27.0	27.6	21.1	22.8	30.6	25.8
S6-5030	Lincoln x Ralsoy	22.7	27.0	15.5	23.7	23.0-	25.6
S6-5162	Lincoln x Ralsoy	16.0-	26.7	17.3	25.4	22.9-	20.7
S6-5216	Lincoln x Ralsoy	17.3-	20.0-	22.1	22.4	20.2-	16.4-
S6-5569	Lincoln x Ralsoy	20.5-	25.0	18.2	24.4	29.9	30.4
N46-253	S-100 x Rose Non-pop	21.2-	26.6	16.7	23.8	31.5	27.5
R46-2012	Macoupin x Arksoy	21.6-	15.3-	20.4	15.3-	25.3	20.0
R46-2062	Dunfield x C143	25.6	22.2-	23.6	21.6	25.2	24.1
R46-2076	C143 x C233	15.6-	25.6	12.7-	20.9	26.0	29.1
R46-2087	C143 x (Dunfield x Midwest)	16.8-	20.4-	15.1-	21.0	25.6	18.5-
R46-2094	C143 x C168	19.6-	17.8-	22.6	16.9-	21.5-	17.7-
R46-2271	Dunfield x Arksoy	5.9-	31.8+	13.6-	24.4	20.3-	23.0
D56-8	Boone x Magnolia	20.8-	19.1-	17.8	17.0-	23.0-	29.8
D59-8	Macoupin x Arksoy 2913	17.7-	20.7-	12.5-	18.3-	24.3-	26.4
D518-10	Patoka x Arksoy	21.7-	24.6	17.5	19.2	24.2-	25.9
D520-4	L7-1355 x Arksoy	22.0-	16.5-	15.5	19.7	26.8	20.6
D520-18	L7-1355 x Arksoy	20.6-	21.0-	15.4	21.6	23.5-	30.0
D523-25	Dunfield x Arksoy	21.5-	20.9-	22.9	20.5	30.0	35.7+
D523-30	Dunfield x Arksoy	21.1-	20.0-	16.7	23.9	28.4	28.9
D523-58	Dunfield x Arksoy	13.9-	28.2	13.4-	22.4	28.0	24.7
D523-88	Dunfield x Arksoy	11.5-	36.7+	13.4-	24.1	28.3	32.4
D524-4	Manch. 13-177 x Arksoy	24.3	10.6-	20.0	16.5-	24.2-	24.3
D524-57	Manch. 13-177 x Arksoy	14.7-	26.6	13.6-	24.3	26.1	31.1
D532-4	Haberlandt x Dunfield	21.0-	20.2	22.5	19.5	23.6-	25.7
Bus. Nec. for sig. (5% level)		4.7	3.3	5.9	3.7	5.6	7.1
Bus. Nec. for sig. (1% level)		6.3	4.5	7.9	4.9	7.4	9.4
Coefficient of variation		18%	10%	24%	12%	15%	20%

(+) Strains yielding significantly more (odds 19:1) than S-100.
(-) Strains yielding significantly less (odds 19:1) than S-100.

Table 18: Chemical Composition of the strains in Preliminary Group V, 1948

Strain	Jackson, Tenn.		Stoneville, Miss.	
	Percent Protein	Percent Oil	Percent Protein	Percent Oil
Ogden	40.3	20.7	41.2	20.0
S-100	40.5	19.1	41.1	19.5
S6-5030	40.5	20.3	39.4	21.5
S6-5162	40.1	21.8	40.3	21.4
S6-5216	39.4	21.3	39.4	21.5
S6-5569	39.0	21.6	38.4	22.2
N46-253	41.7	19.2	42.0	19.8
R46-2012	39.4	21.5	39.2	21.8
R46-2062	38.7	22.0	38.2	22.5
R46-2076	42.9	21.4	40.9	20.1
R46-2087	40.9	20.6	38.9	21.6
R46-2094	39.8	21.6	39.0	21.3
R46-2271	42.2	20.9	41.4	19.7
D56-8	41.5	20.5	40.6	22.3
D59-8	38.7	20.7	41.0	20.9
D518-10	42.2	20.5	42.6	20.2
D520-4	39.1	20.7	38.5	22.7
D520-18	40.9	19.5	40.4	20.6
D523-25	39.9	21.7	42.0	21.7
D523-30	42.1	20.3	38.6	22.4
D523-58	42.8	20.3	42.7	21.1
D523-88	39.1	21.8	42.8	22.6
D524-4	41.3	20.4	41.2	20.5
D524-57	40.8	20.3	39.9	21.8
D532-4	37.9	22.7	39.0	22.6

Uniform Group VI, 1948

Variety or Strain	Source or Originating Agency	Origin
Ogden	Tenn. A. E. S.	Sel. from Tokyo x P.I. 54610
Dortchsoy #2	Robert L. Dortch Seed Co., Scott, Ark.	Sel. from Ogden
Hale Ogden #12	George Hale, Blytheville, Ark.	Sel. from Ogden
Arksoy 2913	Arkansas A.E.S.	Sel. from Arksoy
D517-14	Delta Br. E. S. & U.S.R.S.L.	Sel. from Arksoy x Patoka
D540-1	Delta Br. E. S. & U.S.R.S.L.	Sel. from Ogden x Arksoy
N44-639	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Ogden x Missoy
N45-2885	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Haberlandt x Ogden
N45-2994	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Ralsoy x Ogden

Ogden is the most widely grown variety of Group VI. Ogden is well adapted in the Delta area of Missouri, Arkansas, Mississippi, and Tennessee and in the Tidewater area of Virginia and North Carolina. In these areas it matures in early October if planted in May. Ogden is an excellent variety from the standpoint of yield, erectness, and chemical composition of the seed. However, it has only fair seed holding qualities and under some conditions produces seed of somewhat poorer quality than is desired.

Dortchsoy #2 is a selection from Ogden reported to have improved seed holding qualities over Ogden. Under most conditions Dortchsoy #2 has not differed significantly from Ogden in seed yield. In the Upper Coastal Plain area of the Carolinas, Dortchsoy #2 has not differed from Ogden in its seed holding properties.

Hale Ogden #12 (formerly Burdette #12) has shown no improvement over Ogden in these tests for seed yield or seed holding. It has averaged slightly lower in oil content and in a few instances has been about two days later in maturity.

Arksoy 2913 and the closely related strains, such as Arksoy and Ralsoy, are being replaced in most production areas by Ogden which consistently gives higher seed yields. The advantage of Ogden over Arksoy 2913 increases as yields for Ogden get over 30 bushels per acre.

D517-14 was included in the regional testing program for the first time. It has rather tall growth type and holds its seed well. The mean seed yield for this strain in each area is slightly below Ogden, but the oil content is slightly higher than for Ogden. D517-14 is taller than Ogden, but stands reasonably well.

D540-1 was grown in Group VI for the first time but had been included in Group V in 1947. It is about two days earlier in maturity than Ogden and has a quite similar growth type. D540-1 holds its seed very well but is uniform for green seed coat color. The oil content is slightly below Ogden.

N44-639 has yielded somewhat less than Ogden at most locations and has a somewhat lower oil content.

N45-2885 is about two days later than Ogden. It holds its seed better than Ogden, has yellow seed coat, but has a slightly lower oil content. N45-2885 gave a better seed yield in relation to Ogden in 1948 than in 1947. On the basis of the two-year yield average, it is slightly below Ogden.

N45-2994 appears to be the best of the new strains in this group. It has yellow seed coat, holds its seed very well, and has given good seed yields at most of the locations. However, it does have lower oil content than Ogden. N45-2994 is somewhat later than Ogden. The difference in maturity between the two seems to be greatest when the maturity of Ogden is hastened by drought.

Table 19: Yield in bushels per acre for the strains in Uniform Group VI, 1948

Location	Ogden	Dortchsoy #2	Hale-Ogden #12	Arksoy 2913	D517-14
		EAST COAST			
Plymouth, N. C.	43.2	45.7	44.8	33.4-	34.4-
Willard, N. C.	38.0	40.4	38.0	28.6-	37.8
McCullers, N. C.	26.5	25.8	26.8	23.8	23.8
MEAN	35.9	37.3	35.5	28.6	32.0
		SOUTHEAST			
Monetta, S. C.	34.2	32.8	34.5	29.4	33.8
Fairhope, Ala.	29.4	29.4	23.6-	16.6-	21.1-
MEAN	31.8	31.1	29.0	23.0	27.4
		UPPER AND CENTRAL SOUTH			
Knoxville, Tenn.	23.6	20.9	20.9	15.1-	14.8-
Jackson, Tenn.	18.8	18.1	18.1	15.5	13.9
Belle Mina, Ala. 1/	9.6	13.8	9.6	11.6	10.3
Crossville, Ala.	31.6	33.3	31.1	29.4	33.8
Watkinsville, Ga.	14.8	18.2	16.4	15.5	12.7
Experiment, Ga.	21.3	20.3	14.7	16.7	22.1
Rome, Ga. 1/	7.8	14.8+	12.7+	12.1	12.4+
State College, Miss.	30.4	27.2	27.4	29.9	21.1
MEAN	23.4	23.0	21.5	20.3	19.7
		DELTA			
Sikeston, Mo.	30.0	28.9	32.2	25.7-	26.6
Clarkedale, Ark. (5-17)	27.2	26.1	26.9	19.5	21.9
Clarkedale, Ark. (7-15)	26.5	24.4	23.0	23.8	19.2
Marianna, Ark.	22.2	23.7	24.7+	21.2	24.5+
Tunica, Miss.	26.5	28.1	26.7	19.4	17.5
Stoneville, Miss.	25.1	24.7	25.7	16.3	19.5
Winchester, Ark.	23.1	26.9	26.8	17.5	21.2
Moorhead, Miss.	29.8	31.3	30.2	26.7	27.1
Anchorage, Miss.	27.3	30.9	31.3	18.3	21.4
Onward, Miss.	31.7	28.1	33.1	20.8	21.3
St. Joseph, La.	36.6	41.5	33.6	27.3	28.3
Hamburg, La.	27.2	28.7	26.3	19.2	22.8
Baton Rouge, La.	11.6	20.1	11.3	11.8	14.0
MEAN	27.8	28.6	28.3	21.3	22.6
		WEST			
Wagoner, Okla. 1/	10.6	9.7	9.9	9.8	11.5
Stillwater, Okla. 1/	8.9	5.7	6.2	3.0	6.9
Heavener, Okla. 1/	13.9	12.0-	13.2	11.8-	15.2
Fayetteville, Ark.	20.9	20.1	20.8	16.6-	17.2-
Stuttgart, Ark.	22.0	25.2	22.8	19.8	26.0
Miller County, Ark.	30.9	26.4	39.1+	19.8-	19.2-
Curtis, La.	19.1	26.7	26.7	21.8	21.0
Crowley, La.	19.4	23.9	22.7	13.7	14.0
Lubbock, Texas	23.2	23.2	22.7	17.3-	24.7
MEAN	22.6	24.3	25.8	18.2	20.3

(+)Strains yielding significantly more (odds 19:1) than Ogden.
(-)Strains yielding significantly less (odds 19:1) than Ogden.
1/Not included in the mean.

Table 19: (Continued)

Location	D540-1	N44-639	N45-2885	N45-2994	Bus. Nes. Sig. (5%)	Coef. of Var.
			EAST COAST			
Plymouth, N. C.	35.5	34.5-	43.0	46.0	8.5	15%
Willard, N. C.	37.2	35.3	38.7	39.6	5.8	11%
McCullers, N. C.	27.0	23.1	25.6	22.1-	3.6	10%
MEAN	33.2	31.0	35.8	35.9		
			SOUTHEAST			
Monetta, S. C.	33.5	32.3	32.0	36.6	N.S.	11%
Fairhope, Ala.	29.5	25.4-	25.8-	28.7	3.4	9%
MEAN	31.5	28.9	28.9	32.7		
			UPPER AND CENTRAL SOUTH			
Knoxville, Tenn.	22.6	18.0-	21.9	19.0-	3.5	12%
Jackson, Tenn.	14.5	15.3	15.3	17.2	1.8	7%
Belle Mina, Ala.[1]	11.4	11.6	11.3	11.5	-	-
Crossville, Ala.	31.8	28.7	30.8	32.7	N.S.	8%
Watkinsville, Ga.	16.5	15.7	16.2	22.1	1.9	8%
Experiment, Ga.	21.0	20.7	19.7	23.8	N.S.	19%
Rome, Ga.[1]	16.9+	11.9	8.2	13.2+	4.5	25%
State College, Miss.	29.2	26.1	29.3	29.5	N.S.	17%
MEAN	22.6	20.8	22.2	24.1		
			DELTA			
Sikeston, Mo.	29.8	25.4-	32.1	32.3	3.9	9%
Clarkedale, Ark.	26.4	22.7	24.7	23.7	-	-
Clarkedale, Ark.	23.0	18.1	20.6	21.0	N.S.	20%
Marianna, Ark.	22.0	21.2	24.7+	20.5-	1.6	5%
Tunica, Miss.	27.1	24.2	25.9	23.4	N.S.	20%
Stoneville, Miss.	29.4+	25.2	18.7-	24.7	4.2	12%
Winchester, Ark.	19.2	24.8	23.4	25.3	6.0	18%
Moorhead, Miss.	34.4	27.2	27.9	25.3	4.0	10%
Anchorage, Miss.	25.3	28.6	28.9	27.7	3.6	9%
Onward, Miss.	30.0	29.3	30.7	27.1	8.0	20%
St. Joseph, La.	46.2	34.9	41.2	30.5	9.8	19%
Hamburg, La.	24.1	26.8	23.4	20.1	N.S.	20%
Baton Rouge, La.	12.8	11.3	15.2	12.8	3.4	17%
MEAN	28.1	25.7	26.9	25.1		
			WEST			
Wagoner, Okla.[1]	9.2	8.5	9.1	7.3	-	-
Stillwater, Okla.[1]	5.9	4.6	2.4	3.0	-	-
Heavener, Okla.[1]	15.7+	14.3	8.0-	10.9-	1.8	12%
Fayetteville, Ark.	20.4	17.9-	12.9-	18.7	2.8	10%
Stuttgart, Ark.	24.4	26.4+	19.3	29.0+	4.1	12%
Miller County, Ark.	24.6-	22.0-	20.0-	22.8-	5.4	15%
Curtis, La.	28.9	27.9	27.1	34.5	N.S.	24%
Crowley, La.	23.6	18.2	20.1	22.6	6.6	23%
Lubbock, Texas	23.7	21.3	27.3	25.3	4.6	14%
MEAN	24.3	22.3	21.1	25.5		

Table 20: Chemical composition of strains in Uniform Group VI, 1948

Location	Ogden	Dortch-soy 2	Hale Ogden 12	Arksoy 2913
		PERCENT OIL		
Plymouth, N. C.	20.6	20.4	20.2	19.5
McCullers, N. C.	20.3	19.3	19.1	20.2
Fairhope, Ala.	20.9	21.0	21.0	20.0
Jackson, Tenn.	22.1	22.0	21.5	21.0
Watkinsville, Ga.	21.7	22.6	22.0	21.4
Fayetteville, Ark.	18.6	18.2	18.1	18.3
Stoneville, Miss.	20.5	19.7	20.0	18.9
Baton Rouge, La.	24.2	24.6	24.0	23.8
Stuttgart, Ark.	20.3	20.1	20.2	19.8
Mean	21.0	20.9	20.7	20.3
		PERCENT PROTEIN		
Plymouth, N. C.	42.5	42.5	43.0	44.0
McCullers, N. C.	44.2	44.4	44.8	45.6
Fairhope, Ala.	40.6	40.1	41.2	43.2
Jackson, Tenn.	39.4	38.7	40.1	40.6
Watkinsville, Ga.	38.3	37.1	37.8	39.8
Fayetteville, Ark.	43.8	44.2	43.9	44.5
Stoneville, Miss.	41.5	41.1	39.4	43.0
Baton Rouge, La.	34.6	34.3	35.3	36.5
Stuttgart, Ark.	43.7	43.1	44.1	45.3
Mean	41.0	40.6	41.1	42.5
		IODINE NUMBER OF OIL		
Plymouth, N. C.	137	134	137	134
McCullers, N. C.	134	132	133	132
Fairhope, Ala.	139	138	138	135
Jackson, Tenn.	132	131	132	130
Watkinsville, Ga.	133	134	134	133
Fayetteville, Ark.	135	134	133	132
Stoneville, Miss.	134	134	134	134
Baton Rouge, La.	134	135	134	133
Stuttgart, Ark.	134	135	136	134
Mean	135	134	134	133

Table 20: (Continued)

