U. S. REGIONAL SOYBEAN LABORATORY
URBANA, ILLINOIS

RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS, 1949 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

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RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

PART II. SOUTHERN STATES[1/]

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1949

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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 For this reason, citation to particular statements in the report should not be published unless permission has been granted previously by the Laboratory or the state station concerned.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 Groups 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.

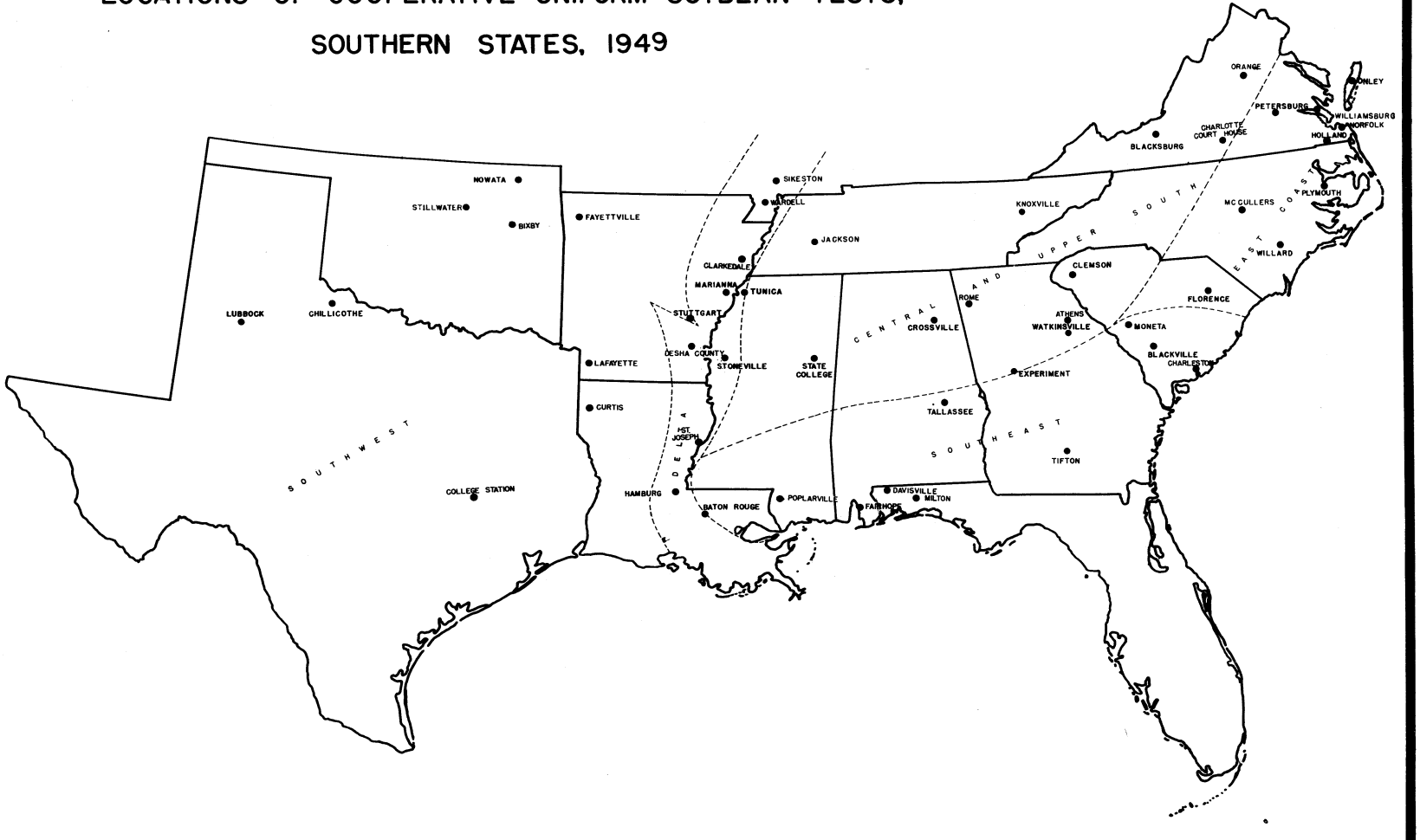
The cooperative program between the Soybean Laboratory and the states in the southern region was initiated in 1943. At that time there was only limited information available showing the regions of adaptation of the existing varieties of soybeans. During the first few years, most of the strains included 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, ranfall 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 from 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 are reported for those locations where the plots were fertilized. Soil types are reported for all locations.

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES, 1949



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.

Arkansas Agricultural Experiment Station;
Agronomy Department: C. R. Adair, P. E. Smith, J. L. Dameron, J. O. Dockins.

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

Florida Agricultural Experiment Station;
Agronomy Department: R. L. Smith, H. W. Lundy

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.

South Carolina Agricultural Experiment Station;
Agronomy Department: W. R. Paden.

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.	Va. State Field Sta.		1	1	1		Norfolk Fine Sandy Loam	0-48-48
Williamsburg, Va.	Eastern Va. Field Sta.		1		1		Sassafras Fine Sandy Loam	0-96-96
Holland, Va.	Tidewater Field Sta		1		1		Onslow Fine Sandy Loam	0-56-28
Onley, Va.	Eastern Shore Br. Truck Sta.		1		1		Sassafras Fine Sandy Loam	None
Norfolk, Va.	Va. Truck Expt. Sta.		1		1		Norfolk Fine Sandy Loam	None
Plymouth, N. C.	Tidewater Branch Sta.		1	1	1		Bladen Fine Sandy Loam	0-40-80
Willard, N. C.	Lower Coastal Plain Exp. Sta.			1	1		Norfolk Fine Sandy Loam	0-40-80
McCullers, N. C.	N. C. Agr. Expt. Sta.			1	1		Norfolk Fine Sandy Loam	0-40-80
Florence, S. C.	Pee Dee Expt. Sta.				1		Dunbar Fine Sandy Loam	0-40-80
			Southeast					
Monetta, S. C.	Miss Bessie Johnson			1	1	1	Norfolk Fine Sandy Loam	0-40-80
Blackville, S. C.	Edisto Expt. Sta.				1		Norfolk Fine Sandy Loam	15-45-45
Charleston, S. C.	Truck Expt. Sta.				2		Nosbig Fine Sandy Loam	None[2]
Tifton, Ga.	Ga. Coastal Plain Expt. Sta.				1	1	Tifton Pebbly Loam	0-40-80
Tallassee, Ala.	Ala. Agr. Expt. Sta.			1	1	1	Cahaba Fine Sandy Loam	16-40-28
Milton, Fla.	West Fla. Expt. Sta.			1	1		Red Bay Sandy Loam	16-40-28
Davisville, Fla.	Sam Tichi				1	1	Magnolia Fine Sandy Loam	24-40-28
Fairhope, Ala.	Gulf Coast Sub-sta.			1	1		Marlboro Fine Sandy Loam	0-56-40
Poplarville, Miss.	South Miss. Branch Sta.				1		Orangeburg Sandy Loam	0-40-80
			Upper and Central South					
Blacksburg, Va.	Va. Agric. Expt. Sta.	1					Dunmore Silt Loam	16-60-30
Orange, Va.	Piedmont Field Sta.	1	1				Davidson Clay	80-84-42
Charlotte C.H., Va.	Southside Va. Field Sta.		1	1			Cecil Sandy Loam	0-56-28
Knoxville, Tenn.	Tenn. Agr. Expt. Sta.	1	1	1			Etowah Silt Loam	0-80-80
Jackson, Tenn.	West Tenn. Agr. Expt. Sta.	1	1	1			Olivier Silt Loam	0-80-120
Crossville, Ala.	Sand Mountain Sub-sta.		1	1			Hartsville Sandy Loam	12-36-36
Clemson, S. C.	Clemson College Expt. Sta.				1		Cecil Sandy Loam	12-36-36
Watkinsville, Ga.	Sou. Piedmont Conserv. Sta.		1	1	1		Cecil Sandy Loam	24-32-24
Athens, Ga.	Univ. of Georgia			1	1		Cecil Clay Loam	9-27-18
Experiment, Ga.	Ga. Agr. Expt. Sta.		1	1	1	1	Cecil Sandy Loam	0-40-40
Rome, Ga.	Mt. Berry Schools		1				Conasauga Silt Loam	24-32-24
State College, Miss.	Miss. Agr. Expt. Sta.		1	1	1		Kaufman Sandy Loam	15-30-15

Location	Cooperator	IV	V	VI	VII	VII	Soil Type	Fertilizer 1/
Mississippi Delta								
Wardell, Mo.	O. H. Acom Farms		1	1			Sharkey Clay	None
Sikeston, Mo.	Mo. Agr. Expt. Sta.	1	1	1			Lintonia Fine Sandy Loam	9-36-36
Clarkedale, Ark.	Cotton Branch Sta.	1	1	1	1		Sharkey Clay and Sand	None
Marianna, Ark.	Cotton Branch Sta.		1	1	1		Richland Silt Loam	None
Tunica, Miss.	R. W. Owens	1	1	1			Forestdale Silty Loam	None
Stoneville, Miss.	Delta Branch Exp. Sta.	1	1	2	2	1	Bosket Fine Sandy Loam	None
Desha County, Ark.	J. A. Newton			1			Portland Sandy Loam	None
St. Joseph, La.	N.E. La. Agr. Expt. Sta.		1	1	1	1	Sarpy Clay Loam	None
Hamburg, La.	W. T. Nolin		1	1	1		Sharkey Clay Loam	12-36-36
Baton Rouge, La.	La. Agr. Expt. Sta.		1	1	1	1	Lintonia Sandy Loam	18-96-96
West								
Bixby, Okla.	Okla. Veg. Research Sta.		1	1			Yahola Very Fine Sandy Loam	None
Stillwater, Okla.	Okla. Agr. Expt. Sta.		1	1			Miller Fine Sandy Loam	None
Nowata, Okla.	Paul O. Schultz.	1	1				Verdigris Silt Loam	None
Fayetteville, Ark.	Ark. Agr. Expt. Sta.	1	1	1			Bolivar Silt Loam	None
Stuttgart, Ark.	Rice Branch Expt. Sta.	1	1	1	1	1	Crowley Silt Loam	None
Lafayette County, Ark.	Alston Foster			1	1			7.5-22.5-45
Curtis, La.	Red River Valley Exp. Sta.		1	1	1	1	Miller Fine Sandy Loam	6-24-24
College Station, Texas	Texas Agr. Expt. Sta.	1	1	1	1		Yahola Silt Loam	None
Chillicothe, Texas	Texas Sub-station #12				1	1	Abilene Loam	None
Lubbock, Texas	Texas Sub-station #8	1	1	1			Richfield Fine Sandy Loam	None

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 three-row plots, using a randomized block design with four replications. Where three-row plots were grown, only the center row was harvested. Row widths at the different locations have varied from 36 to 42 inches. Plantings are made at the rate of 10 viable seeds 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 mid-section of each plot. Actual seed weights are recorded after the seed of all strains has a uniform moisture content.

Shattering notes, where taken, were on the remaining end plants of each row, or the border rows, 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 a composite from all replications at a location 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
2. Good
3. Fair
4. Poor
5. Very Poor

The factors considered in estimating seed quality were development of seed, wrinkling damage, and brightness. 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.

Strain Identification: The strains designated by number carry a letter prefix. This letter identifies the state where this strain was selected. The following letters appear in this report:

C - Purdue Agric. Expt. Station and U. S. Regional Soybean Laboratory
D - Delta Branch Experiment Station and U. S. Regional Soybean Laboratory
L - Ill. Agric. Expt. Station and U. S. Regional Soybean Laboratory
La - Louisiana Agric. Expt. Sta. and U. S. Regional Soybean Laboratory
N - N. Car. Agric. Expt. Sta. and U. S. Regional Soybean Laboratory
V - Virginia Agric. Expt. Sta. and U. S. Regional Soybean Laboratory

P.I. - Plant Introduction

UNIFORM GROUP IV, 1949

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
C501	Purdue A.E.S. & U.S.R.S.L.	Sel. from C143 x X531-468-3-3-2-3
C502	Purdue A.E.S. & U.S.R.S.L.	Sel. from C143 x X531-468-3-3-2-3
C612	Purdue A.E.S. & U.S.R.S.L.	Sel. from Patoka x L7-1355
L6-5679	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x Richland
L6-1656	Ill. A.E.S. & U.S.R.S.L.	Sel. from Lincoln x (Linc. x Richland)
Carlin		Farmer Selection

Results of fourteen Group IV nurseries are summarized. Maturity of Gibson, the check variety, ranged from August 20 at the location farthest south, College Station, Texas, to October 1 at the two most northern locations, Orange, Virginia, and Nowata, Oklahoma. Over much of the area where these nurseries were grown, varieties of this maturity will be secondary to later maturing varieties. Varieties of Group IV maturity are full season varieties in southern Indiana.

Five named varieties, Gibson, Chief, Patoka, Wabash, and Carlin, and six strains from the breeding programs conducted cooperatively by the U. S. Regional Soybean Laboratory with the Purdue and Illinois Agricultural Experiment Station were included in these comparisons. Of the named varieties of this maturity, Gibson is the one most widely grown in the southern area. Wabash was released for general production in the spring of 1949. Although Wabash is slightly earlier than Gibson, it equals or surpasses Gibson in seed yield, stands better, has higher oil content, and usually produces seed of superior quality. For these reasons, Wabash should replace Gibson in this area.