Location	D517-14	D540-1	N44-639	N45-2885	N45-2994
		PERCENT OIL			
Plymouth, N. C.	20.8	19.1	20.3	19.4	19.0
McCullers, N. C.	21.3	20.0	20.3	18.8	18.1
Fairhope, Ala.	21.0	19.9	19.7	20.2	20.4
Jackson, Tenn.	23.1	20.4	21.4	20.7	20.8
Watkinsville, Ga.	25.0	21.9	21.2	22.2	22.8
Fayetteville, Ark.	19.2	18.3	17.8	16.9	17.4
Stoneville, Miss.	19.7	20.4	20.4	18.6	19.8
Baton Rouge, La.	26.1	23.4	23.4	24.9	23.3
Stuttgart, Ark.	21.8	19.0	20.2	18.7	18.6
Mean	22.0	20.3	20.5	20.0	20.0
		PERCENT PROTEIN			
Plymouth, N. C.	43.7	43.1	42.0	42.9	44.5
McCullers, N. C.	44.0	44.7	43.9	45.4	46.1
Fairhope, Ala.	41.8	43.0	43.0	41.7	41.5
Jackson, Tenn.	38.9	40.5	39.7	40.1	39.7
Watkinsville, Ga.	34.2	37.1	38.9	36.5	37.0
Fayetteville, Ark.	44.1	44.8	44.7	44.2	45.2
Stoneville, Miss.	42.6	42.0	41.9	42.5	41.2
Baton Rouge, La.	33.4	36.2	35.4	32.1	36.6
Stuttgart, Ark.	42.0	45.3	43.7	45.4	45.9
Mean	40.5	41.9	41.5	41.2	42.0
		IODINE NUMBER OF OIL			
Plymouth, N. C.	137	131	139	136	137
McCullers, N. C.	134	130	133	132	132
Fairhope, Ala.	133	138	136	138	137
Jackson, Tenn.	130	134	132	132	136
Watkinsville, Ga.	130	133	133	134	137
Fayetteville, Ark.	130	134	134	134	134
Stoneville, Miss.	131	136	134	132	137
Baton Rouge, La.	132	134	136	135	135
Stuttgart, Ark.	131	137	136	134	136
Mean	132	134	135	134	136

Table 21: Relative maturity, days earlier (-) or later (+) than Ogden, for the strains of the Uniform Group VI, 1948

Location	Date Planted	Ogden Matured	Dortchsoy #2	Hale Ogden 12	Arksoy 2913
		EAST COAST			
Plymouth, N. C.	5-4	10-9	0	+3	0
Willard, N. C.	5-17	10-10	+2	0	+1
McCullers, N. C.	5-7	10-6	0	+1	-2
MEAN			+0.7	+2.0	-0.3
		SOUTHEAST			
Monetta, S. C.	5-19	10-7	0	0	0
Tallassee, Ala.		10-8	+1	+1	0
Fairhope, Ala.	6-6	10-4	0	0	0
MEAN			+0.3	+0.3	0
		UPPER AND CENTRAL SOUTH			
Knoxville, Tenn.	5-20	10-12	+3	0	0
Jackson, Tenn.	5-1	10-20	0	0	-9
Experiment, Ga.	5-20	10-5	-3	-2	-2
Rome, Ga.	6-18	11-10	+10	-2	-1
State College, Miss.	5-12	10-2	+12	0	0
MEAN			+4.5	-1.3	-4.0
		DELTA			
Marianna, Ark.	5-26	10-9	0	0	0
Tunica, Miss.	4-20	9-28	+4	-2	+6
Stoneville, Miss.	4-21	9-27	+2	+4	+4
Winchester, Ark.	5-25	10-8	0	0	-12
Moorhead, Miss.	5-5	9-28	0	0	0
Anchorage, Miss.	5-1	10-1	0	0	0
Onward, Miss.	5-12	10-1	+2	+7	0
St. Joseph, La.	5-10	9-23	0	0	0
Hamburg, La.	4-29	9-26	+2	+2	-1
Baton Rouge, La.	6-4	10-1	0	0	0
MEAN			+1.0	+1.1	-0.3
		WEST			
Wagoner, Okla.	6-3	10-8	+2	+2	0
Stillwater, Okla.	5-4	9-23	+2	+3	-3
Fayetteville, Ark.	5-27	10-8	+4	+3	+1
Stuttgart, Ark.	5-29	10-13	0	0	-1
Miller County, Ark.	5-24	10-8	0	0	-11
Curtis, La.	5-5	9-28	+3	+3	+3
Crowley, La.	5-4	9-25	0	0	-5
Lubbock, Texas	6-4	10-15	+10	-5	-5
MEAN			+2.6	+0.8	-2.6

Table 21: (Continued)

Location	D517-14	D540-1	N44-639	N45-2885	N45-2994
		EAST COAST			
Wagoner, Okla.	+1	-1	-1	+1	+4
Willard, N. C.	+8	0	+1	+2	+6
McCullers, N. C.	-2	-2	+2	+2	+12
MEAN	+2.3	-1.0	+0.7	+1.7	+7.3
		SOUTHEAST			
Monetta, S. C.	+1	0	0	0	+8
Tallassee, Ala.	+2	+2	+4	+7	+4
Fairhope, Ala.	0	0	0	0	0
MEAN	+1.0	+0.6	+1.3	+2.3	+4.0
		UPPER AND CENTRAL SOUTH			
Knoxville, Tenn.	+2	0	+5	+8	+19
Jackson, Tenn.	-11	-18	-7	-2	-2
Experiment, Ga.	-2	-2	-1	-3	-3
Rome, Ga.	-4	-5	-5	-3	+8
State College, Miss.	0	0	0	+2	+14
MEAN	-3.0	-8.0	-1.6	-0.4	+7.2
		DELTA			
Marianna, Ark.	0	0	-4	+1	0
Tunica, Miss.	+2	+3	+2	+2	+22
Stoneville, Miss.	-6	-8	-6	-5	+14
Winchester, Ark.	-11	-12	-11	0	0
Moorhead, Miss.	0	-7	0	0	+2
Anchorage, Miss.	0	-3	-3	0	+2
Onward, Miss.	0	+2	0	+2	+15
St. Joseph, La.	-5	-3	-5	-2	+2
Hamburg, La.	-1	-1	-1	-1	+9
Baton Rouge, La.	+4	+2	0	+1	+2
MEAN	-1.7	-2.7	-2.8	-0.2	+6.8
		WEST			
Wagoner, Okla.	0	-2	-1	+2	+2
Stillwater, Okla.	-3	-3	-2	+3	+4
Fayetteville, Ark.	0	0	+2	+7	+10
Stuttgart, Ark.	-7	-7	-7	+2	+5
Miller County, Ark.	-11	0	0	0	+1
Curtis, La.	+7	+5	+3	+5	+4
Crowley, La.	+3	-5	+5	+5	+10
Lubbock, Texas	-5	0	0	+5	-5
MEAN	-2.0	-1.5	0	+3.6	+3.9

Table 22: Mean plant height of strains in Uniform Group VI, 1948

Location	Ogden	Dortchsoy #2	Hale Ogden #12	Arksoy 2913	D517-14
		EAST COAST			
Plymouth, N. C.	36	37	37	36	44
Willard, N. C.	28	30	22	24	46
McCullers, N. C.	26	26	27	25	37
MEAN	30	31	29	28	42
		SOUTHEAST			
Monetta, S. C.	26	26	26	25	31
Tallassee, Ala.	30	32	28	26	44
Fairhope, Ala.	30	30	30	28	36
MEAN	29	29	28	26	37
		UPPER AND CENTRAL SOUTH			
Knoxville, Tenn.	38	41	41	38	48
Jackson, Tenn.	40	44	40	42	48
Belle Mina, Ala.	28	34	32	35	43
Watkinsville, Ga.	24	28	29	30	36
Experiment, Ga.	22	23	20	24	29
Rome, Ga.	29	35	31	34	36
State College, Miss.	23	25	26	24	41
MEAN	29	33	31	32	40
		DELTA			
Sikeston, Mo.	43	45	43	41	46
Clarkedale, Ark.	31	34	30	31	33
Marianna, Ark.	34	36	36	34	38
Tunica, Miss.	32	36	34	34	37
Stoneville, Miss.	30	35	34	28	43
Winchester, Ark.	31	35	34	33	48
Moorhead, Miss.	35	38	36	38	38
Anchorage, Miss.	29	30	30	25	52
Onward, Miss.	29	33	31	31	40
St. Joseph, La.	24	30	26	32	40
Hamburg, La.	23	28	24	28	38
Baton Rouge, La.	20	22	21	24	32
MEAN	30	34	32	32	40
		WEST			
Wagoner, Okla.	25	27	26	28	31
Stillwater, Okla.	35	39	39	33	46
Fayetteville, Ark.	34	38	36	37	38
Stuttgart, Ark.	21	20	21	21	32
Miller County, Ark.	15	21	20	18	28
Curtis, La.	14	14	15	20	46
Crowley, La.	18	22	20	16	35
Lubbock, Texas	28	33	30	31	24
MEAN	24	27	26	26	35

Table 22: (Continued)

Location	D540-1	N44-639	N45-2885	N45-2994
		EAST COAST		
Plymouth, N. C.	38	40	42	42
Willard, N. C.	30	36	34	38
McCullers, N. C.	28	32	32	36
MEAN	32	36	36	39
		SOUTHEAST		
Monetta, S. C.	28	31	29	32
Tallassee, Ala.	30	36	36	38
Fairhope, Ala	30	33	32	37
MEAN	29	33	32	36
		UPPER AND CENTRAL SOUTH		
Knoxville, Tenn.	41	50	43	49
Jackson, Tenn.	40	45	45	46
Belle Mina, Ala.	33	39	37	42
Watkinsville, Ga.	30	36	33	33
Experiment, Ga.	24	26	26	34
Rome, Ga.	38	38	35	39
State College, Miss.	24	32	30	34
MEAN	33	38	36	40
		DELTA		
Sikeston, Mo.	43	47	45	47
Clarkedale, Ark.	31	32	33	33
Marianna, Ark.	34	38	38	36
Tunica, Miss.	33	38	38	40
Stoneville, Miss.	34	38	37	35
Winchester, Ark.	34	42	38	39
Moorhead, Miss.	38	37	40	38
Anchorage, Miss.	32	42	35	41
Onward, Miss.	32	36	34	32
St. Joseph, La.	30	38	36	40
Hamburg, La.	30	36	36	36
Baton Rouge, La.	26	38	36	34
MEAN	33	38	37	38
		WEST		
Wagoner, Okla.	25	33	33	35
Stillwater, Okla.	40	44	41	44
Fayetteville, Ark.	36	38	39	38
Stuttgart, Ark.	21	26	23	32
Miller County, Ark.	19	25	24	30
Curtis, La,	26	29	30	35
Crowley, La.	22	24	24	33
Lubbock, Texas	30	26	26	31
MEAN	27	31	30	35

Table 23: Lodging scores for the strains in Uniform Group VI, 1948

Location	Ogden	Dortchsoy #2	Hale-Ogden 12	Arksoy 2913	D517-14
		EAST COAST			
Plymouth, N. C.	2.0	2.0	2.0	2.0	2.5
Willard, N. C.	1.0	1.0	1.0	1.0	1.5
McCullers, N. C.	1.0	1.0	1.0	1.0	1.5
		SOUTHEAST			
Monetta, S. C.	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.3	1.3	1.5	2.0	2.3
Fairhope, Ala.	1.0	1.0	1.0	2.0	2.5
		UPPER AND CENTRAL SOUTH			
Knoxville, Tenn.	1.5	1.5	1.8	3.8	3.5
Jackson, Tenn.	1.0	1.0	1.0	1.3	1.0
Belle Mina, Ala.[1/]	1.0	1.3	1.0	1.8	1.8
Watkinsville, Ga.	1.0	1.0	1.0	2.0	1.0
Experiment, Ga.	1.0	1.0	1.0	2.0	1.0
State College, Miss.	1.0	1.0	1.0	2.0	2.0
		DELTA			
Sikeston, Mo.	1.0	1.0	1.0	2.0	1.8
Clarkedale, Ark.	2.2	2.2	2.2	2.5	1.8
Marianna, Ark.	1.0	1.0	1.2	1.5	1.0
Tunica, Miss.	2.5	3.0	2.5	3.0	3.5
Stoneville, Miss.	2.0	3.5	2.0	2.3	3.0
Winchester, Ark.	1.0	1.0	1.0	1.0	2.0
Moorhead, Miss.	2.0	2.8	2.3	2.8	2.8
Anchorage, Miss.	2.0	2.0	2.5	2.5	3.0
Onward, Miss.	3.0	3.5	3.0	4.0	4.0
St. Joseph, La.	2.0	2.0	2.0	2.0	3.0
Hamburg, La.	1.0	2.0	2.0	2.0	3.0
Baton Rouge, La.	1.0	1.0	1.0	2.0	3.0
		WEST			
Wagoner, Okla.	1.0	1.0	1.0	1.0	1.0
Stillwater, Okla.	1.0	1.0	1.0	2.0	2.0
Fayetteville, Ark.	1.2	2.8	1.8	3.0	2.8
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0
Miller County, Ark.	1.0	1.0	1.0	1.5	1.5
Curtis, La.	1.0	1.0	1.0	2.0	3.0
Crowley, La.	1.0	1.0	1.0	1.0	2.0
Lubbock, Texas	1.0	1.0	1.0	1.0	1.0

Table 23: (Continued)

Location	D540-1	N44-639	N45-2885	N45-2994
		EAST COAST		
Plymouth, N. C.	2.0	2.5	2.5	2.0
Willard, N. C.	1.0	1.0	1.0	1.0
McCullers, N. C.	1.0	1.0	1.0	1.5
		SOUTHEAST		
Monetta, S. C.	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.3	1.8	1.5	2.3
Fairhope, Ala.	1.5	2.0	2.0	2.0
		UPPER AND CENTRAL SOUTH		
Knoxville, Tenn.	1.3	1.8	1.3	2.5
Jackson, Tenn.	1.0	1.3	1.0	1.0
Belle Mina, Ala. 1/	1.0	1.5	1.0	1.5
Watkinsville, Ga.	1.0	1.0	1.0	1.0
Experiment, Ga.	1.0	1.0	1.0	1.0
State College, Miss.	1.0	2.0	2.0	2.0
		DELTA		
Sikeston, Mo.	1.0	1.3	1.3	2.0
Clarkedale, Ark.	1.5	2.8	2.0	1.8
Marianna, Ark.	1.2	2.5	1.5	2.0
Tunica, Miss.	2.5	3.0	2.5	2.0
Stoneville, Miss.	2.0	3.0	2.3	2.0
Winchester, Ark.	1.2	2.0	1.8	1.8
Moorhead, Miss.	2.0	2.8	3.0	2.8
Anchorage, Miss.	2.5	3.0	2.0	2.0
Onward, Miss.	3.0	4.0	3.5	4.0
St. Joseph, La.	2.0	3.0	3.0	3.0
Hamburg, La.	2.0	2.0	2.0	3.0
Baton Rouge, La.	2.0	2.0	2.0	3.0
		WEST		
Wagoner, Okla.	1.0	1.0	1.0	1.0
Stillwater, Okla.	2.0	2.0	1.0	1.0
Fayetteville, Ark.	3.0	2.2	3.0	1.8
Stuttgart, Ark.	1.0	1.0	1.0	1.0
Miller County, Ark.	1.2	1.0	1.2	1.7
Curtis, La.	2.0	2.0	2.0	3.0
Crowley, La.	1.0	1.0	1.0	2.0
Lubbock, Texas	1.0	1.0	1.0	1.0

Table 24: Mean seed weight for strains in Uniform Group VI, 1948

Location	Ogden	Dortchsoy #2	Hale-Ogden 12	Arksoy 2913	D517-14
		EAST COAST			
Plymouth, N. C.	15.7	14.9	15.3	14.0	14.7
Willard, N. C.	17.0	16.2	16.5	14.9	15.9
McCullers, N. C.	14.2	13.5	13.6	12.0	13.1
Mean	15.6	14.9	15.1	13.6	14.6
		SOUTHEAST			
Monetta, S. C.	20.0	19.2	19.6	16.5	18.6
		UPPER AND CENTRAL SOUTH			
Knoxville, Tenn.	13.1	13.1	13.7	12.6	13.0
Jackson, Tenn.	14.6	16.3	15.6	11.5	12.0
Watkinsville, Ga.	12.1	11.9	13.4	11.3	11.8
Mean	13.3	13.8	14.2	11.8	12.3
		DELTA			
Sikeston, Mo.	16.7	16.4	16.8	14.6	17.0
Clarkedale, Ark.	17.2	15.8	16.6	16.0	15.7
Marianna, Ark.	15.4	14.0	15.0	12.4	14.0
Tunica, Miss.	13.2	12.8	12.4	11.4	11.4
Stoneville, Miss.	12.0	11.5	12.0	9.8	9.4
Winchester, Ark.	15.0	12.8	13.1	11.7	12.4
Moorhead, Miss.	13.8	13.4	13.3	11.8	12.4
Anchorage, Miss.	13.2	12.5	12.4	10.7	11.6
Onward, Miss.	15.6	14.8	15.3	11.2	12.6
Baton Rouge, Miss.	13.0	13.4	13.7	11.0	13.3
Mean	14.5	13.7	14.1	12.1	13.0
		WEST			
Wagoner, Okla.	11.6	10.8	11.0	8.5	9.7
Stillwater, Okla.	10.2	9.7	10.6	8.4	10.6
Heavener, Okla.	14.3	12.6	14.1	11.0	11.2
Fayetteville, Ark.	11.4	11.1	11.6	11.2	11.6
Stuttgart, Ark.	13.4	12.8	13.6	11.8	12.6
Miller County, Ark.	14.7	14.3	14.0	10.5	11.6
Lubbock, Texas	17.0	17.0	17.0	16.0	15.0
Mean	13.2	12.6	13.1	11.1	11.8

Table 24: (Continued)