In general, the later maturing strains of this group have given best results in the southern region. The three latest maturing strains, and also most promising in appearance, are C612, C490, and L6-5679. C612 and C490 have both been grown two years, while L6-5679 was included for the first time. C612 has produced higher seed yields than Wabash in all production areas and has a more erect plant type. It equals Wabash in oil content, but produces seed of lower quality.

C490 has a leafier, bushier, more erect plant type than Wabash. It has produced higher seed yields than Wabash in the Virginia and Tennessee tests, but has not been superior to Wabash in the tests in the Mississippi Delta. C490

produces seed of lower quality and with a lower oil content than Wabash. However, at Orange, Virginia, where C490 has a two-year average yield of six bushels per acre above Wabash, it has equalled Wabash in oil content.

L6-5679 is outstanding in appearance in the field for this group. It gave a seed yield significantly above Wabash at six of the fourteen locations, and also gave a higher mean yield in each of the three production areas. L6-5679 is approximately a week later than Wabash in maturity. Its rather dense foliage is a definite advantage in weed control. L6-5679 produces seed of good quality which averages about 0.8 percent lower in oil content than Wabash. L6-5679 has good seed holding capacity. Although this strain was grown in Group IV for the first time in 1949, its performance at Stoneville, Mississippi, and Stillwater, Oklahoma, in preliminary plantings in 1948 was very good.

Table 1: Yield in bushels per acre of the strains in Uniform Group IV, 1949

Location	Gibson	Chief	Patoka	Wabash	C490	C501	C502
			UPPER AND CENTRAL SOUTH				
Orange, Va.	30.8	32.7	33.8	33.1	38.2+	37.4+	32.3
Blacksburg, Va.	25.3	29.7	28.6	35.2+	23.1	29.7	27.5
Knoxville, Tenn.	29.0	33.2	32.5	32.1	35.9+	36.6+	37.5+
Jackson, Tenn.	32.6	30.8	36.9	31.4	40.8	36.0	36.5
Mean	29.4	31.6	33.0	33.0	34.5	34.9	33.4
			DELTA				
Sikeston, Mo.	30.0	26.1-	30.7	33.5	29.3	30.3	33.0
Clarkedale, Ark.1/	9.5	10.4	12.2	13.5	10.1	8.3	12.0
Tunica, Miss.	24.4	23.9	20.6	25.0	27.6	27.7	23.6
Stoneville, Miss.	26.6	24.6	28.2	24.0	25.9	32.0	24.7
Mean	27.0	24.9	26.5	27.5	27.6	30.0	27.1
			WEST				
Fayetteville, Ark.1/	10.2	6.5-	11.9	12.1	12.6	12.3	10.6
Stuttgart, Ark.1/	11.1	10.2	13.0	10.2	13.3	17.0+	16.4+
Nowata, Okla.	28.5	26.9	27.3	27.6	-	29.1	28.5
Denton, Texas1/	10.4	9.8	7.8	10.2	7.6	10.5	6.3
Lubbock, Texas	25.9	22.3	21.2	22.0	23.4	24.3	22.3
College Sta., Texas	23.5	23.8	26.6	26.0	26.0	28.0+	22.2
Mean	26.0	24.3	25.0	25.2	24.7	27.1	24.3

1/ - Not included in the mean.
(+) - Yield significantly more (odds 19:1) than Gibson.
(-) - Yield significantly less (odds 19:1) than Gibson.

Table 1: (Continued)

Location	C612	L6-5679	L6-1656	Carlin	L.S.D. (5% level)	Coef. of Var.
			UPPER AND CENTRAL SOUTH			
Orange, Va.	40.8+	39.9+	40.5+	30.9	3.4	7%
Blacksburg, Va.	33.0+	31.9+	33.0+	27.5	5.0	12%
Knoxville, Tenn.	38.1+	39.3+	34.3+	33.0	5.0	10%
Jackson, Tenn.	38.4	33.5	35.0	35.7	N.S.	13%
Mean	37.6	36.2	35.7	31.8		
			DELTA			
Sikeston, Mo.	37.1+	32.1	32.9	31.2	3.6	8%
Clarkedale, Ark.[1]	11.1	9.9	11.7	10.4	N.S.	30%
Tunica, Miss.	26.1	29.4+	25.3	26.9	4.8	12%
Stoneville, Miss.	36.6+	33.3+	25.3	28.4	6.6	16%
Mean	33.3	31.6	27.8	28.8		
			WEST			
Fayetteville, Ark.[1]	11.9	11.6	14.4+	11.4	2.7	17%
Stuttgart, Ark.[1]	14.5	18.5+	18.0+	12.9	3.5	17%
Nowata, Okla.[1]	29.6	32.7	29.5	26.8	N.S.	12%
Denton, Texas[1]	9.3	11.4	11.1	12.3	-	-
Lubbock, Texas	22.7	27.1	23.5	22.6	N.S.	11%
College Sta., Tex.	29.6+	30.5+	25.4	26.1	4.0	11%
Mean	27.3	30.1	26.1	25.2		

Table 2: Chemical composition of the strains in Uniform Group IV, 1949

Location	Gibson	Chief	Patoka	Wabash	C490
		OIL PERCENTAGE			
Orange, Va.	20.9	20.7	21.2	21.4	22.2
Jackson, Tenn.	23.3	23.1	22.7	24.7	23.7
Stoneville, Miss.[1/]	-	21.5	21.4	23.0	21.2
Sikeston, Mo.	21.7	21.1	21.3	23.3	20.5
Nowata, Okla.	21.3	21.5	21.8	22.8	22.5
Stuttgart, Ark.	22.7	21.2	20.1	22.7	22.2
Mean	22.0	21.5	21.4	23.0	22.0
		PROTEIN PERCENTAGE			
Orange, Va.	39.1	42.4	41.5	38.4	40.0
Jackson, Tenn.	38.1	41.8	42.2	37.7	40.9
Stoneville, Miss.[1/]	-	42.6	42.4	40.5	43.1
Sikeston, Mo.	40.2	41.8	42.6	39.1	45.0
Nowata, Okla.	36.0	38.1	39.1	36.3	38.1
Stuttgart, Ark.	42.9	45.2	47.8	43.6	45.6
Mean	39.3	42.0	42.6	39.3	42.1
		IODINE NUMBER OF THE OIL			
Orange, Va.	132.5	130.6	131.5	127.2	130.7
Jackson, Tenn.	131.4	128.0	131.5	124.6	127.7
Stoneville, Miss.[1/]	-	127.7	131.2	126.1	129.1
Sikeston, Mo.	131.3	125.4	130.6	123.5	127.9
Nowata, Okla.	133.7	131.6	131.0	128.9	129.9
Stuttgart, Ark.	128.4	122.0	127.6	118.4	127.0
Mean	131.5	127.6	130.6	124.8	128.7

Table 2: (Continued)

Location	C501	C502	C612	L6-5679	L6-1656	Carlin
			OIL PERCENTAGE			
Orange, Va.	21.7	22.2	22.0	22.3	21.5	21.3
Jackson, Tenn.	22.7	23.7	24.5	23.1	24.4	22.5
Stoneville, Miss.[1/]	-	21.7	22.9	22.8	21.4	-
Sikeston, Mo.	20.2	21.9	22.5	21.1	21.9	21.3
Nowata, Okla.	22.2	23.5	22.7	22.1	22.7	22.2
Stuttgart, Ark.	21.9	22.2	22.7	21.8	22.2	22.0
Mean	21.7	22.5	22.9	22.2	22.4	21.9
			PROTEIN PERCENTAGE			
Orange, Va.	40.4	39.9	41.3	39.6	40.7	41.9
Jackson, Tenn.	41.4	38.8	38.8	38.5	36.3	42.0
Stoneville, Miss.[1/]	-	40.9	42.3	40.6	43.2	-
Sikeston, Mo.	41.0	40.0	40.7	40.6	39.3	41.3
Nowata, Okla.	37.8	36.0	38.6	36.3	35.9	36.7
Stuttgart, Ark.	45.5	46.0	45.5	44.5	45.2	42.7
Mean	41.2	40.3	41.2	40.0	40.1	40.9
			IODINE NUMBER OF THE OIL			
Orange, Va.	129.1	128.6	127.7	130.6	134.7	130.0
Jackson, Tenn.	126.5	126.8	128.6	128.3	133.5	128.6
Stoneville, Miss.[1/]	-	128.5	128.8	126.0	127.0	-
Sikeston, Mo.	128.5	126.6	128.0	135.0	128.8	130.6
Nowata, Okla.	131.4	128.3	129.4	131.5	133.9	132.3
Stuttgart, Ark.	120.6	119.2	121.2	123.5	132.6	128.6
Mean	127.2	126.3	127.3	129.2	131.8	130.0

Table 3: Relative maturity, days earlier (-) or later (+) than Gibson, of the strains in Uniform Group IV, 1949

Location	Date Planted	Gibson Matured	Chief	Patoka	Wabash	C490
		UPPER AND CENTRAL SOUTH				
Orange, Va.	5-17	10-1	0	0	0	-3
Blacksburg, Va.	5-20	10-4	+2	+2	+2	+4
Knoxville, Tenn.	5-10	9-12	+6	0	0	+7
Jackson, Tenn.	5-6	9-30	+2	-2	-28	-2
Mean			+3	0	-7	+2
		DELTA				
Sikeston, Mo.	5-12	9-15	-6	-1	-2	+6
Tunica, Miss.	5-9	9-16	0	+2	-4	+4
Stoneville, Miss.	5-11	9-7	-1	0	-2	+5
Mean			-2	0	-3	+5
		WEST				
Fayetteville, Ark.	5-28	9-16	+1	-3	0	+2
Stuttgart, Ark.	6-2	9-25	+1	+1	0	+1
Nowata, Okla.	5-22	10-1	-3	-2	0	+2
Denton, Texas		8-8	0	-2	-2	0
College Sta., Texas	5-10	8-20	-4	+2	-4	+4
Lubbock, Texas	6-20	9-15	0	0	0	0
Mean			-1	-1	-1	+2

Table 3: (Continued)

Location	C501	C502	C612	L6-5679	L6-1656	Carlin
			UPPER AND CENTRAL SOUTH			
Orange, Va.	0	0	0	0	0	+3
Blacksburg, Va.	+2	+1	+6	+2	+1	+4
Knoxville, Tenn.	+5	0	+9	+6	-1	+1
Jackson, Tenn.	-2	-13	-2	-2	-18	0
Mean	+1	-3	+3	+2	-5	+2
			DELTA			
Sikeston, Mo.	+4	+3	0	+4	+2	+7
Tunica, Miss.	+4	+3	+5	+8	0	+4
Stoneville, Miss.	+2	+1	+2	+5	0	0
Mean	+3	+2	+2	+6	+1	+4
			WEST			
Fayetteville, Ark.	+2	+3	+2	+1	+2	-2
Stuttgart, Ark.	+1	+1	+1	+2	+1	-1
Nowata, Okla.	+2	0	+2	+2	0	-5
Denton, Texas	+2	+2	0	+6	+2	0
College Sta., Texas	+4	+3	+4	+1	+4	-1
Lubbock, Texas	0	0	+5	0	0	-5
Mean	+2	+2	+2	+2	+2	-2

Table 4: Mean plant height of the strains in Uniform Group IV, 1949

Location	Gibson	Chief	Patoka	Wabash	C490	C501
			UPPER AND CENTRAL SOUTH			
Orange, Va.	39	47	37	41	39	42
Blacksburg, Va.	40	48	40	40	40	44
Knoxville, Tenn.	44	55	43	48	45	47
Jackson, Tenn.	38	44	37	40	41	42
Mean	40	48	39	42	41	44
			DELTA			
Sikeston, Mo.	44	55	40	46	45	48
Tunica, Miss.	38	42	29	36	35	38
Stoneville, Miss.	36	44	31	37	35	35
Clarkedale, Ark. 1/	23	21	24	20	22	20
Mean	35	40	31	35	34	35
			WEST			
Fayetteville, Ark.	31	36	28	32	31	35
Stuttgart, Ark.	22	25	21	19	24	25
Nowata, Okla.	34	42	32	37	35	39
Denton, Texas	23	24	19	19	25	27
Lubbock, Texas	24	23	19	28	27	28
College Sta., Texas	28	29	25	32	28	34
Mean	27	30	24	28	28	31

1/ - Not included in the mean.

Table 4: (Continued)

Location	C502	C612	L6-5679	L6-1656	Carlin
		UPPER AND CENTRAL SOUTH			
Orange, Va.	39	39	44	47	35
Blacksburg, Va.	40	40	44	48	40
Knoxville, Tenn.	44	45	51	48	41
Jackson, Tenn.	40	38	43	40	38
Mean	41	40	46	46	38
		DELTA			
Sikeston, Mo.	45	45	50	45	43
Tunica, Miss.	32	29	36	34	33
Stoneville, Miss.	32	35	39	33	30
Clarkedale, Ark.[1/]	21	21	22	21	21
Mean	32	32	37	33	32
		WEST			
Fayetteville, Ark.	30	31	35	34	29
Stuttgart, Ark.	24	22	24	24	21
Nowata, Okla.	34	31	39	38	34
Denton, Texas	21	21	23	22	25
Lubbock, Texas	22	22	28	25	24
College Sta., Tex.	29	26	28	30	27
Mean	27	25	30	29	27