Location	D540-1	N44-639	N45-2885	N45-2994
		EAST COAST		
Plymouth, N. C.	13.9	14.0	13.7	15.9
Willard, N. C.	15.4	15.0	14.8	15.2
McCullers, N. C.	14.2	14.9	12.3	13.9
Mean	14.5	14.6	13.6	15.0
		SOUTHEAST		
Monetta, S. C.	19.2	20.1	17.3	19.2
		UPPER AND CENTRAL SOUTH		
Knoxville, Tenn.	13.0	14.0	13.6	16.0
Jackson, Tenn.	11.3	14.4	14.2	14.5
Watkinsville, Ga.	11.4	12.7	9.4	12.3
Mean	11.9	13.7	12.4	14.3
		DELTA		
Sikeston, Mo.	16.1	17.0	15.0	16.9
Clarkedale, Ark.	14.8	15.9	14.5	16.0
Marianna, Ark.	13.5	14.5	11.5	14.0
Tunica, Miss.	12.0	13.0	11.5	13.0
Stoneville, Miss.	12.2	12.8	10.5	11.6
Winchester, Ark.	12.3	13.2	12.1	13.3
Moorhead, Miss.	12.9	14.2	12.8	12.1
Anchorage, Miss.	12.1	11.8	11.2	11.2
Onward, Miss.	13.9	14.7	12.9	13.8
Baton Rouge, La.	12.6	12.6	10.7	12.1
Mean	13.2	14.0	12.3	13.4
		WEST		
Wagoner, Okla.	10.1	10.6	8.4	10.3
Stillwater, Okla.	8.7	11.4	10.5	13.9
Heavener, Okla.	12.1	12.7	10.4	12.9
Fayetteville, Ark.	12.2	11.4	10.4	12.4
Stuttgart, Ark.	12.5	13.3	11.3	14.0
Miller County, Ark.	12.2	14.6	10.2	13.1
Lubbock, Texas	19.0	16.0	15.0	17.0
Mean	12.4	12.9	10.9	13.4

Table 25: Seed quality scores for strains in Uniform Group VI, 1948

Location	Ogden	Dortchsoy #2	Hale Ogden 12	Arksoy 2913	D517-14
		EAST COAST			
Plymouth, N. C.	3.0	3.0	3.0	2.0	3.0
Willard, N. C.	3.0	3.0	4.0	4.0	3.0
McCullers, N. C.	2.0	2.0	2.0	2.0	2.0
		SOUTHEAST			
Monetta, S. C.	2.0	2.0	2.0	2.0	2.0
Tallassee, Ala.	2.0	1.7	2.0	1.5	1.8
		UPPER AND CENTRAL SOUTH			
Knoxville, Tenn.	1.0	1.0	1.0	1.5	1.0
Jackson, Tenn.	1.2	1.5	1.8	1.0	1.5
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0
		DELTA			
Sikeston, Mo.	1.8	2.3	1.8	1.8	1.5
Clarkedale, Ark.	3.0	2.8	2.5	2.8	3.0
Marianna, Ark.	2.2	2.0	2.0	2.0	2.0
Tunica, Miss.	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.	2.0	2.0	2.0	1.0	2.0
Winchester, Ark.	1.5	1.2	1.5	1.2	2.0
Moorhead, Miss.	2.0	2.0	2.0	2.0	2.0
Anchorage, Miss.	2.0	2.0	2.0	1.0	2.0
Onward, Miss.	2.0	2.0	2.0	2.0	2.0
St. Joseph, La.	2.0	2.0	2.0	2.0	2.0
Hamburg, La.	2.0	2.0	2.0	2.0	4.0
Baton Rouge, La.	1.0	1.0	1.0	2.0	2.0
		WEST			
Wagoner, Okla.	3.0	3.0	3.0	2.0	2.0
Stillwater, Okla.	2.0	2.0	3.0	3.0	4.0
Fayetteville, Ark.	1.5	1.5	1.5	1.5	2.0
Stuttgart, Ark.	1.2	1.5	1.8	1.2	1.5
Miller County, Ark.	1.5	1.5	1.5	2.0	1.8
Curtis, La.	1.0	1.0	1.0	1.0	3.0
Crowley, La.	3.0	3.0	3.0	4.0	4.0
Lubbock, Texas	2.0	2.0	2.0	4.0	4.0

Table 25: (Continued)

Location	D540-1	N44-639	N45-2885	N45-2994
		EAST COAST		
Plymouth, N. C.	3.0	3.0	3.0	3.0
Willard, N. C.	3.0	4.0	2.0	2.0
McCullers, N. C.	2.0	2.0	2.0	3.0
		SOUTHEAST		
Monetta, S. C.	2.0	2.0	2.0	2.0
Tallassee, Ala.	1.3	1.8	1.5	1.7
		UPPER AND CENTRAL SOUTH		
Knoxville, Tenn.	1.0	1.5	1.0	2.0
Jackson, Tenn.	1.2	1.5	1.0	1.2
Watkinsville, Ga.	1.0	1.0	1.0	1.0
		DELTA		
Sikeston, Mo.	2.8	2.0	2.0	2.0
Clarkedale, Ark.	2.8	2.8	2.8	3.0
Marianna, Ark.	2.0	2.5	2.0	2.0
Tunica, Miss.	2.0	2.0	3.0	2.0
Stoneville, Miss.	2.0	2.0	2.0	2.0
Winchester, Ark.	1.2	2.0	1.8	1.5
Moorhead, Miss.	2.0	2.0	2.0	2.0
Anchorage, Miss.	2.0	2.0	2.0	2.0
Onward, Miss.	3.0	3.0	4.0	2.0
St. Joseph, La.	2.0	3.0	3.0	2.0
Hamburg, La.	4.0	4.0	3.0	2.0
Baton Rouge, La.	2.0	2.0	2.0	2.0
		WEST		
Wagoner, Okla.	2.0	2.0	2.0	2.0
Stillwater, Okla.	2.0	3.0	4.0	4.0
Fayetteville, Ark.	1.5	1.8	1.5	1.5
Stuttgart, Ark.	1.2	2.5	1.8	1.8
Miller County, Ark.	1.0	1.7	1.5	1.3
Curtis, La.	1.0	2.0	1.0	2.0
Crowley, La.	4.0	5.0	4.0	2.0
Lubbock, Texas	3.0	5.0	3.0	1.0

Table 26: Two-year summary of yield and oil content for the strains in Uniform Group VI, 1947-48

Location	Ogden	Dortchsoy #2	Hale-Ogden 12	Arksoy 2913	N44-639	N45-2885	N45-2994
			YIELD (Bushesl per Acre)				
East Coast	34.7	32.0	34.3	25.9	27.9	32.3	33.0
Upper & Central South	23.2	22.7	23.2	18.5	20.2	20.2	22.2
Delta	25.8	26.4	26.1	19.4	22.2	22.6	25.3
			PERCENTAGE OIL				
Plymouth, N. C.	20.4	20.4	20.0	19.1	19.6	19.8	19.0
McCullers, N. C.	21.2	20.6	20.2	20.5	20.6	20.2	19.4
Jackson, Tenn.	22.4	22.2	21.4	21.1	21.8	21.2	20.7
Watkinsville, Ga.	21.4	21.2	20.4	19.7	20.8	20.8	20.8
Stoneville, Miss.	20.3	20.0	20.2	18.8	20.0	19.1	19.4
Baton Rouge, La.	23.3	23.4	22.8	22.6	22.7	23.8	22.2
Fayetteville, Ark.	20.6	20.4	20.2	19.8	20.6	19.8	19.5
Stuttgart, Ark.	20.2	20.0	19.9	19.2	20.0	18.4	18.6

Preliminary Uniform VI, 1948

Twenty-four new soybean strains were grown in comparison with Ogden at Sikeston, Missouri; Clarkedale and Stuttgart, Arkansas; Stoneville and Anchorage, Mississippi; and Plymouth, North Carolina. Of this group, two strains, Hale Ogden #2 and D554-7, gave yields very similar to Ogden at all locations. Hale Ogden #2 appears to be similar to Ogden in all respects. D554-7 is also very similar to Ogden. It has green seed coat, similar growth type, and shatters to the same extent as Ogden.

OK 710 yielded as well as Ogden at four locations. This is a rather tall type, slightly earlier than Ogden. The oil content of the seed is quite similar to that of Ogden. Other strains yielding as well as Ogden at four of the six locations are D5-17, D420-1676, and N46-696. Of these, D5-17 is of Group VII maturity and has lower oil content than Ogden. D420-1676 lodged badly at several locations and is somewhat variable for plant type. N46-696 has a lower oil content than Ogden.

Four strains yielded significantly less than Ogden at three locations; eight strains yielded significantly less at four locations; five strains at five locations; and Bobshaw yielded significantly less than Ogden at all six locations and highly significantly less (odds 99:1) at five locations.

Table 27: Yield data for strains in Preliminary Group VI, 1948

Strain and Parentage		Sikes-ton, Mo.	Clarke-dale, Ark.	Stutt-gart, Ark.	Stone-ville, Miss.	Anchor-age, Miss.	Ply-mouth, N. C.
Ogden		36.8	33.3	29.2	33.1	31.7	40.5
Hale Ogden #2	Ogden selection	36.5	34.1	29.1	29.6	32.4	44.9
Bobshaw	Tokyo x Mamredo	24.5-	23.5-	19.7-	19.6-	20.3-	16.4-
Kilpatrick 10	Arksoy selection	32.1	29.0	22.5-	20.5-	22.4-	24.4-
OK 710	Chief x Arksoy	32.4	32.6	27.1	31.1	25.1-	26.1-
S5-334	Ralsoy selection	31.3	27.5	21.9-	16.4-	22.3-	26.0-
S5-373	Ralsoy selection	30.0-	29.3	23.1-	21.1-	23.2-	24.4-
S6-5203	Lincoln x Ralsoy	26.9-	31.2	24.8	21.6-	19.8-	23.2-
S6-5507	Dunfield x Arksoy	27.0-	28.4	22.0-	24.3-	22.2-	28.5-
R46-2202	Macoupin x Arksoy	27.5-	27.8	23.3-	15.5-	18.2-	29.1-
R46-2217	Chief x Arksoy	28.6-	31.5	26.1	24.8-	23.2-	26.2-
R46-2231	Chief x Arksoy	24.2-	28.3	31.0	25.7-	20.9-	36.7
R46-2257	Arksoy x Patoka	28.9-	28.4	30.3	19.4-	21.0-	23.9-
R46-2259	Arksoy x Patoka	26.2-	32.1	29.3	20.8-	19.5-	23.9-
R46-2287	Manch. 13-177 x Arksoy	28.9-	30.7	24.5-	19.3-	21.9-	29.0-
D5-17	Ogden selection	25.6-	43.1+	28.3	25.4-	28.3	36.5
D420-1676	L7-1355 x Arksoy	28.3-	27.7	29.7	29.5	30.8	30.5-
D520-26	L7-1355 x Arksoy	31.6	29.0	24.5-	19.2-	22.0-	27.1
D523-83	Dunfield x Arksoy	29.7-	29.2	20.8-	18.9-	24.5-	25.6-
D523-91	Dunfield x Arksoy	35.5	30.4	25.2	23.4-	24.3-	24.4-
D533-14	Tenn.N.P.x Dunfield	32.3	31.2	22.6-	25.2-	22.7-	28.1-
D554-7	Ogden x Delsoy	36.1	34.0	29.2	31.7	35.8	45.5
N46-174	S-100 x Rose Non-Pop	28.1-	26.7	25.9	20.9-	28.2	25.3-
N46-406	S-100 x Volstate	30.8-	26.3	25.2	28.5	24.7-	32.2-
N46-696	S-100 x Volstate	33.3	28.1	23.3-	27.7-	29.6	35.9
Bus. Nec. for Sig. (5% level)		5.8	7.3	4.5	5.1	6.0	6.9
Bus. Nec. for Sig. (1% level)		7.7	N.S.	6.0	6.7	8.0	9.2
Coefficient of Variation		14%	17%	13%	15%	17%	17%

(+)Strains yielding significantly more (odds 19:1) than Ogden.
(-)Strains yielding significantly less (odds 19:1) than Ogden.

Table 28: Chemical composition of strains in Preliminary Group VI, 1948.

Variety or Strain	Stuttgart, Ark.		Stoneville, Miss.	
	Protein	Oil	Protein	Oil
Ogden	43.3	20.0	40.4	20.3
Hale Ogden #2	44.5	20.4	41.0	20.3
Bobshaw	45.3	18.6	41.9	19.4
Kilpatrick #10	45.6	20.3	42.2	20.0
OK 710	44.9	20.3	43.1	19.7
S5-334	47.1	19.2	43.7	19.1
S5-373	45.1	20.7	42.8	20.0
S6-5203	42.8	21.9	40.1	21.9
S6-5507	41.1	22.6	42.5	21.1
R46-2202	43.6	20.8	43.3	18.9
R46-2217	45.2	19.2	42.7	19.5
R46-2231	42.2	19.0	39.4	19.7
R46-2257	42.2	20.8	41.9	20.3
R46-2259	42.5	21.5	40.9	21.1
R46-2287	45.0	19.3	45.2	18.8
D5-17	44.1	18.4	39.7	19.2
D420-1676	42.9	22.3	40.3	21.1
D520-26	43.6	20.0	42.6	19.9
D523-83	43.5	21.7	41.2	21.4
D523-91	42.0	22.7	40.2	21.7
D533-14	43.8	22.0	41.3	21.6
D554-7	43.1	20.2	41.5	20.1
N46-174	45.1	19.7	42.0	19.4
N46-406	45.1	19.7	41.7	19.5
N46-696	44.7	19.5	42.0	19.4

Uniform Group VII, 1948

Variety or Strain	Source or Originating Agency	Origin
Roanoke	N. Carolina A.E.S. & U.S.R.S.L.	Selection from mixed seed lot
Volstate	Tennessee A.E.S.	Selection from Tokyo x P.I. 54610
N42-26	N. Carolina A.E.S. & U.S.R.S.L.	Selection from Arksoy
N44-92	N. Carolina A.E.S. & U.S.R.S.L.	Selection from Haberlandt x Ogden
N44-774	N. Carolina A.E.S. & U.S.R.S.L.	Selection from Ogden x Missoy
N44-937	N. Carolina A.E.S. & U.S.R.S.L.	Selection from Palmetto x Ogden
N45-3036	N. Carolina A.E.S. & U.S.R.S.L.	Selection from Ralsoy x Ogden
N45-3563	N. Carolina A.E.S. & U.S.R.S.L.	Selection from Ogden x Missoy
N45-3728	N. Carolina A.E.S. & U.S.R.S.L.	Selection from Palmetto x Ogden
Ogden	Tennessee A.E.S.	Selection from Tokyo x P.I. 54610
Dortchsoy 31	R. L. Dortch Seed Co., Scott, Arkansas	Selection from Ogden
CNS	J. E. Wannamaker St. Matthews, S. Car.	Selection from Clemson
Palmetto	U. S. D. A.	Introduction from Nanking, China, (P.I. 71587)

The maturity of varieties in Group VII is, roughly, the last two weeks of October. In most areas where this group is adapted, Roanoke will mature about October 25. Roanoke is approximately two weeks later than Ogden which is the standard for Group VI.

Five varieties, Roanoke, Volstate, Ogden, CNS, and Palmetto, have now been grown in the nurseries for five years. Seed yield and percent oil for nine locations are summarized in table 39. Roanoke has the highest average yield per acre for the Group VII varieties at all locations except Tifton, Georgia, and has the highest average oil content at all locations. Of the four varieties maturing in late October (Roanoke, Volstate, CNS, and Palmetto), Roanoke is being grown on the largest acreage. Its principal area of production is the Upper Coastal Plain and lower Piedmont areas of North Carolina, South Carolina, and the northern half of Georgia.

Three additional strains, N42-26, N44-92, and N44-774, have now been grown three years. Seed yield and percent oil for 16 locations are summarized in table 38. At these 16 locations, N42-26 has given a higher average yield than Roanoke at four locations. These are Willard, North Carolina; Blackville, South Carolina; Tifton, Georgia; and Baton Rouge, Louisiana. At all locations, it has had approximately one percent lower oil content than Roanoke. N42-26 is slightly earlier than Roanoke, is usually somewhat taller, stands quite well, and holds its seed extremely well.

N44-92 is a tall, rather heavy-stemmed strain with good seed holding properties. It is approximately one week earlier than Roanoke and one week later than Ogden. The oil content averages slightly below Roanoke but is quite comparable to that for Ogden. N44-92 has the capacity to produce high seed yields when all factors are favorable. It appears to be quite tolerant to wet conditions but very sensitive to drought conditions. The coarse, heavy stems would not meet with favor from combine operators.

N44-774 has surpassed Roanoke in yield at Blackville, South Carolina, and at Baton Rouge, Louisiana. It has approximately 2 percent lower oil content than Roanoke. N44-774 is the increase from an F_2 plant which appeared very uniform for growth characteristics and maturity as an F_3 row. Single plant selections were made from a F_6 population in 1947. These progenies will be compared to study the variability for yielding ability and chemical composition which might exist in a relatively uniform strain of this breeding background.