Table 5: Lodging scores for strains in the Uniform Group IV, 1949

Location	Gibson	Chief	Patoka	Wabash	C490	C501
UPPER AND CENTRAL SOUTH						
Orange, Va.	2.5	3.0	2.0	2.0	2.0	3.0
Blacksburg, Va.	3.0	3.0	2.0	2.0	2.0	3.0
Knoxville, Tenn.	3.4	3.5	2.2	1.5	2.4	2.3
Jackson, Tenn.	3.2	3.5	2.2	2.0	2.0	1.5
DELTA						
Sikeston, Mo.	2.8	2.8	2.0	2.0	3.0	3.0
Tunica, Miss.	2.0	2.5	1.5	1.5	2.5	2.5
Stoneville, Miss.	3.0	3.0	2.0	1.8	2.0	2.0
Clarkedale, Ark.	2.0	2.0	2.0	1.0	2.0	3.0
WEST						
Fayetteville, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Nowata, Okla.	2.0	2.0	2.0	2.0	3.0	3.0
Lubbock, Texas	1.0	1.0	1.0	1.0	1.0	1.0
College Sta., Texas	2.0	1.0	2.0	1.0	2.0	2.0

Table 5: (Continued)

Location	C502	C612	L6-5679	L6-1656	Carlin
		UPPER AND CENTRAL SOUTH			
Orange, Va.	1.8	2.0	2.0	2.5	3.5
Blacksburg, Va.	2.0	2.0	2.0	3.0	2.0
Knoxville, Tenn.	1.1	1.6	1.0	1.9	3.5
Jackson, Tenn.	1.8	1.2	1.2	1.2	3.5
		DELTA			
Sikeston, Mo.	1.8	1.8	1.3	1.0	3.3
Tunica, Miss.	2.0	1.5	2.0	2.0	2.8
Stoneville, Miss.	2.5	1.0	1.0	2.3	4.0
Clarkedale, Ark.	2.0	2.0	2.0	1.0	2.0
		WEST			
Fayetteville, Ark.	1.0	1.0	1.0	1.0	1.0
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0
Nowata, Okla.	2.0	2.0	2.0	2.0	3.0
Lubbock, Texas	1.0	1.0	1.0	1.0	1.0
College Sta., Texas	1.0	1.0	2.0	2.0	1.0

Table 6: Mean seed weight for strains in Uniform Group IV, 1949

Location	Gibson	Chief	Patoka	Wabash	C490	C501
			UPPER AND CENTRAL SOUTH			
Orange, Va.	15.0	15.0	21.0	16.0	19.0	16.0
Blacksburg, Va.	16.0	15.7	19.5	18.3	17.8	16.1
Knoxville, Tenn.	12.8	13.4	16.3	13.3	16.3	14.0
Jackson, Tenn.	14.0	14.0	17.0	13.9	16.8	14.7
Mean	14.4	14.5	18.4	15.4	17.5	15.2
			DELTA			
Sikeston, Mo.	13.2	13.3	15.4	13.3	14.9	11.7
Tunica, Miss.	14.3	15.8	11.8	12.0	14.7	12.8
Stoneville, Miss.	11.5	12.1	13.0	11.7	13.2	13.0
Clarkedale, Ark.	15.0	14.0	14.0	18.0	13.0	20.0
Mean	13.5	13.8	13.6	13.8	14.0	14.4
			WEST			
Fayetteville, Ark.	14.0	12.0	16.0	14.0	14.0	13.0
Stuttgart, Ark.	13.0	12.0	16.0	12.0	14.0	13.0
Nowata, Okla.	13.0	12.8	17.6	14.2	17.5	14.0
Lubbock, Texas	16.0	16.0	17.0	17.0	16.0	17.0
College Sta., Texas	12.0	14.0	15.0	12.0	13.0	13.0
Mean	13.6	13.4	16.3	13.8	14.9	14.0

Table 6: (Continued)

Location	C502	C612	L6-5679	L6-1656	Carlin
			UPPER AND CENTRAL SOUTH		
Orange, Va.	18.0	20.0	19.0	16.0	16.0
Blacksburg, Va.	16.3	20.2	17.0	19.3	16.0
Knoxville, Tenn.	14.6	16.1	14.0	12.3	14.0
Jackson, Tenn.	15.5	16.2	14.3	12.7	14.6
Mean	16.1	18.1	16.1	15.1	15.2
			DELTA		
Sikeston, Mo.	14.3	14.6	12.4	12.2	12.1
Tunica, Miss.	13.0	13.7	12.7	12.2	16.0
Stoneville, Miss.	12.2	13.3	11.8	11.7	11.9
Clarkedale, Ark.	18.0	17.0	18.0	16.0	17.0
Mean	14.4	14.6	13.7	13.0	14.2
			WEST		
Fayetteville, Ark.	14.0	14.0	12.0	12.0	11.0
Stuttgart, Ark.	13.0	17.0	16.0	14.0	13.0
Nowata, Okla.	15.4	17.2	14.8	14.3	13.3
Lubbock, Texas	18.0	18.0	16.0	17.0	16.0
College Sta., Texas	14.0	15.0	13.0	14.0	12.0
Mean	14.9	16.2	14.4	14.3	13.1

Table 7: Seed quality scores for strains in Uniform Group IV, 1949

Location	Gibson	Chief	Patoka	Wabash	C490	C501
			UPPER AND CENTRAL SOUTH			
Orange, Va.	1.0	2.0	1.0	1.0	1.0	1.0
Blacksburg, Va.	4.0	3.0	4.0	2.0	3.0	3.0
Knoxville, Tenn.	3.2	4.2	3.8	1.8	3.0	2.2
Jackson, Tenn.	3.5	4.2	4.0	1.8	3.5	2.2
			DELTA			
Sikeston, Mo.	1.0	2.0	1.0	1.0	1.5	2.0
Tunica, Miss.	4.0	4.0	4.0	3.0	3.0	3.0
Stoneville, Miss.	3.0	4.0	3.0	3.0	3.0	3.0
			WEST			
Nowata, Okla.	2.0	3.0	1.0	3.0	2.0	2.0
Lubbock, Texas	2.0	1.0	2.0	1.0	1.0	2.0
College Sta., Texas	2.0	3.0	2.0	3.0	2.0	2.0

Table 7: (Continued)

Location	C502	C612	L6-5679	L6-1656	Carlin
		UPPER AND CENTRAL SOUTH			
Orange, Va.	1.0	1.0	2.0	1.0	3.0
Blacksburg, Va.	3.0	3.0	2.0	2.0	2.0
Knoxville, Tenn.	1.2	2.5	2.0	2.8	2.0
Jackson, Tenn.	1.0	3.2	2.0	2.5	3.5
		DELTA			
Sikeston, Mo.	1.0	1.0	1.3	1.5	2.0
Tunica, Miss.	3.0	3.0	3.0	4.0	4.0
Stoneville, Miss.	3.0	3.0	2.0	5.0	4.0
		WEST			
Nowata, Okla.	3.0	2.0	2.0	2.0	2.0
Lubbock, Texas	1.0	2.0	2.0	2.0	1.0
College Sta., Texas	4.0	3.0	1.0	4.0	4.0

Table 8: Two-year summary of yield and oil content for strains in Uniform Group IV, 1948-1949

Location	Gibson	Chief	Patoka	Wabash	C490	C501	C502	C612
			YIELD					
Orange, Va.	27.2	29.7	32.0	29.1	35.0	31.2	27.9	34.4
Knoxville, Tenn.	23.3	30.0	26.3	27.6	28.0	28.6	30.8	29.4
Jackson, Tenn.	28.1	31.0	32.8	31.6	34.8	32.8	34.6	32.8
Sikeston, Mo.	24.0	25.4	25.5	27.6	23.0	25.6	26.6	29.0
Tunica, Miss.	23.8	18.8	21.8	25.5	29.5	27.4	26.4	25.4
Stoneville, Miss.	26.6	19.6	23.9	25.1	25.8	32.2	24.8	28.8
Lubbock, Texas	21.6	19.2	17.2	19.6	21.6	21.0	18.6	19.9
			OIL CONTENT					
Orange, Va.	21.6	21.2	21.4	21.6	22.0	21.9	22.8	22.4
Jackson, Tenn.	23.4	23.0	22.9	24.4	23.2	23.0	23.8	24.0
Stoneville, Miss.	-	22.4	22.3	23.7	22.2	-	22.8	23.4

Uniform Group V, 1949

Strain or Variety	Source or Originating Agency	Origin
S-10C	Missouri A.E.S.	Sel. from rogue in Illini
D512-3	Delta Branch A.E.S. & U.S.R.S.L.	Sel. from C171 x Arksoy 2913
D514-13	Delta Branch A.E.S. & U.S.R.S.L.	Sel. from Chief x Arksoy 2913
D514-20	Delta Branch A.E.S. & U.S.R.S.L.	Sel. from Chief x Arksoy 2913
D517-3	Delta Branch A.E.S. & U.S.R.S.L.	Sel. from Arksoy 2913 x Patoka
N45-1466	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Ralsoy x Ogden
D523-25	Delta Branch A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Arksoy
D523-30	Delta Branch A.E.S. & U.S.R.S.L.	Sel. from Dunfield x Arksoy
R46-2062	Rice Branch A.E.S. & U.S.R.S.L.	Sel. from Dunfield x C143
R46-2076	Rice Branch A.E.S. & U.S.R.S.L.	Sel. from C143 x C233
L4-6290	Ill. A.E.S. & U.S.R.S.L.	Sel. from L7-1355 x Macoupin x L7-1355

Thirty-two Group V nurseries were harvested and results are summarized. S-100 is the only standard variety in this group. S-100 is a full-season variety in the northern range of the southern region. In more southern parts of the region, varieties of this maturity are desired to grow in combination with later varieties and thus extend the harvest period. Where Ogden will mature, S-100 is usually 14 to 18 days earlier.

Of the ten strains grown in Group V along with S-100, none has been outstandingly superior to S-100. Differences between strains were nonsignificant in 10 of the 21 tests harvested in the East Coast, Upper and Central South, and Delta areas. One strain, N45-1466, has been grown three years. N45-1466 has surpassed S-100 in seed yield in the East Coast and Delta sections and has 1.5 to 2.0 percent higher oil content. However, although N45-1466 is earlier in maturity than Ogden, it is sufficiently later than S-100 that in most production areas it would be competing with Ogden more directly than with S-100. N45-1466 does not appear to have sufficient merit in any area to be considered for release.

Four strains, D512-3, D514-13, D514-20, and D517-3, have been grown in the regional plantings for two years. D512-3 has produced higher seed yields than S-100 in the eastern area, has equalled S-100 in seed yield in other areas, and has surpassed S-100 in oil content in all areas. D512-3 is of approximately the same maturity as N45-1466 and consequently is somewhat late to be considered as a replacement for S-100.

D514-13 is of approximately the same maturity as S-100. On the basis of its two year performance, D514-3 has given seed yields comparable to S-100 in the East Coast and Delta sections, but has yielded less in the Upper and

and Central South. In oil content, D514-13 is only 0.4 percent higher than S-100. It is more subject to lodging than S-100.

D514-20 is slightly later than S-100 in the eastern section, but of similar maturity in all other sections. The oil content of D514-20 is approximately 2 percent higher than that of S-100. It also has an advantage in seed quality, but is inferior in standing ability.

D517-3 has yielded somewhat below S-100 in all areas, but does surpass S-100 in oil content by 1 to 1.5 percent. D517-3 is quite comparable to S-100 in maturity, seed quality, and lodging.

Five strains, D523-25, D523-30, R46-2062, R46-2076, and L4-6290, were grown in the regional plantings for the first time. Of these strains, D523-25 and R46-2062 appear most promising over most of the area. Both have distinctly higher oil content than S-100, and are equal to S-100 in most other respects. D523-25 has produced seed superior in quality to that of S-100 in the Delta plantings.

D523-30 is slightly earlier than S-100, has somewhat better seed quality, but is more subject to lodging. D523-30 yielded significantly less than S-100 in 7 of the 32 nurseries. R46-2076 is approximately five days later than S-100, has lower seed quality, and is more subject to lodging. It produced lower seed yields than S-100 in 6 of the 32 nurseries.

L4-6290 is an extremely tall-growing strain, approximately five days later than S-100. In the humid areas, the rank growth of L4-6290 is a disadvantage; but in the western area, the extra growth should be of value. L4-6290 has good oil content and fair seed quality.