Two other strains, N44-937 and N45-3563, have been grown for two years. N44-937 is a tall type comparable to N44-92 in maturity. N44-937 has given its best relative performance at Tifton, Georgia. At other locations its yield performance has not been superior to Ogden or Roanoke. Oil content is below that for Ogden. Because of its tall growth type, N44-937 might have value as an early variety to plant after oats in the Delta area. In June plantings, N44-937 is considerably taller than Ogden and matures earlier. For example, in the June 16 planting at Stuttgart, the height for N44-937 was 38 inches as compared with 16 inches for Ogden.

N45-3563 is quite comparable to Roanoke in many of its growth characteristics; but where lodging occurs with Roanoke, N45-3563 usually lodges somewhat more. However, in the Southeast, N45-3563 usually grows slightly taller than Roanoke. N45-3563 appears to be best adapted in the Southeast. Here it has averaged four bushels more seed per acre than Roanoke and has yielded as well as N42-26. N45-3563 has approximately one-half percent higher oil content than N42-26. In further comparisons with N42-26, N45-3563 usually has higher quality seed.

Three strains, N45-3036, N45-3728, and Dortchsoy 31, were grown in the nurseries for the first time. All gave good seed yields, but not superior to Roanoke at most locations. All have lower oil content than Roanoke.

N45-3728 gave its highest relative rank at Tifton, Georgia. It had given a similar performance at Tifton when grown there in 1946. N45-3728 is nearly as tall as Palmetto, holds its seed better, and has 2 to 3 percent higher oil content. In several nurseries, it has appeared that N45-3728 was more susceptible to Sclerotium rolfsii than any of the commonly grown soybean varieties.

Dortchsoy 31 is a selection from Ogden resembling Ogden in growth type and seed coat color, but is nearly two weeks later in maturity. It also has a lower oil content than Ogden. Dortchsoy 31 does not have the same reaction to bacterial pustule and wildfire as Ogden.

Table 29: Yield in bushels per acre for strains in Uniform Group VII, 1948

Location	Roa-noke	Vol-state	N-42-26	N-44-92	N-44-774	N-44-937	N-45-3036
			EAST COAST				
Petersburg, Va.	30.6	32.1	33.2	39.3+	36.5+	35.6	34.6
Williamsburg, Va.	33.6	32.7	29.3	36.8	27.4	25.5-	38.2
Holland, Va.	43.7	39.2	45.0	47.8	33.6-	42.7	47.2
Norfolk, Va.	16.8	16.0	14.7	20.5+	12.1-	14.3	23.4+
Plymouth, N. C.	30.1	24.6-	29.9	30.5	25.9	24.6-	28.2
Willard, N. C.	37.3	34.9	36.8	35.5	29.4-	30.3-	34.2
McCullers, N. C.	19.4	23.6	22.8	22.8	17.9	24.7	21.3
Hartsville, S. C.	27.6	25.8	24.0	24.0	29.4	18.9-	30.1
Florence, S. C.	41.1	31.9-	34.6-	32.9-	31.8-	30.5-	36.1
Mean	31.1	29.0	30.0	32.2	27.1	27.5	32.6
			SOUTHEAST				
Monetta, S. C.	30.0	27.0	34.5+	29.4	28.6	29.9	30.0
Blackville, S. C.	27.5	22.9	27.0	25.1	23.5	9.8-	24.0
Charleston, S. C.	30.6	29.1	32.3	28.4	34.4	21.2	25.9
Tifton, Ga. (4-21)	20.7	14.8	36.4+	23.1	22.3	30.8+	27.9
Tifton, Ga. (5-21)	19.4	18.9	21.1	22.8	20.0	15.8	24.1+
Tallassee, Ala.	35.2	33.8	30.4	32.4	32.2	17.2	37.8
Fairhope, Ala.	27.1	25.1	23.1	25.9	29.2	23.6	26.6
Mean	27.2	24.5	29.3	26.7	27.2	21.2	28.0
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	24.0	21.9	20.7-	20.3-	18.8-	18.9-	19.0-
Belle Mina, Ala. 1/	10.3	12.8	12.2	9.4	5.0	10.4	10.9
Crossville, Ala.	34.3	32.3	29.6-	30.0-	26.7-	30.6	34.8
Watkinsville, Ga.	17.9	17.5	17.6	16.7	13.3-	18.6	17.6
Experiment, Ga.	21.5	25.1	22.5	19.5	25.5	21.1	19.6
State College, Miss.	31.4	25.8-	26.4	28.8	23.5-	22.1-	29.4
Mean	25.8	24.5	23.4	23.1	21.6	22.3	24.1

(+) Strains yielding significantly more (odds 19:1) than Roanoke.
(-) Strains yielding significantly less (odds 19:1) than Roanoke.
1/ Not included in the mean.

Table 29: (Continued)

Location	N-45-3563	N-45-3728	Ogden	Dortch-soy 31	CNS	Pal-metto	Bus. Nec. Sig(5%)	C.V.
EAST COAST								
Petersburg, Va.	39.5+	41.0+	31.0	37.5+	19.1-	20.8	5.1	11%
Williamsburg, Va.	36.1	29.2	33.6	34.7	24.4-	21.2-	4.9	11%
Holland, Va.	46.8	39.5	32.1-	45.5	17.5-	32.7-	7.5	13%
Norfolk, Va.	15.9	16.9	20.0+	19.9+	8.5-	10.7-	2.6	11%
Plymouth, N. C.	30.0	31.7	27.9	24.3-	25.1	23.2-	5.2	13%
Willard, N. C.	32.7-	28.6-	34.6	31.8-	27.6-	21.9-	4.4	10%
McCullers, N. C.	16.9	18.6	29.8+	22.9	18.1	12.7-	6.0	20%
Hartsville, S. C.	28.7	25.4	22.9	28.7	20.0-	11.2-	5.6	16%
Florence, S. C.	35.0	35.2	31.5-	33.8-	23.6-	26.7-	6.2	13%
Mean	31.3	29.6	29.3	31.0	20.4	20.1		
SOUTHEAST								
Monetta, S. C.	30.6	32.4	27.8	29.6	25.1-	26.2-	3.4	8%
Blackville, S. C.	22.5	22.2	9.6-	25.5	22.0	9.5	9.5	32%
Charleston, S. C.	38.7	30.7	29.4	32.2	29.3	28.5	9.7	23%
Tifton, Ga. (4-21)	27.5	39.4+	23.6	21.8	24.7	30.8+	7.8	21%
Tifton, Ga. (5-27)	20.0	23.3	11.0-	20.9	20.3	19.1	4.6	16%
Tallassee, Ala.	32.4	28.9	-	33.2	36.7	18.4		
Fairhope, Ala.	28.9	31.4	23.5	25.7	22.6	18.2-	6.1	17%
Mean	28.7	29.8	20.8	27.0	25.8	21.5		
UPPER AND CENTRAL SOUTH								
Clemson, S. C.	18.7-	14.1-	21.0-	20.8-	13.1-	11.8-	2.5	10%
Belle Mina, Ala.[1/]	5.3	8.5	-	9.8	2.9	-		
Crossville, Ala.	28.5-	29.0-	31.1	28.5-	-	20.3-	4.2	10%
Watkinsville, Ga.	20.3+	19.4	13.9-	17.1	9.9-	-	1.7	7%
Experiment, Ga.	20.0	17.9	17.4	22.9	-	18.4	N.S.	28%
State College, Miss.	30.0	24.6-	31.5	30.1	21.8-	17.5-	5.3	14%
Mean	23.5	21.0	23.0	23.9	14.9	17.0		

Table 29: (Continued)

Location	Roa-noke	Vol-state	N-42-26	N-44-92	N-44-774	N-44-927	45-3036
			DELTA				
Clarkedale, Ark.(5-17)	33.1	28.8	22.6-	19.3-	19.1-	20.0-	20.9-
Clarkedale, Ark.(7-5)	20.8	23.6	17.7	17.7	13.8-	14.7-	22.8
Marianna, Ark.	23.3	22.1	18.3-	18.0-	14.5-	12.5-	18.0-
Tunica, Miss.	27.2	25.8	24.0	27.3	21.4	18.9-	19.9-
Stoneville, Miss.	25.7	26.1	26.0	23.2	23.3	21.7	23.0
Winchester, Ark.	29.8	32.7	27.7	31.1	29.5	29.1	29.4
Moorhead, Miss.	28.0	26.5	24.3	25.0	16.1-	23.0-	26.2
Anchorage, Miss.	29.7	25.5	22.8-	25.8	22.6-	20.4-	26.6
Onward, Miss.	25.7	23.6	27.3	28.4	21.1	25.7	21.5
St. Joseph, La.	31.0	35.9	39.4+	44.6+	29.2	32.7	30.7
Hamburg, La.	10.2	12.8	10.9	19.6+	14.3+	19.3+	13.8
Baton Rouge, La.	20.1	19.3	15.5	20.0	20.1	13.4	18.8
Mean	25.4	25.2	21.8	25.0	20.4	21.0	22.6
			WEST				
Stuttgart, Ark.(5-29)	26.3	23.6	23.3	20.0-	24.8	23.7	25.4
Stuttgart, Ark.(6-16)	25.0	24.4	27.7	19.5-	23.6	25.3	26.0
Curtis, La.	27.0	26.5	28.7	22.4	28.5	16.0-	25.7
Crowley, La.	22.5	23.2	22.3	21.5	25.7	11.3-	22.0
Mean	25.2	24.4	25.5	20.8	25.6	19.1	24.8

Table 29: (Continued)

Location	N-45-3563	N-45-3728	Ogden	Dortch-soy 31	CNS	Pal-metto	Bus. Sig.(5%)	Nec. C.V.
			DELTA					
Clarkedale, Ark.	19.9-	21.3-	18.0-	27.2	13.4-	13.8-	6.8	22%
Clarkedale, Ark.	20.2	17.5	20.9	22.5	12.3-	8.3-	4.0	15%
Marianna, Ark.	15.1-	13.6-	15.6-	17.4-	12.6-	9.4-	4.6	20%
Tunica, Miss.	23.1	21.3	22.0	24.2	9.7-	8.1-	6.2	21%
Stoneville, Miss.	26.1	19.4-	25.5	20.7	15.8-	10.1-	5.3	17%
Winchester, Ark.	37.2	36.2	30.0	42.0+	15.3-	14.6-	8.0	19%
Moorhead, Miss.	20.8-	18.1-	30.5	23.7-	9.0-	5.6-	4.2	14%
Anchorage, Miss.	25.4	15.6-	23.5-	20.7-	13.1-	7.1- [1/]	5.2	16%
Onward, Miss.	25.0	22.9	29.1	25.3	15.7-	6.0- [1/]	6.3	18%
St. Joseph, La.	31.4	30.7	31.1	21.1-	12.9-	10.1-	7.1	17%
Hamburg, La.	14.0	12.8	21.4+	7.5	5.5-	9.5	3.9	21%
Baton Rouge, La.	16.5	15.6	15.8	21.0	20.3	13.6	N.S.	24%
Mean	22.9	20.4	23.6	22.8	13.0	9.9		
			WEST					
Stuttgart, Ark.	24.4	26.4	21.6-	23.8	20.6-	17.2-	3.4	10%
Stuttgart, Ark.	27.2	26.9	20.4-	28.5	24.5	20.0-	4.0	11%
Curtis, La.	26.3	25.2	22.1	31.0	25.6	18.3-	6.0	17%
Crowley, La.	25.1	17.8	17.7	19.3	22.3	18.2	5.4	18%
Mean	25.8	24.1	20.4	25.6	23.2	18.4		

Table 30: Chemical composition of the strains in Group VII, 1948

Location	Roanoke	Volstate	N42-26	N44-92	N44-774	N44-937
			PERCENT OIL			
Petersburg, Va.	20.2	20.3	19.6	20.1	18.2	19.2
Willard, N. C.	22.2	21.8	21.4	21.8	19.8	19.9
Florence, S. C.	22.3	21.7	21.3	21.7	19.0	19.2
Fairhope, Ala.	21.6	20.9	20.9	21.3	20.2	18.7
Clemson, S. C.	19.7	19.5	18.7	20.7	17.5	19.5
Watkinsville, Ga.	22.6	22.7	23.1	22.8	20.4	21.3
Experiment, Ga.	22.9	22.2	21.8	22.2	21.2	20.9
Stoneville, Miss.	21.7	21.2	19.7	20.2	20.3	17.4
Baton Rouge, La.	24.9	23.5	22.4	24.0	21.0	22.1
Stuttgart, Ark.	20.4	20.0	21.1	19.6	19.0	19.8
Stuttgart, Ark.	21.3	21.3	20.7	20.4	19.2	19.8
Mean	21.8	21.4	21.0	21.3	19.6	19.8
			PERCENT PROTEIN			
Petersburg, Va.	39.5	38.5	41.4	39.2	41.3	44.0
Willard, N. C.	37.8	37.9	39.7	38.6	39.1	43.1
Florence, S.C.	38.2	38.2	39.9	39.7	42.0	42.9
Fairhope, Ala.	40.2	40.8	40.4	40.9	41.8	43.4
Clemson, S. C.	42.9	42.2	44.9	44.4	44.6	46.0
Watkinsville, Ga.	37.3	37.3	37.1	36.2	38.2	38.6
Experiment, Ga.	36.6	38.0	38.4	39.0	38.6	40.4
Stoneville, Miss.	38.1	37.8	41.3	40.9	39.6	43.1
Baton Rouge, La.	34.0	36.8	37.7	36.0	39.9	38.4
Stuttgart, Ark.	41.9	42.5	42.5	43.9	42.9	43.7
Stuttgart, Ark.	42.0	41.9	42.6	43.4	43.7	44.3
Mean	39.0	39.3	40.5	40.2	41.1	42.5
			IODINE NUMBER OF OIL			
Petersburg, Va.	138	138	137	137	138	136
Willard, N. C.	137	138	137	134	136	135
Florence, S. C.	129	128	128	128	132	132
Fairhope, Ala.	135	136	135	136	134	135
Clemson, S. C.	134	134	134	135	136	134
Watkinsville, Ga.	133	134	133	134	132	131
Experiment, Ga.	133	133	133	130	133	131
Stoneville, Miss.	131	133	134	133	132	130
Baton Rouge, La.	132	133	133	134	131	133
Stuttgart, Ark.	132	133	133	130	133	131
Stuttgart, Ark.	133	133	132	132	134	131
Mean	133	134	133	133	134	133

Table 30: (Continued)

Location	N-45-3036	N-45-3563	N-45-3728	Ogden	Dortch-soy 31	CNS	Palmetto
			PERCENT OIL				
Petersburg, Va.	19.8	19.9	19.0	20.0	19.7	16.3	16.6
Willard, N. C.	20.9	21.3	20.8	22.1	22.0	18.9	18.9
Florence, S. C.	20.4	21.2	19.6	21.5	20.9	17.8	17.5
Fairhope, Ala.	20.6	22.1	20.7	20.8	20.1	18.4	18.3
Clemson, S. C.	19.0	18.2	17.3	19.0	18.8	17.2	16.7
Watkinsville, Ga.	22.0	22.8	22.4	21.6	21.0	18.7	-
Experiment, Ga.	22.0	21.8	21.1	21.8	21.7	19.8	20.4
Stoneville, Miss.	20.0	21.1	20.0	20.2	19.4	18.5	18.4
Baton Rouge, La.	23.2	23.2	21.5	24.8	22.1	19.5	19.1
Stuttgart, Ark.	19.2	20.4	20.2	20.0	19.3	18.1	17.4
Stuttgart, Ark.	19.8	20.5	20.2	20.6	20.0	17.8	17.2
Mean	20.6	21.1	20.2	21.1	20.4	18.3	18.0
			PERCENT PROTEIN				
Petersburg, Va.	41.8	40.3	38.3	41.7	41.2	45.5	43.2
Willard, N. C.	41.8	38.6	40.1	39.7	36.8	42.1	41.2
Florence, S.C.	43.5	40.2	41.4	40.1	39.8	44.4	43.5
Fairhope, Ala.	43.1	40.9	41.6	41.6	40.9	45.9	45.1
Clemson, S. C.	43.7	42.8	45.1	44.4	43.3	45.9	46.5
Watkinsville, Ga.	40.4	36.7	35.6	38.8	39.3	40.2	-
Experiment, Ga.	40.4	37.7	38.1	39.1	39.6	40.9	37.9
Stoneville, Miss.	42.5	40.1	40.7	41.8	41.5	44.1	42.7
Baton Rouge, La.	39.3	36.8	39.3	33.4	35.3	42.7	41.5
Stuttgart, Ark.	46.6	42.9	41.5	44.3	43.3	44.9	45.5
Stuttgart, Ark.	46.2	42.9	42.0	43.4	44.1	45.2	45.6
Mean	42.7	40.0	40.3	40.8	40.5	43.8	43.3
			IODINE NUMBER OF OIL				
Petersburg, Va.	136	139	139	138	141	138	140
Willard, N. C.	136	138	135	137	142	136	137
Florence, S. C.	132	135	131	130	127	128	126
Fairhope, Ala.	136	135	134	138	137	130	131
Clemson, S. C.	135	136	134	133	136	133	137
Watkinsville, Ga.	133	134	133	134	134	130	-
Experiment, Ga.	132	135	133	134	135	133	134
Stoneville, Miss.	133	132	131	133	134	131	130
Baton Rouge, La.	134	133	133	134	133	129	132
Stuttgart, Ark.	133	133	132	135	133	131	133
Stuttgart, Ark.	132	134	134	135	134	132	134
Mean	134	135	134	135	135	132	133