Table 9: Summary of yield data for the strains in Uniform Group V, 1949

	S-100	D512-3	D514-13	D514-20	D517-3	N45-1466
			EAST COAST			
Petersburg, Va.	37.2	44.6	36.4	40.9	37.6	42.8
Williamsburg, Va.	28.4	31.7	24.7	23.8-	24.4-	32.3
Holland, Va.	30.3	36.0	24.2	27.9	26.9	38.2+
Norfolk, Va.	35.7	31.1	34.5	32.2	32.2	35.7
Onley, Va.	29.9	27.6	27.6	25.3	23.0	32.2
Plymouth, N. C.	23.5	25.3	23.9	31.9	23.7	28.4
Mean	30.8	32.7	28.6	30.3	28.0	34.9
			UPPER AND CENTRAL SOUTH			
Orange, Va.	38.5	36.3	33.7-	36.3	37.3	37.9
Charlotte C. H., Va.	31.2	30.8	27.1	31.1	28.2	35.1+
Knoxville, Tenn.	36.4	32.1	30.6	28.1	31.6	31.0
Jackson, Tenn.	36.7	38.1	33.0	39.2	35.4	34.5
Crossville, Ala.	28.3	20.9-	23.8	25.2	23.8-	25.3
Watkinsville, Ga.	19.5	21.6	17.9	18.6	19.5	19.5
Experiment, Ga.	26.0	21.9	29.8	30.1	25.8	25.2
State College, Miss.	37.0	34.2	34.5	30.1-	26.6-	32.7
Mean	31.7	29.5	28.8	29.8	28.5	30.2
			DELTA			
Sikeston, Mo.	35.2	26.7-	26.3-	30.3-	29.7-	31.2-
Wardell, Mo.	39.1	36.3	31.8-	30.3-	27.1-	35.2
Clarkedale, Ark.[1/]	12.2	12.7	12.4	13.4	11.1	14.0
Marianna, Ark.	27.4	22.4-	22.8-	26.1	23.2-	23.5
Tunica, Miss.	23.6	25.1	20.8	25.6	24.4	28.1
Stoneville, Miss.	26.1	20.5	31.8	27.9	23.3	27.7
St. Joseph, La.	34.6	42.9+	44.3+	43.6+	34.5	35.6
Hamburg, La.	24.9	24.1	21.9	21.6	17.4	22.7
Baton Rouge, La.	21.3	18.5	26.2	21.0	22.5	21.6
Mean	29.0	27.1	28.2	28.3	25.3	28.2
			WEST			
Bixby, Okla.	22.4	20.6	22.6	19.3	15.9	16.7
Nowata, Okla.	33.2	22.2-	31.0	28.1	29.2	20.7-
Stillwater, Okla.	20.0	15.1	10.8-	10.6-	11.8-	18.1
Fayetteville, Ark.[1/]	9.6	9.2	7.4	6.4	5.8	8.3
Stuttgart, Ark.	15.1	21.5+	16.7	14.8	17.1	20.3+
Curtis, La.	26.0	19.1	29.6	19.8	22.2	16.4
Denton, Texas[1/]	10.2	9.0	8.2	9.2	5.6	6.5
Lubbock, Texas	25.4	28.1	21.6	25.2	20.2-	25.6
College Sta., Texas	27.0	17.7-	25.0	25.9	21.4-	17.0-
Mean	24.2	20.6	22.5	20.5	19.7	19.3

1/- Not included in the mean.
(+)- Strains yielding significantly more (odds 19:1) than S-100.
(-)- Strains yielding significantly less (odds 19:1) than S-100.

Table 9: (Continued)

Location	D523-25	D523-30	R46-2062	R46-2076	L4-6290	L.S.D. (5% level)	C.V.
			EAST COAST				
Petersburg, Va.	42.7	40.7	39.6	40.5	35.2	N.S.	11%
Williamsburg, Va.	28.6	19.8-	26.4	27.7	25.1	4.0	11%
Holland, Va.	33.9	30.3	27.5	26.2	24.8	7.2	17%
Norfolk, Va.	32.2	27.6	29.9	33.4	33.4	N.S.	12%
Onley, Va.	25.3	24.2	27.6	23.0	26.5	N.S.	17%
Plymouth, N. C.	24.7	31.4	27.8	27.6	26.0	N.S.	17%
Mean	31.2	29.0	29.8	29.7	28.5		
			UPPER AND CENTRAL SOUTH				
Orange, Va.	35.1	40.9	38.9	33.1-	33.9-	4.4	8%
Charlotte C. H., Va.	26.9	29.8	32.9	26.6	32.0	3.8	9%
Knoxville, Tenn.	33.1	33.5	36.1	33.0	31.9	N.S.	12%
Jackson, Tenn.	37.4	37.2	37.8	33.0	38.4	N.S.	14%
Crossville, Ala.	27.5	27.6	25.7	25.8	25.3	3.6	10%
Watkinsville, Ga.	19.5	18.8	19.8	23.8	18.2	N.S.	13%
Experiment, Ga.	27.0	26.5	21.9	25.3	37.5+	6.7	17%
State College, Miss.	28.9-	28.5-	25.2-	30.5-	33.1	5.2	12%
Mean	29.4	30.4	29.8	28.9	31.3		
			DELTA				
Sikeston, Mo.	29.4-	28.5-	31.6	30.3-	31.7	3.7	9%
Wardell, Mo.	35.5	26.7-	30.7-	31.3-	37.4	5.2	11%
Clarkedale, Ark. 1/	9.2	10.0	9.2	8.6	9.6	2.2	14%
Marianna, Ark.	27.1	29.1	27.6	22.3-	28.8	4.0	11%
Tunica, Miss.	23.9	23.5	19.4	21.4	25.1	N.S.	24%
Stoneville, Miss.	32.8	28.8	25.6	32.8	27.5	6.5	16%
St. Joseph, La.	42.8+	39.1	36.0	39.4	36.4	7.1	13%
Hamburg, La.	28.1	19.7	21.1	26.2	22.5	N.S.	19%
Baton Rouge, La.	21.1	12.1	14.9	17.7	16.4	N.S.	30%
Mean	30.1	25.9	25.9	27.7	28.2		
			WEST				
Bixby, Okla.	18.2	15.4-	14.6-	21.5	24.5	6.7	24%
Nowata, Okla.	27.0-	27.4-	30.9	29.1	30.2	5.2	13%
Stillwater, Okla. 1/	9.8-	15.6	15.4	13.4-	10.0-	5.8	30%
Fayetteville, Ark. 1/	6.8	8.1	8.1	8.3	9.2	2.3	20%
Stuttgart, Ark.	18.1+	17.6	19.3+	17.2	18.3+	2.6	10%
Curtis, La.	19.4	11.7	17.9	15.8	17.4	5.8	21%
Denton, Texas 1/	9.2	8.5	7.1	8.0	7.9	2.3	20%
Lubbock, Texas	26.7	20.3-	22.3	29.2	27.7	3.9	11%
College Sta., Texas	24.8	27.2	20.3-	24.7	30.5	6.6	19%
Mean	20.6	19.3	20.1	21.6	22.6		