Table 31: Relative maturity, days earlier (-) or later (+) than Roanoke, for the strains of the Uniform Group VII, 1948

Location	Date Planted	Roanoke Matured	Vol-state	N-42-26	N-44-92	N-44-74	N-44-937
			EAST COAST				
Petersburg, Va.	5-11		0	-4	-8	+2	-16
Williamsburg, Va.	5-24	11-8	0	+2	0	+4	-14
Holland, Va.	5-22	10-25	0	+6	0	+10	0
Plymouth, N. C.	5-4	10-25	0	-2	-2	+3	-2
Willard, N. C.	5-17	10-29	-1	-6	-14	+1	-15
McCullers, N.C.	5-7	10-25	0	0	-12	+5	-12
Florence, S.C.	5-18	10-25	0	0	-5	0	-5
Mean			-0.1	-0.6	-5.8	+3.6	-9.1
			SOUTHEAST				
Monetta, S.C.	5-19	10-25	-5	-7	-15	0	-18
Blackville, S. C.	5-19	11-1	0	+3	+5	+6	+8
Charleston, S.C.	5-26	11-15	0	-5	-3	0	+5
Tifton, Ga.	4-21	10-20	0	-17	-16	-12	-21
Tifton, Ga.	5-27	10-20	-5	-12	-14	-5	-11
Tallassee, Ala.		10-24	-5	-6	-5	-2	-5
Fairhope, Ala.	6-1	10-15	0	0	-11	0	-11
Mean			-2.1	-6.3	-8.4	-1.8	-7.6
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	6-1	10-10	0	0	+7	+7	+10
Watkinsville, Ga.	4-21	10-11	0	0	0	-15	0
Experiment, Ga.	5-20	10-15	-3	-4	-4	+1	0
State College, Miss.	5-12	10-18	-2	-2	-6	+2	-5
Mean			-1.3	-1.5	-0.8	-1.2	+1.2
			DELTA				
Tunica, Miss.	4-20	10-22	-3	-7	-11	0	-16
Stoneville, Miss.	4-21	10-18	-2	-12	-17	+2	-14
Winchester, Ark.	5-25	10-18	0	-10	-10	0	-10
Anchorage, Miss.	5-1	10-20	0	-10	-19	0	-19
Onward, Miss.	5-12	10-20	0	0	-14	0	-8
St. Joseph, La.	5-10	10-26	-3	-3	-3	+12	+22
Hamburg, La.	4-29	10-10	0	0	-5	-2	-5
Baton Rouge, La.	6-4	10-22	0	-7	-19	0	-21
Mean			-1.0	-6.1	-12.2	+1.5	-8.9
			WEST				
Stuttgart, Ark.	5-29	10-18	0	-1	-5	+2	-12
Stuttgart, Ark.	6-16	10-18	0	-1	-3	+1	-4
Curtis, La.	5-5	10-20	0	-5	-10	0	-5
Crowley, La.	5-4	10-18	-3	-8	-17	-3	-26
Mean			-0.8	-3.8	-8.8	0	-11.8

Table 31: (Continued)

Location	45-3036	45-3563	45-3728	Ogden	Dortch soy 31	CNS	Palmetto
			EAST COAST				
Petersburg, Va.	0	+2	-8	-16	+4	+2	+1
Williamsburg, Va.	+4	+2	-14	-14	+2	+4	+2
Holland, Va.	+5	+8	+3	-7	+5	+14	+21
Plymouth, N. C.	-1	+2	0	-16	-5	+3	0
Willard, N. C.	-2	-3	-13	-19	0	+2	-3
McCullers, N. C.	+3	+2	-7	-19	-3	+8	+7
Florence, S. C.	+3	0	0	-15	-5	+5	0
Mean	+1.7	+1.8	-5.6	-15.1	-0.3	+5.4	+4.0
			SOUTHEAST				
Monetta, S. C.	0	-2	-7	-18	-2	0	-7
Blackville, S. C.	-1	+5	-1	-3	-1	+3	-1
Charleston, S.C.	-3	-3	+10	-10	-15	-3	-7
Tifton, Ga.	-4	-8	-16	-22	-8	-6	-10
Tifton, Ga.	+4	-8	-12	-14	-3	-2	-7
Tallassee, Ala.	-3	+2	-3	-14	-4	0	-5
Fairhope, Ala.	0	0	0	-11	0	+5	0
Mean	-1.0	-2.0	-4.1	-13.1	-4.7	-0.4	-5.3
			UPPER AND CENTRAL SOUTH				
Clemson, S.C.	-7	+10	+7	-10	+7	+15	+15
Watkinsville, Ga.	0	0	0	-10	-15	-15	-7
Experiment, Ga.	+2	0	-6	-8	+1	-3	-4
State College, Miss.	-6	+4	+1	-16	-1	-2	0
Mean	-2.8	+3.5	+0.5	-11.0	-2.0	-1.2	+1.0
			DELTA				
Tunica, Miss.	-2	-1	-2	-23	-1	+1	-3
Stoneville, Miss.	+1	0	-4	-17	0	+4	+2
Winchester, Ark.	0	0	-10	-10	0	0	0
Anchorage, Miss.	0	0	0	-19	0	-2	-5
Onward, Miss.	0	0	-5	-19	0	0	-4
St. Joseph, La.	+22	+12	+22	-3	0	+14	+5
Hamburg, La.	-2	-2	-4	-9	-5	+5	+5
Baton Rouge, La.	-2	-7	-4	-21	-2	-2	-7
Mean	+2.1	+0.3	-0.9	-15.1	-1.0	+2.5	-0.9
			WEST				
Stuttgart, Ark.	+2	+2	-3	-5	0	0	0
Stuttgart, Ark.	0	0	-3	-3	0	+2	-1
Curtis, La.	-8	-2	-2	-19	0	0	0
Crowley, La.	0	-3	-8	-23	-3	0	-8
Mean	-1.5	-0.8	-4.0	-12.5	-0.8	+0.5	-2.2

Table 32: Mean plant height of the strains in Uniform Group VII, 1948

Location	Roanoke	Volstate	N42-26	N44-92	N44-774	N44-937
			EAST COAST			
Petersburg, Va.	50	44	50	45	41	60
Williamsburg, Va.	40	43	40	44	35	40
Holland, Va.	39	40	42	41	42	44
Norfolk, Va.	37	35	39	39	36	38
Plymouth, N.C.	49	45	51	50	52	53
Willard, N.C.	42	36	40	42	36	48
McCullers, N.C.	39	37	41	41	38	40
Florence, S.C.	45	44	49	44	43	47
Mean	43	40	44	43	40	46
			SOUTHEAST			
Monetta, S.C.	34	32	36	30	34	42
Blackville, S.C.	42	37	46	44	40	48
Charleston, S.C.	34	34	43	45	44	53
Tifton, Ga.	24	22	48	40	32	50
Tifton, Ga.	36	32	42	38	40	42
Tallassee, Ala.	42	33	46	45	41	52
Fairhope, Ala.	36	38	44	40	42	48
Mean	35	32	44	40	39	48
			UPPER AND CENTRAL SOUTH			
Clemson, S.C.	44	36	46	44	42	36
Belle Mina, Ala.	44	40	46	45	41	45
Watkinsville, Ga.	36	36	39	38	36	39
Experiment, Ga.	34	29	40	32	32	37
State College, Miss.	30	30	36	37	31	45
Mean	38	34	41	39	36	40
			DELTA			
Clarkedale, Ark.	36	36	39	40	36	35
Marianna, Ark.	40	38	38	42	41	41
Tunica, Miss.	42	40	44	44	42	48
Stoneville, Miss.	35	31	44	44	40	53
Winchester, Ark.	39	42	43	46	47	55
Moorhead, Miss.	49	44	44	45	49	44
Anchorage, Miss.	38	40	41	44	39	39
Onward, Miss.	40	38	40	39	40	45
St. Joseph, La.	38	35	44	46	44	40
Hamburg, La.	28	24	40	36	35	42
Baton Rouge, La.	31	36	36	40	33	36
Mean	38	37	41	42	40	43
			WEST			
Stuttgart, Ark.	39	36	38	34	36	36
Stuttgart, Ark.	32	33	39	28	30	38
Curtis, La.	24	24	40	38	42	54
Crowley, La.	22	22	36	34	27	40
Mean	29	29	38	34	34	42

Table 32: (Continued)

Location	N45-3036	N45-3563	N45-3728	Ogden	Dortch-soy 31	CNS	Pal-metto
			EAST COAST				
Petersburg, Va.	40	42	56	26	39	33	70
Williamsburg, Va.	37	34	37	34	35	28	45
Holland, Va.	40	40	50	32	30	36	54
Norfolk, Va.	35	37	40	26	32	32	44
Plymouth, N.C.	42	47	53	38	38	35	58
Willard, N.C.	34	40	54	28	30	36	64
McCullers, N.C.	36	37	48	26	31	36	58
Florence, S.C.	40	45	53	32	36	34	60
Mean	38	40	49	30	34	34	57
			SOUTHEAST				
Monetta, S. C.	30	36	46	24	24	32	60
Blackville, S.C.	38	38	50	23	33	36	52
Charleston, S.C.	34	44	61	28	31	32	68
Tifton, Ga.	30	34	56	25	22	34	56
Tifton, Ga.	34	38	48	24	28	36	58
Tallassee, Ala.	34	42	58	28	32	30	56
Fairhope, Ala.	34	38	54	24	26	36	57
Mean	33	38	53	25	28	34	58
			UPPER AND CENTRAL SOUTH				
Clemson, S.C.	40	40	36	28	28	36	54
Belle Mina, Ala.	39	42	45	-	32	32	-
Watkinsville, Ga.	34	39	40	28	30	34	60
Experiment, Ga.	27	32	40	21	26	29	54
State College, Miss.	35	30	39	19	24	28	41
Mean	35	37	40	24	28	32	52
			DELTA				
Clarkedale, Ark.	34	35	35	36	29	34	36
Marianna, Ark.	36	38	46	29	30	31	52
Tunica, Miss.	39	40	44	31	38	37	44
Stoneville, Miss.	34	40	56	32	28	32	52
Winchester, Ark.	40	43	56	32	39	40	64
Moorhead, Miss.	43	46	54	31	35	36	54
Anchorage, Miss.	36	40	43	26	28	40	46
Onward, Miss.	38	38	44	31	39	39	40
St. Joseph, La.	36	46	48	25	30	40	60
Hamburg, La.	34	30	38	26	25	31	52
Baton Rouge, La.	32	34	48	20	24	33	60
Mean	36	39	46	29	31	36	51
			WEST				
Stuttgart, Ark.	32	38	38	21	24	28	46
Stuttgart, Ark.	30	34	38	16	24	30	46
Curtis, La.	30	36	72	14	22	38	82
Crowley, La.	28	35	45	18	18	29	52
Mean	30	36	48	17	22	31	56

Table 33: Lodging scores for the strains of the Uniform Test, Group VII, 1948

Location	Roanoke	Volstate	N42-26	N44-92	N44-774	N44-937
			EAST COAST			
Petersburg, Va.	2.0	2.0	2.0	2.0	2.0	3.0
Williamsburg, Va.	3.0	2.0	2.0	2.0	3.0	2.0
Holland, Va.	4.0	4.0	1.0	1.0	2.0	1.0
Norfolk, Va.	2.2	3.2	2.2	1.0	2.2	1.5
Plymouth, N. C.	3.0	2.5	3.0	2.0	4.0	3.0
Willard, N. C.	2.0	1.5	2.0	1.0	1.5	1.5
McCullers, N. C.	2.5	1.5	2.0	2.0	2.0	3.0
Florence, S. C.	2.0	2.0	2.0	1.5	3.0	4.0
			SOUTHEAST			
Monetta, S. C.	1.0	1.0	1.5	1.0	1.0	1.5
Blackville, S. C.	2.0	1.0	2.0	1.0	1.0	1.0
Charleston, S. C.	1.0	1.0	2.0	1.0	2.0	2.0
Tallassee, Ala.	2.3	2.0	2.3	1.5	1.8	1.8
Fairhope, Ala.	2.0	2.0	3.0	2.0	2.0	2.0
			UPPER AND CENTRAL SOUTH			
Clemson, S. C.	3.0	2.0	2.0	3.0	3.0	1.0
Belle Mina, Ala.	2.0	2.2	3.0	1.2	1.3	1.3
Watkinsville, Ga.	1.0	1.0	2.0	3.0	2.0	3.0
Experiment, Ga.	1.0	0	1.0	1.0	1.0	1.0
State College, Miss.	2.0	2.0	3.0	2.0	2.0	2.0
			DELTA			
Clarkedale, Ark.	2.5	3.2	3.0	1.8	2.2	1.2
Marianna, Ark.	2.0	2.0	2.5	1.5	2.2	1.5
Stoneville, Miss.	3.0	2.7	3.0	2.8	3.0	3.5
Winchester, Ark.	2.2	2.5	3.8	2.5	2.8	2.2
Moorhead, Miss.	3.0	3.5	2.8	3.0	3.2	3.0
St. Joseph, La.	2.0	2.0	3.0	3.0	3.0	3.0
Hamburg, La.	2.0	2.0	3.0	3.0	3.0	3.0
Baton Rouge, La.	3.0	3.0	4.0	2.0	3.0	2.0
			WEST			
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.8	1.0
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Curtis, La.	2.0	2.0	3.0	2.0	3.0	3.0
Crowley, La.	1.0	1.0	3.0	2.0	3.0	3.0

Table 33: (Continued)

Location	N45-3036	N45-3563	N45-3728	Ogden	Dortch-soy 31	CNS	Pal-metto
			EAST COAST				
Petersburg, Va.	2.0	2.0	4.0	1.0	2.5	3.0	4.0
Wiliamsburg, Va.	2.0	2.0	2.0	1.0	3.0	5.0	4.0
Holland, Va.	2.0	1.0	1.0	1.0	1.0	4.0	5.0
Norfolk, Va.	2.0	2.2	2.2	1.5	2.2	5.0	2.8
Plymouth, N. C.	3.0	4.0	3.0	2.0	2.0	5.0	5.0
Willard, N. C.	1.0	2.0	2.0	1.0	1.0	3.5	3.0
McCullers, N. C.	1.5	2.0	2.0	1.0	1.5	4.5	3.5
Florence, S. C.	1.5	2.5	3.5	1.0	1.0	4.5	3.5
			SOUTHEAST				
Monetta, S. C.	1.0	1.5	2.0	1.0	1.0	3.0	2.0
Blackville, S. C.	1.0	1.0	1.0	1.0	1.0	2.0	2.0
Charleston, S. C.	1.0	1.5	2.5	1.0	1.0	3.0	3.0
Tallassee, Ala.	1.8	2.0	2.0	1.5	1.3	3.5	3.0
Fairhope, Ala.	2.0	3.0	3.0	1.0	1.0	3.0	4.0
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	3.0	3.0	1.0	1.0	1.0	4.0	4.0
Belle Mina, Ala.	2.2	1.2	1.0	-	1.0	4.0	-
Watkinsville, Ga.	2.0	1.0	1.0	1.0	1.0	3.0	1.0
Experiment, Ga.	0	1.0	3.0	1.0	1.0	3.0	2.0
State College, Miss.	2.0	1.0	2.0	1.0	1.0	3.0	3.0
			DELTA				
Clarkedale, Ark.	3.2	2.8	1.8	1.5	1.0	4.0	3.8
Marianna, Ark.	3.2	2.2	1.8	1.0	1.0	5.0	3.0
Stoneville, Miss.	2.8	3.3	3.8	2.3	2.0	4.3	4.0
Winchester, Ark.	2.8	2.2	3.5	1.0	1.5	4.8	5.0
Moorhead, Miss.	3.0	3.8	3.8	2.0	3.2	4.0	4.0
St. Joseph, La.	3.0	3.0	3.0	2.0	2.0	4.0	5.0
Hamburg, La.	2.0	3.0	3.0	2.0	2.0	3.0	3.0
Baton Rouge, La.	2.0	3.0	3.0	1.0	1.0	3.0	4.0
			WEST				
Stuttgart, Ark.	1.5	1.0	1.0	1.0	1.0	3.0	1.8
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0	2.8	1.2
Curtis, La.	2.0	3.0	4.0	1.0	2.0	4.0	4.0
Crowley, La.	3.0	3.0	3.0	1.0	1.0	4.0	3.0

Table 34: Mean seed weight for the strains of the Uniform Group VII, 1948

Location	Roanoke	Volstate	N42-26	N44-92	N44-774	N44-937
			EAST COAST			
Petersburg, Va.	16.5	16.0	15.5	18.5	16.5	15.0
Williamsburg, Va.	17.0	17.0	15.5	19.0	13.5	14.0
Plymouth, N. C.	15.8	15.3	13.5	16.7	14.9	13.6
Willard, N. C.	16.1	15.5	14.3	17.4	13.9	14.6
McCullers, N. C.	13.2	12.8	11.8	13.4	14.5	11.7
Florence, S. C.	15.6	15.3	14.2	16.2	12.9	13.0
Mean	15.7	15.3	14.1	16.9	14.4	13.6
			SOUTHEAST			
Monetta, S. C.	15.4	15.0	14.1	16.1	13.4	14.0
Blackville, S. C.	17.1	15.4	14.1	18.2	14.7	13.4
Charleston, S. C.	19.1	18.1	16.7	21.0	15.6	16.0
Fairhope, Ala.	14.2	13.1	11.0	13.4	12.2	10.0
Mean	16.4	15.4	14.0	17.2	14.0	13.4
			UPPER AND CENTRAL SOUTH			
Clemson, S. C.	15.2	13.6	12.2	14.6	12.7	11.9
Experiment, Ga.	17.2	17.1	14.9	16.5	16.4	13.4
Mean	16.2	15.3	13.6	15.6	14.6	12.6
			DELTA			
Clarkedale, Ark.	16.5	17.1	12.6	14.9	12.6	14.2
Marianna, Ark.	15.1	13.2	12.4	13.5	12.7	11.2
Tunica, Miss.	12.1	13.8	11.4	12.9	12.6	11.4
Stoneville, Miss.	12.4	11.6	9.4	11.4	11.2	10.5
Winchester, Ark.	14.1	13.7	11.9	14.3	12.6	11.6
Moorhead, Miss.	11.9	11.9	11.1	14.0	11.2	11.4
Anchorage, Miss.	11.7	11.2	10.6	12.0	11.4	10.3
Onward, Miss.	15.6	14.3	11.2	13.8	12.5	12.1
Mean	13.7	13.4	11.3	13.4	12.1	11.6
			WEST			
Stuttgart, Ark.	12.7	12.6	12.1	11.9	11.4	11.4
Stuttgart, Ark.	13.4	13.5	13.3	12.0	12.4	16.4
Mean	13.0	13.0	12.7	12.0	11.9	13.9

Table 34: (Continued)

Location	N45-3036	N45-3563	N45-3728	Ogden	Dortch-soy 31	CNS	Pal-metto
			EAST COAST				
Petersburg, Va.	20.0	16.0	15.5	18.0	16.5	13.5	12.5
Williamsburg, Va.	20.5	16.0	15.0	19.0	17.0	14.0	12.0
Plymouth, N. C.	17.3	14.5	14.5	12.6	13.7	14.3	12.3
Willard, N. C.	19.9	15.1	14.0	17.8	15.7	13.4	11.2
McCullers, N. C.	17.0	13.4	11.9	14.3	13.1	14.5	11.1
Florence, S. C.	19.0	14.2	13.2	16.2	14.5	12.2	10.9
Mean	19.0	14.9	14.0	16.3	15.1	13.6	11.7
			SOUTHEAST				
Monetta, S. C.	19.3	14.9	14.0	17.7	14.5	15.2	12.0
Blackville, S. C.	18.5	15.5	13.5	18.8	16.8	13.8	12.7
Charleston, S. C.	19.6	16.8	17.1	19.6	16.9	16.0	15.0
Fairhope, Ala.	15.9	14.5	12.3	13.3	14.7	13.6	12.4
Mean	18.3	15.4	14.2	17.4	15.7	14.7	13.0
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	15.5	13.1	11.2	17.2	13.8	13.2	11.4
Experiment, Ga.	18.9	15.8	14.2	16.3	19.2	13.4	12.5
Mean	17.2	14.4	12.7	16.8	16.5	13.3	12.0
			DELTA				
Clarkedale, Ark.	15.3	13.8	13.0	17.9	15.5	11.1	13.2
Marianna, Ark.	15.9	14.3	11.6	15.5	15.0	12.1	11.1
Tunica, Miss.	12.8	13.2	11.9	13.8	12.3	12.9	11.2
Stoneville, Miss.	13.7	11.8	10.5	12.0	11.4	12.4	11.3
Winchester, Ark.	15.1	14.2	12.3	14.4	14.5	12.8	11.6
Moorhead, Miss.	14.3	11.7	11.5	14.0	10.8	11.5	11.1
Anchorage, Miss.	14.1	11.4	10.4	12.7	12.0	11.6	11.7
Onward, Miss.	15.0	13.3	10.8	15.7	13.8	12.1	11.6
Mean	14.5	13.0	11.5	14.5	13.2	12.1	11.6
			WEST				
Stuttgart, Ark.	16.2	12.7	11.4	14.0	12.6	13.4	10.6
Stuttgart, Ark.	13.6	12.4	10.3	14.8	13.5	13.3	14.3
Mean	14.9	12.6	10.9	14.4	13.0	13.4	12.4

Table 35: Seed quality scores for the strains of the Uniform Group VII, 1948

Location	Roanoke	Volstate	N42-26	N44-92	N44-774	N44-937
			EAST COAST			
Petersburg, Va.	1.0	1.0	1.0	1.0	2.0	1.0
Williamsburg, Va.	2.0	2.0	2.0	3.0	2.0	2.0
Holland, Va.	1.0	1.0	2.0	2.0	3.0	2.0
Norfolk, Va.	1.0	1.0	2.0	3.0	2.0	3.0
Plymouth, N. C.	1.0	2.0	3.0	3.0	2.0	4.0
Willard, N. C.	1.0	2.0	2.0	2.0	2.0	3.0
McCullers, N. C.	2.0	2.0	2.0	3.0	3.0	2.0
Florence, S. C.	1.0	1.0	2.0	2.0	2.0	3.0
			SOUTHEAST			
Monetta, S. C.	2.0	2.0	2.0	2.0	2.0	3.0
Blackville, S. C.	2.0	2.0	1.0	2.0	2.0	3.0
Charleston, S. C.	3.0	3.0	2.0	4.0	2.0	4.0
Tallassee, Ala.	1.3	1.3	1.3	1.5	1.0	1.3
			UPPER AND CENTRAL SOUTH			
Clemson, S. C.	2.0	2.0	2.0	3.0	3.0	3.0
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Experiment, Ga.	1.0	1.0	1.0	2.0	1.0	1.0
			DELTA			
Clarkedale, Ark.	2.2	2.0	2.5	3.2	2.5	2.8
Marianna, Ark.	2.0	2.0	2.0	2.0	2.8	2.0
Tunica, Miss.	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.	2.0	1.0	1.0	3.0	1.0	2.0
Winchester, Ark.	1.7	1.5	1.2	1.5	1.5	1.2
Moorhead, Miss.	2.0	2.0	1.0	2.0	3.0	3.0
Anchorage, Miss.	2.0	2.0	2.0	2.0	2.0	2.0
Onward, Miss.	2.0	2.0	2.0	3.0	3.0	4.0
St. Joseph, La.	1.0	1.0	2.0	2.0	1.0	2.0
Hamburg, La.	3.0	3.0	2.0	3.0	2.0	4.0
Baton Rouge, La.	1.0	1.0	2.0	1.0	1.0	1.0
			WEST			
Stuttgart, Ark.	1.0	1.0	1.2	1.0	1.0	1.0
Stuttgart, Ark.	1.0	1.0	1.2	1.0	1.2	1.2
Curtis, La.	1.0	1.0	1.0	2.0	1.0	2.0
Crowley, La.	2.0	2.0	2.0	3.0	2.0	4.0

Table 35: (Continued)

Location	N45-3036	N45-3563	N45-3728	Ogden	Dortch-soy 31	CNS	Pal-metto
			EAST COAST				
Petersburg, Va.	2.0	1.0	1.0	2.0	2.0	2.0	2.0
Williamsburg, Va.	2.0	2.0	3.0	2.0	1.0	2.0	3.0
Holland, Va.	1.0	1.0	2.0	2.0	2.0	2.0	3.0
Norfolk, Va.	2.0	2.0	3.0	2.0	2.0	2.0	3.0
Plymouth, N. C.	2.0	2.0	2.0	3.0	2.0	1.0	2.0
Willard, N. C.	2.0	1.0	2.0	3.0	2.0	1.0	2.0
McCullers, N. C.	2.0	2.0	2.0	2.0	2.0	1.0	2.0
Florence, S. C.	2.0	1.0	1.0	2.0	2.0	2.0	2.0
			SOUTHEAST				
Monetta, S. C.	2.0	1.0	2.0	2.0	2.0	1.0	2.0
Blackville, S. C.	2.0	2.0	2.0	3.0	1.0	1.0	2.0
Charleston, S. C.	3.0	2.0	4.0	3.0	2.0	2.0	2.0
Tallassee, Ala.	1.0	1.0	1.3	-	1.0	1.0	1.7
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	3.0	3.0	3.0	3.0	2.0	2.0	3.0
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Experiment, Ga.	1.0	1.0	1.0	1.0	-	1.0	1.0
			DELTA				
Clarkedale, Ark.	2.8	2.8	3.0	2.8	2.2	2.5	2.2
Marianna, Ark.	2.2	2.2	2.0	2.0	2.0	2.2	2.0
Tunica, Miss.	2.0	3.0	3.0	2.0	2.0	2.0	3.0
Stoneville, Miss.	2.0	2.0	2.0	2.0	1.0	1.0	3.0
Winchester, Ark.	1.8	1.5	1.2	1.5	1.7	1.2	1.2
Moorhead, Miss.	3.0	3.0	3.0	2.0	2.0	3.0	3.0
Anchorage, Miss.	2.0	2.0	2.0	2.0	2.0	3.0	3.0
Onward, Miss.	3.0	3.0	3.0	2.0	2.0	3.0	3.0
St. Joseph, La.	2.0	1.0	2.0	2.0	2.0	2.0	3.0
Hamburg, La.	2.0	2.0	2.0	4.0	3.0	3.0	3.0
Baton Rouge, La.	1.0	2.0	1.0	2.0	2.0	1.0	1.0
			WEST				
Stuttgart, Ark.	1.8	1.8	1.0	1.0	1.0	1.5	1.8
Stuttgart, Ark.	1.5	1.8	1.0	1.3	1.2	1.2	1.2
Curtis, La.	2.0	1.0	1.0	2.0	1.0	1.0	1.0
Crowley, La.	3.0	2.0	2.0	4.0	2.0	3.0	1.0

Table 36: Two-year summary of yield for the strains in Uniform Group VII, 1947-48

Location	Roa-noke	Vol-state	N-42-26	N-44-92	N-44-774	N-44-937	N-45-3563	Ogden	CNS	Pal-metto
East Coast	32.8	31.6	31.6	32.5	27.0	28.2	31.9	31.5	21.2	22.6
Southeast	23.9	22.4	27.9	24.7	25.9	21.1	27.6	20.3	24.8	21.4
Upper & Central South	24.8	23.6	21.8	21.6	21.2	21.2	21.8	22.5	15.6	16.1
Delta	23.9	22.8	22.2	23.3	20.2	21.2	22.0	24.0	14.2	11.4

Table 37: Two-year summary of the oil content for the strains in Uniform Group VII, 1947-48

Location	Roa-noke	Vol-state	N-42-26	N-44-92	N-44-774	N-44-937	N-45-3563	Ogden	CNS	Pal-metto
Petersburg, Va.	20.6	20.6	19.6	20.0	18.2	19.6	20.0	20.2	16.4	16.6
McCullers, N. C.	22.1	21.8	21.5	21.7	19.2	20.8	21.4	22.0	18.4	18.4
Florence, S.C.	21.8	21.3	20.7	21.2	18.7	19.2	21.3	21.2	18.7	17.5
Experiment, Ga.	21.2	20.6	20.0	20.4	20.2	20.0	21.0	20.2	19.2	19.1
Clemson, S.C.	20.4	20.2	19.0	20.2	18.2	19.6	19.1	19.7	17.1	16.7
Stoneville, Miss.	21.6	21.3	20.2	20.4	20.2	18.7	21.2	20.2	18.6	18.2
Baton Rouge, La.	23.4	22.6	22.6	23.6	21.0	21.9	23.4	23.9	19.4	19.5
Stuttgart, Ark.	21.2	21.0	20.8	19.0	19.6	19.8	20.7	20.2	17.9	17.6

Table 38: Three-year summary of yield and oil content for strains in Uniform Group VII, 1946-48

Location	Roanoke	Volstate	N42-26	N44-92	N44-774	Ogden	CNS	Palmetto
			SEED YIELD IN BUSHELS PER ACRE					
Petersburg, Va.	38.7	40.5	38.5	41.2	38.2	37.8	28.4	30.5
McCullers, N. C.	36.3	33.8	32.3	33.6	29.5	35.3	21.9	26.2
Plymouth, N. C.	29.6	29.4	28.5	34.0	24.6	35.0	17.1	23.5
Willard, N. C.	30.8	30.1	35.0	38.1	28.7	31.0	21.5	25.8
Florence, S. C.	30.6	24.2	30.9	29.1	25.3	28.5	20.9	21.9
Monetta, S. C.	25.0	22.8	24.9	21.2	25.2	22.2	22.5	21.0
Blackville, S. C.	23.3	22.2	30.4	25.6	29.2	18.1	25.5	21.2
Tifton, Ga.	14.3	12.2	26.1	21.3	18.7	20.2	20.4	23.5
Clemson, S. C.	28.3	25.0	26.2	25.4	23.8	26.4	18.3	18.3
Experiment, Ga.	20.0	19.8	20.0	16.6	19.7	17.6	14.5	15.6
Crossville, Ala.	32.6	31.8	26.0	30.8	25.5	33.7	14.4	19.8
State College, Miss.	36.0	32.9	27.5	29.4	30.0	33.5	20.8	17.3
Clarkedale, Ark.	30.9	28.3	21.4	19.8	19.9	25.2	14.0	13.0
Stoneville, Miss.	28.9	25.0	23.5	24.2	22.5	26.4	15.4	15.2
Baton Rouge, La.	15.7	16.0	22.5	24.0	25.1	21.6	20.5	17.4
Stuttgart, Ark.	18.6	18.2	17.0	14.0	18.3	15.5	16.1	14.0
Mean			PERCENT OIL					
East Coast	21.2	21.0	20.3	20.6	18.7	20.7	17.4	17.2
Southeast	21.9	21.5	20.7	21.2	20.1	21.1	18.8	18.2
Upper & Central South	21.7	21.4	20.6	21.2	19.8	20.8	18.2	18.1
Delta	22.2	21.7	20.7	21.3	20.2	21.3	18.6	18.1
West	21.5	21.4	20.6	20.4	19.8	20.8	18.4	17.7

Table 39: Five-year summary for yield, oil content, and seed holding capacity for the strains in Uniform Group VII, 1944-48

Location	SEED YIELD					PERCENT OIL				
	Roanoke	Volstate	Ogden	CNS	Palmetto	Roanoke	Volstate	Ogden	CNS	Palmetto
McCullers, N. C.	35.4	32.4	32.4	20.1	26.2	22.1	21.5	20.6	18.2	18.4
Plymouth, N. C.	29.6	29.2	33.3	16.7	23.1	20.3	20.0	19.8	16.7	16.5 1/
Florence, S. C.	31.2	26.7	28.2	22.8	24.1	22.0	21.5	20.9	17.7	17.8
Tifton, Ga.	18.0	17.1	21.4	21.3	23.4	21.3	21.0	21.2	18.6	17.9 1/
Clemson, S. C.	28.8	25.5	26.2	22.1	18.1	21.7	21.6	20.9	18.1	17.9
Experiment, Ga.	21.3	19.6	18.6	18.7	14.4	21.9	21.5	20.7	19.1	18.9
State College, Miss.	32.2	29.5	30.3	18.0	13.9	21.6	20.8	20.0	17.2	17.0 2/
Stoneville, Miss.	31.3	28.1	29.3	17.5	14.8	21.6	21.0	19.8	17.9	17.7
Stuttgart, Ark.	20.3	19.7	16.9	16.8	15.6	21.7	21.4	20.6	18.1	18.0

Seed Holding Capacity				
Excellent	Excellent	Fair	Good	Poor

1/ Oil data for four years.

2/ Oil data for three years.

Preliminary Group VII, 1948

Twenty-five strains were grown in a preliminary nursery at Willard, North Carolina; Monetta, South Carolina; Fairhope, Alabama; Baton Rouge, Louisiana; and Stoneville, Mississippi. Twenty-three of the strains were from crosses having Biloxi, CNS, Missoy or Palmetto as one parent with the anticipation that better yielding types with high oil content could be obtained for the Southeast. All make taller growth than Roanoke. All of the selections have quite satisfactory seed holding properties. Several of the selections with Palmetto as a parent are as tall as Palmetto, but stand up better.

Of the five locations where the nurseries were grown, Fairhope was the only station where any of the strains yielded significantly more than Roanoke. At Fairhope, F.C. 30261-1, N45-3563, and N46-2881 yielded significantly more than Roanoke. F.C. 30261-1 was included in the Group VII nurseries in 1946 and did not prove to have very wide adaptation. It also shatters rather severely. N45-3563 has been included in the Group VII nurseries for the past two years. N46-2881 is approximately six inches taller than Roanoke, stands well, and has approximately the same oil content as Roanoke. In addition to yielding well at Fairhope, N46-2881 was one of the top-yielding strains at all locations.

Other strains producing good seed yields, combined with a quite satisfactory oil content, are N45-3799, N46-2652, N46-2802, N46-2872, and N46-3008. N45-3799 was the earliest strain in the test. It is approximately one week earlier than Roanoke. N46-2652 has a growth type very comparable to Palmetto, but stands better and holds its seed quite satisfactorily. This strain should have value in southern Georgia. The strains N46-2802, N46-2872, and N46-3008 are four to six inches taller than Roanoke.

In 1947 tests, in which a larger number of selections were grown at McCullers, North Carolina, and Monetta, South Carolina, N46-2652 had the best combination of yield and oil content from the Volstate x Palmetto selections; and N46-2872 was the top strain of the selections from the back cross of Volstate/Volstate x Palmetto. Both strains yielded well at Florence in 1948 where they were grown as extra varieties with Group VII. Each had an oil content of one percent below Roanoke.

Table 40: Yield data in bushels per acre for the strains of the Preliminary Uniform Group VII, 1948

Strain & Parentage		LOCATIONS					
		Willard, N.C.	Monetta, S.C.	Fairhope, Ala.	Baton Rouge, La.	Stoneville, Miss.	Florence, S.C.1/
Roanoke		35.1	36.4	20.6	19.5	23.4	41.1
MB45 (F.C.30261-1)		-	32.7	26.9+	18.9	17.3-	
N45-952	Ogden x CNS	29.1	34.7	19.4	18.5	23.3	
N45-1064	Volstate x CNS	29.3	36.5	19.8	19.1	20.7	
N45-2176	Ogden x Biloxi	36.9	35.1	20.3	13.0	22.3	
N45-2307	Volstate x Biloxi	26.8-	28.6-	19.7	16.2	18.6-	
N45-3563	Ogden x Missoy	34.8	33.9	27.3+	14.6	23.4	
N45-3573	Ogden x Missoy	38.2	32.8	22.7	17.5	21.3	
N45-3799	Ogden x Palmetto	32.0	32.5	16.4	12.0	27.5	40.2
N46-1850	Ralsoy x Tokyo	28.5-	33.3	23.5	13.6	18.9-	
N46-2652	Volstate x Palmetto	35.2	28.7-	15.4	12.7	19.9	37.4
N46-2679	Volstate x Palmetto	34.4	30.4-	21.6	13.6	24.5	
N46-2718	Volstate x Palmetto	35.3	33.7	21.3	12.3	25.4	
N46-2723	Volstate x Palmetto	27.2-	27.1-	20.7	15.2	16.4-	
N46-2797	Volstate x Palmetto	35.3	31.1-	22.6	11.4	24.0	
N46-2802	Volstate x Palmetto	36.4	33.6	23.2	13.0	23.4	
N46-2845	Volstate/Vol. x Palmetto	31.9	32.1	20.3	13.6	19.9	
N46-2872	Volstate/Vol. x Palmetto	37.1	37.6	23.6	17.8	24.7	42.3
N46-2881	Volstate/Vol. x Palmetto	40.4	35.8	28.3+	18.8	27.0	
N46-2883	Volstate/Vol. x Palmetto	35.4	30.5-	24.2	16.9	21.3	
N46-2918	Volstate/Vol. x Palmetto	35.2	32.1	20.6	19.8	21.4	
N46-2936	Volstate/Vol. x Palmetto	34.7	28.2-	28.5	15.9	19.0-	
N46-2950	Volstate/Vol. x Palmetto	29.2	30.6-	23.3	13.6	24.8	
N46-3000	Volstate/Vol. x Palmetto	28.8	29.7-	17.2	14.3	16.6-	
N46-3008	Volstate/Vol. x Palmetto	31.9	36.6	23.9	16.2	18.5-	
Bus. nec. for sig. (5% level)		6.5	4.4	6.2	N.S.	4.2	6.2
Bus. nec. for sig. (1% level)		8.6	5.8	8.2	-	5.6	8.3
Coefficient of variation		11%	9%	20%	21%	14%	13%

(+)Strains yielding significantly more (odds 19:1) than Roanoke.
(-)Strains yielding significantly less (odds 19:1) than Roanoke.

1/Included as extra varieties with Uniform Group VII.

Table 41: Chemical composition of the strains in Preliminary Group VII, 1948

Strain	Willard, N. C.		Fairhope, Ala.	
	Percent		Percent	
	Protein	Oil	Protein	Oil
Roanoke	38.8	21.7	41.4	21.1
MB45	-	-	40.7	21.7
N45-952	40.7	20.6	42.7	20.8
N45-1064	40.5	20.0	44.4	19.8
N45-2176	39.3	20.6	42.7	20.8
N45-2307	42.4	19.7	42.9	19.0
N45-3563	38.7	21.6	40.4	22.0
N45-3573	40.8	19.4	42.8	19.9
N45-3799	40.2	21.3	43.6	20.0
N46-1850	-	-	43.4	19.6
N46-2652	40.6	21.2	41.9	19.9
N46-2679	40.0	20.8	41.2	19.6
N46-2718	40.6	19.9	43.6	18.4
N46-2723	41.0	20.5	43.0	19.7
N46-2797	40.7	20.6	41.5	20.1
N46-2802	38.5	21.2	42.4	20.6
N46-2845	38.1	22.4	40.0	22.1
N46-2872	39.2	20.6	40.9	19.9
N46-2881	37.4	21.9	40.5	21.4
N46-2883	38.7	21.1	41.5	20.7
N46-2918	39.0	21.1	41.5	20.2
N46-2936	40.1	20.9	41.3	21.1
N46-2950	38.6	22.0	41.2	12.3
N46-3000	40.4	21.0	40.0	21.2
N46-3008	38.3	21.4	40.4	20.7

Uniform Group VIII, 1948

Variety or Strain	Source or Originating Agency	Origin
Acadian	Louisiana Agr. Expt. Sta.	Sel. from P.I. 60406 x P.I. 04910
Seminole	U. S. D. A.	Introduction from Hangchow China (P.I. 93058)
Cherokee	U. S. D. A.	Introduction from Hangchow China (P.I. 93057)
JW-45	J. E. Wannamaker St. Matthews, S. C.	Selection from mixed seed lot
Yelnando	Coker Pedigreed Seed Co., Hartsville, S. C.	Sel. from Yelredo x Nanda
La. Green	Louisiana Agr. Expt. Sta.	
Mamotan	Delta Branch Expt. Sta.	Sel. from Mammoth Yellow x Otootan
Mamloxi	Delta Branch Expt. Sta.	Sel. from Mammoth Yellow x Biloxi
F.C. 31592	U. S. D. A.	Introduction from Dutch East Indies
P.I. 85897	U. S. D. A.	Introduction from Shiznoke, Japan

The varieties of Group VIII maturity are the latest maturing strains now available. The area of best adaptation is the Gulf Coast region. In this area, these strains usually mature in early November. In most areas, the Group VIII strains give lower seed yields and have lower oil content than the best adapted varieties of Group VII.

At some locations, especially Fairhope, Alabama, and St. Joseph, Louisiana, the strains in Group VIII suffered from defoliation by the legume caterpillar to a much greater extent than did the earlier maturing varieties which were further advanced when the caterpillar injury occurred.

One new strain, F.C. 31592, was included in the nurseries for the first time. This strain has black seed coats and green cotyledons. It appears to have a high degree of resistance to bacterial pustule and wildfire. At Fairhope, Alabama, F.C. 31592 was defoliated less by the legume caterpillar than other Group VIII strains. However, at St. Joseph, Louisiana, it was defoliated by the same caterpillar to the same extent as the other varieties. F.C. 31592 yielded as well as Acadian at 10 of the 13 locations where this nursery was grown and had a slightly higher average oil content.

JW-45 has been in the nursery for two years. It is one of the earliest and shortest strains in this group. It has yielded well in the Southeastern area. Its oil content is slightly below that for Acadian.

In comparing yields for strains grown in the nursery for the three years, Seminole has a slight advantage over Acadian at Tifton, Georgia. At Monetta, South Carolina, and Baton Rouge, Louisiana, Acadian is the top-ranking variety. At Baton Rouge, the adaptation of the strains Acadian and Louisiana Green is quite striking. Here, these two strains have yielded approximately 50 percent more seed than at other locations. Although both of these strains consistently yield well at Baton Rouge, the experimental strain, Louisiana Green, has not given the consistently good seed yields at other areas that Acadian has.

Table 42: Yield in bushels per acre for strains in Uniform Group VIII, 1948

Location	Acadian	Seminole	Cherokee	JW45	Yelnando	La. Green
			SOUTHEAST			
Hartsville, S. C.	21.4	22.9	17.1	27.2	22.1	16.3
Monetta, S. C.	28.9	32.8	32.1	32.2	29.0	23.3
Charleston, S. C. 1/	16.4	5.4-	8.2-	12.7	15.9	11.5
Tifton, Ga. (4-21)	27.1	24.9	20.4	20.9	25.9	19.9
Tifton, Ga. (5-27)	21.4	21.8	16.6	21.1	22.4	12.1-
Tallassee, Ala.	27.7	25.9	19.0	27.7	26.1	30.0
Fairhope, Ala.	17.3	21.1	16.9	19.8	19.0	22.3
Mean	22.9	22.1	18.6	23.1	22.9	19.3
			DELTA			
Stoneville, Miss.	12.7	12.2	12.0	22.3+	11.5	9.5
St. Joseph, La.	20.0	10.6-	8.3-	17.5	13.1-	17.7
Baton Rouge, La.	32.1	30.0	25.6-	23.0-	27.9	30.5
Mean	21.6	17.6	15.3	20.9	17.5	19.2
			WEST			
Stuttgart, Ark.	17.9	16.3	17.8	21.8+	15.4	17.4
Curtis, La.	27.6	13.3-	11.8-	19.1-	12.1-	25.1
Crowley, La.	25.0	30.3	17.3-	27.7	28.3	24.2
Mean	23.5	20.0	15.6	22.9	18.6	22.2

(+) Strains yielding significantly more (odds 19:1) than Acadian.
(-) Strains yielding significantly less (odds 19:1) than Acadian.

1/Not included in the mean.

Table 42: (Continued)

Location	Mamotan	Mamloxi	F.C. 31592	P.I. 85897	Bu. Nec. for Sig (5%)	Coef. of Var.
			SOUTHEAST			
Hartsville, S. C.	26.1	22.5	18.5	25.4	5.9	18%
Monetta, S. C.	28.5	29.6	27.5	26.2	5.1	13%
Charleston, S. C.1/	15.1	21.9+	9.7+	14.0	5.0	27%
Tifton, Ga. (4-21)	20.6	23.9	22.4	19.8	N.S.	20%
Tifton, Ga. (5-27)	22.5	22.4	21.9	19.4	6.3	22%
Tallassee, Ala.	30.4	39.2	31.9	32.6	-	-
Fairhope, Ala.	29.6+	23.5+	27.3+	19.9	5.2	17%
Mean	24.7	26.1	22.7	22.5		
			DELTA			
Stoneville, Miss.	21.9+	15.3	10.6	12.5	5.4	27%
St. Joseph, La.	20.8	20.1	8.2-	9.7-	4.8	23%
Baton Rouge, La.	29.2	29.8	29.4	25.0-	5.7	14%
Mean	24.0	11.7	16.1	15.7		
			WEST			
Stuttgart, Ark.	18.3	19.5	18.6	16.7	2.9	11%
Curtis, La.	18.5-	16.2-	15.7-	19.6-	5.0	20%
Crowley, La.	28.9	26.1	23.7	31.1	6.0	16%
Mean	21.9	20.6	19.3	22.5		

Table 43: Chemical compostion of the strains of the Uniform Group VIII, 1948

Location	Aca-dian	Semi-nole	Chero-kee	JW 45	Yel-nando	La. Green	Mamo-tan	Mam-loxi	F. C. 31592	P. I. 85897
				PERCENTAGE OIL						
Monetta, S. C.	19.6	18.9	17.7	19.3	19.4	17.3	19.8	18.9	19.2	19.3
Tifton, Ga. (4-21)	20.0	19.8	18.9	18.2	19.6	17.7	19.6	18.7	20.5	19.7
Baton Rouge, La.	20.9	20.6	20.0	20.1	21.0	18.0	21.1	20.1	21.2	21.1
Crowley, La.	21.1	20.8	20.1	21.0	20.6	18.8	21.3	20.2	21.9	20.3
Mean	20.4	20.0	19.2	19.6	20.2	18.0	20.4	19.5	20.7	20.1
				PERCENTAGE PROTEIN						
Monetta, S. C.	41.0	43.1	44.2	41.2	40.2	43.4	40.9	41.1	39.6	39.7
Tifton, Ga.	43.9	44.9	46.2	44.7	41.8	43.9	42.9	44.5	41.5	42.9
Baton Rouge, La.	42.5	42.1	43.3	41.6	41.8	42.7	40.5	41.1	39.3	40.1
Crowley, La.	42.5	43.5	42.5	42.9	42.0	41.7	40.0	40.5	39.2	41.0
Mean	42.5	43.4	44.0	42.6	41.4	42.9	41.1	41.8	39.9	40.9
				IODINE NUMBER OF OIL						
Monetta, S. C.	139	140	136	133	138	138	138	138	137	136
Tifton, Ga.	136	132	137	130	130	139	139	140	134	133
Baton Rouge, La.	136	134	132	130	128	137	136	135	130	131
Crowley, La.	133	131	132	128	126	134	134	135	130	132
Mean	136	134	134	130	130	137	137	137	133	133

Table 44: Relative maturity, days earlier (-) or later (+) than Acadian, for the strains of Uniform Group VIII, 1948

Location	Date Planted	Acadian Matured	Semi-nolo	Chero-kee	JW45	Yel-nando	La. Green	Mamo-tan	Mam-loxi	F.C. 31592	P.I. 85897
					SOUTHEAST						
Monetta, S. C.	5-19	11-6	-4	-1	-11	-3	+12	-3	0	0	0
Charleston, S. C.	5-26	12-8	+5	+5	-8	0	+5	0	0	-8	+5
Tifton, Ga.	4-21	10-25	-12	-4	0	0	+24	0	+1	+2	-5
Tifton, Ga.	5-25	10-25	0	+1	0	0	+30	+1	+3	+8	-3
Tallassee, Ala.		11-7	-10	+1	-10	-6	+4	+8	0	+2	+2
Mean			-4.2	+0.4	-5.8	-1.8	+15.0	+1.2	+0.8	+0.8	-0.2
					DELTA						
Stoneville, Miss.	4-21	10-28	0	+2	-3	+2	+6	+2	+2	+6	+6
St. Joseph, La.	5-10	10-15	0	0	-3	-3	+5	-3	0	+5	+5
Baton Rouge, La.	6-4	10-28	-5	+4	-6	-3	+11	0	0	-2	-3
Mean			-1.7	+2.0	-4.0	-1.3	+7.3	-0.3	+0.7	+3.0	+2.7
					WEST						
Stuttgart, Ark.	5-29	11-6	-11	-11	-11	-11	+2	0	0	0	0
Curtis, La.	5-5	10-28	-3	+4	-3	+6	+18	+4	+4	+5	+4
Crowley, La.	5-4	10-28	-8	+4	-8	-3	+11	0	0	-2	-3
Mean			-7.3	-1.0	-7.3	-2.6	+10.3	+1.3	+1.3	+1.0	+0.3

Table 45: Mean plant height of the strains in Uniform Group VIII, 1948

Location	Acadian	Seminole	Cherokee	JW45	Yelnando	La. Green	Mamotan	Mamloxi	F. C. 31592	P. I. 85897
					SOUTHEAST					
Monetta, S. C.	58	47	41	44	51	50	40	49	49	40
Charleston, S. C.	74	45	54	44	52	57	43	53	55	45
Tifton, Ga. (4-21)	64	40	52	40	50	60	38	52	52	42
Tifton, Ga. (5-27)	52	44	44	42	44	46	38	42	46	40
Tallassee, Ala.	63	44	49	49	50	60	45	52	57	50
Fairhope, Ala.	60	42	44	36	48	42	42	42	42	42
Mean	62	44	47	42	49	52	41	48	50	43
					DELTA					
Stoneville, Miss.	57	40	44	41	45	-	33	47	-	-
St. Joseph, La.	68	44	56	38	48	65	36	45	54	45
Baton Rouge, La.	72	40	52	40	48	68	42	48	52	48
Mean	66	41	52	40	47	67	37	47	53	47
					WEST					
Stuttgart, Ark.	50	38	37	34	40	48	34	37	40	39
Curtis, La.	72	50	56	54	68	72	44	50	54	44
Crowley, La.	66	36	45	34	38	72	30	36	45	40
Mean	63	41	46	41	49	64	36	41	46	41

Table 46: Lodging scores for the strains of the Uniform Test, Group VIII, 1948

Location	Acadian	Seminole	Cherokee	JW45	Yelnando	La. Green	Mamotan	Mamloxi	F.C. 31592	P. I. 85897
					SOUTHEAST					
Monetta, S. C.	2.0	3.0	3.0	1.0	3.0	4.0	1.0	1.0	2.0	2.0
Charleston, S.C.	2.0	3.0	3.0	2.0	2.0	3.0	2.0	2.0	3.0	2.0
Tallassee, Ala.	3.3	4.8	2.0	2.5	3.5	5.0	2.0	2.8	4.8	3.8
Fairhope, Ala.	3.0	3.0	3.0	2.0	3.0	3.0	2.0	2.0	4.0	3.0
					DELTA					
Stoneville, Miss.	2.0	3.0	4.0	3.0	4.0	2.0	3.0	3.0	4.0	2.0
St. Joseph, La.	5.0	4.0	4.0	3.0	4.0	5.0	4.0	3.0	4.0	4.0
Baton Rouge, La.	4.0	3.0	3.0	4.0	4.0	5.0	3.0	3.0	5.0	3.0
					WEST					
Stuttgart, Ark.	2.3	2.8	2.0	1.2	2.0	2.8	1.0	1.0	3.5	2.2
Curtis, La.	4.0	3.0	4.0	4.0	4.0	5.0	3.0	3.0	4.0	3.0
Crowley, La.	4.0	3.0	3.0	3.0	3.0	4.0	2.0	3.0	3.0	3.0

Table 47: Mean seed weight, grams per 100 seeds, for the strains of Uniform Group VIII, 1948

Location	Acadian	Seminole	Cherokee	JW45	Yelnando	La. Green	Mamotan	Mamloxi	F.C. 31592	P.I. 85897
				SOUTHEAST						
Monetta, S. C.	13.9	31.0	21.0	20.9	19.6	13.4	21.0	18.0	26.5	16.5
Charleston, S. C.	15.5	27.8	21.5	19.7	21.0	13.2	20.8	18.4	25.5	17.2
Tifton, Ga.	13.4	24.4	21.5	15.5	17.1	12.8	16.6	16.6	17.4	16.2
Mean	14.3	27.7	21.3	18.7	19.2	13.1	19.5	17.7	23.1	16.6
				DELTA						
Stoneville, Miss.	11.2	21.2	16.4	15.6	15.1	8.8	14.0	12.2	21.7	12.5
Marianna, Ark.	8.7	22.7	15.0	18.1	15.8	7.7	16.3	12.4	17.1	12.4
Baton Rouge, La.	12.5	26.9	21.0	17.5	17.2	10.3	18.4	14.9	22.5	13.6
Mean	10.8	23.6	17.5	17.1	16.0	8.9	16.2	13.2	20.4	12.8
				WEST						
Stuttgart, Ark.	10.6	23.2	16.0	15.3	14.6	10.2	13.5	16.4	20.9	13.6
Crowley, La.	11.3	23.7	17.4	16.7	15.3	14.8	16.8	13.7	20.3	14.9
Mean	11.0	23.4	16.7	16.0	15.0	12.5	15.2	15.0	20.6	14.2

Table 48: Seed quality scores for the strains of the Uniform Group VIII, 1948

Location	Aca-dian	Semi-nole	Chero-kee	JW45	Yel-nando	La. Green	Mamo-tan	Mam-loxi	F.C. 31592	P.I. 85897
					SOUTHEAST					
Monetta, S. C.	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0
Charleston, S. C.	3.0	5.0	3.0	4.0	3.0	3.0	3.0	3.0	2.0	4.0
Tifton, Ga.	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.5	1.3	1.5	1.3	1.3	1.0	2.0	2.3	1.3	1.5
					DELTA					
Stoneville, Miss.	2.0	3.0	4.0	3.0	4.0	2.0	3.0	3.0	4.0	2.0
St. Joseph, La.	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, La.	1.0	2.0	1.0	2.0	2.0	1.0	1.0	2.0	2.0	1.0
					WEST					
Stuttgart, Ark.	1.5	2.0	2.0	1.2	1.8	1.8	1.8	1.8	2.0	1.5
Curtis, La.	1.0	3.0	3.0	3.0	4.0	2.0	2.0	2.0	4.0	2.0
Crowley, La.	1.0	1.0	1.0	2.0	2.0	1.0	1.0	2.0	2.0	1.0

Table 49: Two-year summary of yield and oil content of strains in Uniform Group VIII, 1947-48

Location	Acadian	Seminole	Cherokee	JW45	Yelnando	La. Green	Mamotan	Mamloxi	P.I. 85897
				YIELD					
Monetta, S. C.	25.6	23.9	25.3	26.7	25.8	21.8	24.3	25.7	23.1
Tifton, Ga.	22.1	23.8	18.0	17.0	20.0	17.7	17.9	18.4	18.9
Baton Rouge, La.	31.5	21.8	20.3	18.0	24.2	30.2	21.9	24.2	24.1
Crowley, La.	21.8	18.9	14.0	21.1	20.5	20.3	19.9	18.7	23.0
				PERCENTAGE OIL					
Monetta, S. C.	19.0	18.0	17.1	18.6	18.9	17.5	18.9	18.4	19.0
Tifton, Ga.	19.5	20.2	18.3	19.0	19.6	17.4	19.9	18.6	19.3
Baton Rouge, La.	20.3	20.5	19.0	19.7	20.7	18.7	20.7	19.5	20.8
Crowley, La.	21.5	19.6	19.9	20.3	20.1	19.2	20.5	19.6	21.1

Table 50: Three-year summary of yield for strains in Uniform Group VIII, 1946-48

Location	Acadian	Seminole	Cherokee	Yelnando	La. Green	Mamotan	Mamloxi
Monetta, S. C.	24.5	21.8	23.0	23.4	20.1	23.1	24.3
Tifton, Ga.	20.0	21.8	17.8	18.0	17.3	17.4	17.8
Baton Rouge, La.	33.9	19.3	20.3	23.5	32.5	22.9	24.0

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SOYBEAN DISEASE INVESTIGATIONS IN THE SOUTHERN STATES

by Howard W. Johnson

This is the third progress report on the cooperative soybean disease research conducted in the Southern States by the Division of Forage Crops and Diseases. The work is closely integrated with the soybean breeding and improvement work of the U. S. Regional Soybean Laboratory and with the soybean work of the state agricultural experiment stations in the region. The state and federal employees cooperating in these investigations supplied much of the information summarized in this annual report of progress. Recognition of this is made in the report by indicating the location at which each particular phase of the work was done. As in the previous years, major attention has been given to rating the varieties and strains in the uniform soybean test groups for susceptibility and resistance to diseases. This phase of the work is shared by almost all the cooperators and is presented as a general summary of all the data submitted to the coordinator.

COOPERATING AGENCIES AND PERSONNEL

Bureau of Plant Industry, Soils, and Agricultural Engineering;
Divsion of Forage Crops and Diseases: J. Lewis Allison, Howard W. Johnson, J. L. Weimer, C. L. Lefebvre, Joe H. Graham, Quintin L. Holdeman, and staff of U. S. Regional Soybean Laboratory.

Louisiana Agricultural Experiment Station;
Botany, Bacteriology, and Plant Pathology Department:
S. J. P. Chilton.

Mississippi Agricultural Experiment Station;
Botany and Plant Pathology Department:
J. T. Presley.

North Carolina Agricultural Experiment Station;
Botany Department, Plant Pathology Section:
S. G. Lehman.

EXPERIMENTAL RESULTS

a-4-3: SOYBEAN PRODUCTION, BREEDING, DISEASE, AND QUALITY INVESTIGATIONS.

a-4-3-9: Selecting Soybeans for Resistance to Diseases Affecting Yields: - for forage, food, and industrial purposes.

Disease prevalence ratings were made on the varieties and strains in the uniform soybean nurseries at numerous locations in the South in 1948 as in the previous years. The bacterial foliage diseases, pustule and blight, were again the most widespread and prevalent soybean diseases observed. Other diseases present in the nurseries were: wildfire, mosaic, downy mildew, frogeye leafspot, helminthosporium leafspot, brown spot, anthracnose, sclerotial blight, charcoal rot, and purple blotch of seed. Of these diseases, wildfire was most widespread and prevalent, being especially conspicuous in Mississippi and Arkansas plantings.

In the various maturity groups grown in the southern states, the following varieties and strains appeared to show resistance to the bacterial leaf diseases:

Group IV: No high degree of resistance present but the new Indiana strains C508, C490, C463, and C612 appeared somewhat less susceptible than Gibson and Patoka.

Group V: No strain in this group possesses as high a degree of resistance to the bacterial foliage diseases as Ogden, but the following strains from the Delta Station remained somewhat freer from diseases than did S-100: D517-3, D523-41, D514-13, and D514-20. Strain D523-30 was included in this group as an extra strain at a number of locations and in the southeastern region it remained practically free of pustule, blight, wildfire, and frogeye. It did not show this high degree of resistance at locations in the Mississippi Delta, but it appears that this strain of early September maturity has possibilities of becoming a superior early soybean variety for the South.

Group VI: Ogden, Dortchsoy 2, Hale Ogden 12, D540-1 (Ogden x Arksoy) and N45-2885 (Haberlandt x Ogden).

Group VII: Ogden, N45-3563 (Missoy x Ogden), N45-3728 (Palmetto x Ogden), N44-937 (Palmetto x Ogden), CNS, and Palmetto.

Group VIII: Cherokee, Louisiana Green, and F.C. 31592.

In an inoculation test at McCullers, North Carolina, involving 13 varieties and 36 selections from progenies of crosses, the following varieties showed high resistance to bacterial pustule: Louisiana Green, CNS, Ogden, Dortchsoy 2, and Hale Ogden 12. Of the 36 selections tested, nine showed high resistance and the remaining 27 showed moderate resistance to pustule.

a-4-3-9: (Continued)

In a disease nursery at Stoneville, Mississippi, the following strains showed a high degree of resistance to bacterial pustule and blight and remained practically free from wildfire although spreader rows of the Ralsoy variety on either side of each strain in the test became very heavily infected: D540-1, D542-71, D554-7, D676-38, D676-40, D676-42, D676-86, D582-2, N44-95, N45-745, N45-1004, and N45-1128.

A severe natural infestation of purple blotching of soybean seed in North Carolina provided an opportunity to collect data on susceptibility and resistance of varieties and strains to this fungous disease. Counts showed that Dortchsoy 31, Volstate, CNS, Palmetto, and Roanoke had much less purple blotching of seed than did Ogden growing at the same location. Some of the hybrid selections also showed a very low percentage of purple seed discoloration. These data indicate varietal differences in susceptibility to purple blotch. It is interesting to note that the five varieties listed as having less purple blotch are 10 days or more later than Ogden.

a-4-3-10: Leaf and Stem Diseases of Soybeans - studies of the organisms causing them and methods for their control.

Six soybean dusting tests were carried out at McCullers, North Carolina, and one at Rocky Mount, North Carolina, in 1948. Tribasic copper sulphate was used in most of the tests and was applied in different amounts per acre and was mixed with different type diluents and amendments with the hope of learning the best dust mixture to use on soybeans. Phygon XL, pargate, and sulphur as dusts and tribasic copper sulphate as a spray were used also. Owing to the dry season which prevailed, the development of leaf and stem diseases was very light during the period of plant development when diseases should affect yield. At no time during the season was there sufficient disease on the non-dusted control plots to make differences apparent between them and the dusted plots. The drought greatly reduced yields and suppressed such yield increases as might have occurred on the dusted plots under more favorable growing conditions. After the leaves had fallen at maturity, the rows of plants which received copper dust could be distinguished from those which did not receive copper dust by their brighter cleaner stems.

Counts of purple blotched seeds on the harvest from the dusting tests showed a reduction of 40 to 50 percent in purple blotched seeds as a result of dusting with tribasic copper sulphate. Seed of the Ogden and Ralsoy varieties from non-dusted plots had 51 and 28 percent of purple blotched seeds, respectively. On the other hand, seed of these varieties from copper dusted plots had 28 and 16 percent purple blotched seeds, respectively. It appears that more frequent or better-timed applications of copper dust might affect still better control of this fungous discoloration of the seeds.

In a soybean dusting test at Stoneville, Mississippi, one-eight acre plots of S-100 soybeans were dusted with the following: 20 percent tribasic copper sulphate, 20 percent tribasic copper sulphate plus 5 percent DDT, 5 percent DDT, and a non-dusted check. The dusts were applied with a Niagra Model AA power duster mounted on a tractor and with the outlets adjusted to dust three rows at a time. The first application was made on June 25 at a rate of ten pounds of dust per acre and a second application was made on July 16, 1948, at a rate of 25 pounds per acre. The growth of the soybeans was too great after this date to permit the tractor being driven through them without injury, so no later applications were made. Bacterial foliage diseases seemed about as prevalent in the dusted as in the non-dusted plots during the growing season and at maturity there were no significant differences between the yields from the various plots. In spite of the negative results obtained in this first season, it is felt that this test should be continued since airplane dusting of soybeans with 10 pounds per acre of 5 percent DDT to control the bean leaf beetle is becoming a more common practice in the Delta areas of Arkansas and Mississippi. The substitution of tribasic copper sulphate for a portion of the clay diluent in this DDT dust would not add greatly to its cost and should prove practical if the combination dust gave just fair control of the bacterial foliage diseases of soybean as well as control of the bean leaf beetle.

At Raleigh, North Carolina, tests were conducted to determine whether soybean seedlings from seed inoculated with the wildfire bacterium and grown in large test tubes would show a definite type of disease lesion. While some of the seedlings were infested with the bacterium, no consistent lesion type was

a-4-3-10: (Continued)

recognized. In preliminary tests of this type with the bacterial pustule organism, more promising results have been obtained.

Tests conducted at Raleigh, North Carolina, have shown that the pustule, blight, and wildfire organisms can survive in competition with saprophytic bacteria and produce good infection when inoculated on to soybean plants. It is thought this will provide a good method for testing seed from diseased plants for the presence of the three pathogenic bacteria. Up to the present, all tests of seeds for natural infection have been negative, due to the growth of saprophytic bacteria in the isolation plates. This method will be used also to test soil for infestation by the three soybean bacteria.

Experiments made at Raleigh, North Carolina, showed that when cultures of the pustule, blight, and wildfire organisms were mixed and soybean plants were inoculated immediately, symptoms of all three diseases appeared on the leaves. When, however, broth cultures of the above mixture were incubated for 24 hours or more before the plants were inoculated, only wildfire symptoms appeared on the leaves and the pustule and blight organisms could not be isolated from the inoculated plants. Plate dilutions from the incubated mixture also showed only the wildfire organism. These results indicate that the wildfire organism has an antibiotic effect on the other two organisms. A further demonstration of this effect was made by soaking sterile discs of filter paper in a suspension of the wildfire organisms and placing them on heavily seeded plates of the pustule and blight organisms. Clear zones from 1 mm. to cm. in width encircled the discs after ten or more hours. Using the same technique, the bacteria-free filtrate of the wildfire organism produced no inhibition zone and negative results were obtained also when the sterile discs were soaked in a suspension of the dead wildfire bacteria.

Overwintering studies conducted at Raleigh, North Carolina, showed that the pustule organism could be recovered readily from overwintered diseased leaves left uncovered or covered with soil, while the blight organism was recovered only from the uncovered leaves that overwintered on the soil surface. The wildfire organism was recovered from only one lot of uncovered leaves, indicating that it does not overwinter as readily in the fallen diseased leaves as do the other two bacterial parasites.

In Georgia, the sterile fungus that causes black patch disease of clovers was observed to be attacking soybeans for the first time. Inoculation tests showed that several varieties of soybeans were susceptible to this disease and that the soybean isolate of the fungus can attack clovers, kudzu, and cowpea. This disease is not of economic importance on soybeans but is quite destructive on clovers.

a-4-3-11: Root and Crown Diseases of Soybeans - studies of the organisms causing them and methods for their control.

In a soybean seed treatment test in North Carolina, Arasan dust proved superior to Dow F-800 both as to increase in emergence and in reduction in number of diseased cotyledons.

Soybean seed treated with Arasan dust at planting time in 1947, and stored at room temperature in a laboratory at Raleigh, North Carolina, until planting time in 1948, germinated about 50 percent when planted in the field; while untreated seed, stored in the same location, failed to germinate almost completely. Arasan on the seed appeared in this test to have markedly inhibited seed deterioration in storage.

At Stoneville, Mississippi, a soybean seed treatment test involving eight varieties of soybeans and eight different fungicidal dusts was planted on two dates in May 1948. In both plantings, the following treatments resulted in increases in stand over the non-treated checks that were highly significant when the data was subjected to statistical analysis: Arasan, Spergon, 2 percent Ceresan, New Improved Ceresan, and Ceresan M. Phygon, Dow 9-B, and Yellow Cuprocide also gave increases in stand but of lesser amount.

In another seed treatment test at Stoneville, Mississippi, seed of four soybean varieties received eight different treatments immediately after harvest in 1947 and was then stored under two different storage conditions until planting time in 1948. Under each storage condition (constant temperature and humidity vs. fluctuating temperature and humidity) the following treatments resulted in increases in stand over the non-treated checks that were highly significant when the data was subjected to statistical analysis: Arasan, Spergon, New Improved Ceresan, Methocel sticker followed by Arasan and Methocel sticker followed by Spergon. Dowax and two different rates of Methocel alone resulted in stands that were no better, or slightly poorer, than the non-treated checks. It appears from these tests that treating soybean planting seed with a fungicide may be done in the fall after harvest with just as satisfactory results as are obtained when the treating is delayed until the following spring just before planting time.

Attempts to select for resistance to southern blight, caused by the fungus Sclerotium rolfsii, were continued at Experiment, Georgia. The average percentage of survival of progenies of plants which survived previous inoculation tests was four times that of unselected progenies. While the percentage survival was still too low to have practical significance, the results obtained suggest the possibility of gradually raising the level of resistance to southern blight in certain soybean varieties by repeated artifical inoculations and selection of the surviving plants.

In a test conducted at Experiment, Georgia, on methods of inoculating soybeans with the southern blight fungus, it was found that planting the soybean seeds directly with the inoculum or planting after the inoculum was mixed with the soil in the row was just as effective as the method previously used of applying the inoculum directly to the base of each plant after emergence had occurred. This new method of inoculation will save considerable time in conducting tests on resistance of soybeans to southern blight.