Table 10: Chemical composition of the strains in Group V, 1949

Location	S-100	D512-3	D514-13	D514-20	D517-3	N45-1466
			PERCENT OIL			
Petersburg, Va.	18.9	20.6	19.2	20.6	19.8	20.8
Knoxville, Tenn.	20.4	21.9	21.3	21.9	21.7	21.8
Sikeston, Mo.	19.1	18.7	19.6	21.2	19.2	19.7
Stoneville, Miss.	18.6	21.3	20.1	22.2	20.3	21.0
Stuttgart, Ark.	19.7	21.1	20.9	21.6	19.6	20.7
Bixby, Okla.	20.3	20.5	20.7	22.5	19.1	19.7
Mean	19.5	20.7	20.3	21.7	20.0	20.6
			PERCENT PROTEIN			
Petersburg, Va.	44.3	41.1	43.5	42.5	44.2	40.4
Knoxville, Tenn.	41.5	39.2	40.4	41.0	41.9	39.8
Sikeston, Mo.	43.4	42.9	43.7	40.2	41.9	40.4
Stoneville, Miss.	42.8	39.7	42.1	40.4	42.6	40.1
Stuttgart, Ark.	47.6	44.5	45.3	44.4	49.1	43.8
Bixby, Okla.	39.1	35.7	35.8	34.8	40.0	40.1
Mean	43.1	40.5	42.2	40.7	43.3	40.8
			IODINE NUMBER OF OIL			
Petersburg, Va.	128.9	133.4	133.6	129.3	127.8	133.7
Knoxville, Tenn.	132.3	131.4	131.7	130.8	129.2	131.7
Sikeston, Mo.	129.1	132.1	130.1	128.6	127.6	131.5
Stoneville, Miss.	130.9	130.9	131.2	128.9	128.4	132.3
Stuttgart, Ark.	121.2	127.5	129.1	123.2	121.3	129.9
Bixby, Okla.	128.7	130.8	128.6	127.7	122.6	131.4
Mean	128.5	131.0	130.7	128.1	126.2	131.8

Table 10: (Continued)

Location	D523-25	D523-30	R46-2062	R46-2076	L4-6290
		PERCENT OIL			
Petersburg, Va.	19.9	20.2	20.9	19.3	20.5
Knoxville, Tenn.	21.5	22.6	22.9	20.7	23.0
Sikeston, Mo.	19.1	19.3	21.1	18.2	20.4
Stoneville, Miss.	21.1	20.3	22.2	20.2	21.6
Stuttgart, Ark.	21.1	20.3	23.1	20.1	21.5
Bixby, Okla.	21.2	22.3	21.1	20.0	21.5
Mean	20.6	20.8	21.9	19.8	21.4
		PERCENT PROTEIN			
Petersburg, Va.	44.7	41.6	43.2	43.2	41.2
Knoxville, Tenn.	42.7	39.6	39.9	40.3	37.5
Sikeston, Mo.	45.4	45.9	43.0	44.4	41.6
Stoneville, Miss.	42.7	43.2	40.0	41.7	40.9
Stuttgart, Ark.	48.0	48.1	43.3	46.6	45.1
Bixby, Okla.	37.4	36.1	38.6	38.3	36.7
Mean	43.5	42.4	41.3	42.4	40.5
		IODINE NUMBER OF OIL			
Petersburg, Va.	127.5	128.6	128.1	136.3	131.6
Knoxville, Tenn.	124.4	130.6	131.0	133.4	130.9
Sikeston, Mo.	124.9	126.5	128.2	133.4	129.2
Stoneville, Miss.	124.9	127.5	129.2	133.4	130.7
Stuttgart, Ark.	116.0	120.1	121.5	131.2	123.2
Bixby, Okla.	122.6	127.1	124.1	131.2	129.4
Mean	123.4	126.7	127.0	133.2	129.2

Table 11: Relative maturity, days earlier (-) or later (+) than S-100, for the strains in Uniform Group V, 1949

Location	Date Planted	S-100 Matured	D512-3	D514-13	D514-20	D517-3
		EAST COAST				
Petersburg, Va.	5-13	9-25	+11	+3	+9	+6
Holland, Va.	5-16	9-20	+12	+5	+6	-2
Plymouth, N. C.	5-5	10-4	-1	-5	+9	-1
Mean			+7	+1	+8	+1
		UPPER AND CENTRAL SOUTH				
Orange, Va.	5-17	10-6	+10	+6	0	0
Charlotte C.H., Va.	5-19	10-4	+9	0	0	0
Knoxville, Tenn.	5-10	9-30	+4	-8	+2	-6
Jackson, Tenn.	5-10	10-2	0	-2	0	-2
Experiment, Ga.	5-21	9-16	+8	-4	+6	-1
State College, Miss.	5-12	9-18	-1	-1	-2	+11
Mean			+5.0	-1.5	+1.0	+0.3
		DELTA				
Sikeston, Mo.	5-12	9-28	+12	-5	-4	-4
Wardell, Mo.	5-16	9-25	+9	+6	+8	+8
Marianna, Ark.	5-31	9-22	+6	-2	-4	-2
Tunica, Miss.	5-9	10-3	0	-11	-9	-11
Stoneville, Miss.	5-10	9-15	+20	+1	+9	+1
St. Joseph, La.	5-9	9-5	+5	+3	+5	-4
Hamburg, La.	5-6	9-12	+3	+2	+8	0
Baton Rouge, La.	6-2	9-20	+8	+2	+4	+4
Mean			+8	-1	+2	-1
		WEST				
Bixby, Okla.	5-13	9-27	+3	-2	-1	-3
Nowata, Okla.	5-22	10-14	+12	0	0	0
Stillwater, Okla.	5-3	9-23	+5	-2	+2	0
Fayetteville, Ark.	5-28	10-5	+10	-12	-10	-6
Stuttgart, Ark.	6-2	9-29	0	0	0	0
Curtis, La.	5-5	9-10	+2	+1	+8	0
Denton, Texas		8-17	+1	-2	-2	+1
Lubbock, Texas	6-20		+10	0	0	0
College Sta., Texas	5-10	9-2	+5	-5	-1	-5
Mean			+5	-3	-1	-1

Table 11:

Location	N45-1466	D523-25	D523-30	R46-2062	R46-2076	L4-6290
			EAST COAST			
Petersburg, Va.	+13	+3	-5	+6	+11	+8
Holland, Va.	+5	+3	+2	-4	+3	+7
Plymouth, N. C.	0	-5	-6	-6	+2	-1
Mean	+6	0	-3	-1	+5	+5
			UPPER AND CENTRAL SOUTH			
Orange, Va.	+10	0	0	0	0	+3
Charlotte C. H., Va.	+9	+3	0	0	+5	+10
Knoxville, Tenn.	+4	-1	-8	-4	+3	+2
Jackson, Tenn.	0	0	-2	-2	0	-2
Experiment, Ga.	+10	-2	-5	-4	-1	+4
State College, Miss.	-2	+5	-2	-2	0	+11
Mean	+5.2	+0.8	-2.8	-2.0	+1.2	+4.7
			DELTA			
Sikeston, Mo.	+6	+3	-3	-2	+4	+3
Wardell, Mo.	+8	-4	-4	+5	+8	+3
Marianna, Ark.	+8	+2	-2	0	+1	-1
Tunica, Miss.	+3	-13	-10	0	-4	-2
Stoneville, Miss.	+20	+1	-3	+1	+15	+18
St. Joseph, La.	+5	+3	-3	-2	+2	+5
Hamburg, La.	+8	+8	+1	+6	+8	+8
Baton Rouge, La.	+8	+4	-5	+2	+8	+5
Mean	+8	+1	-4	+1	+7	+5
			WEST			
Bixby, Okla.	+6	-2	-4	-1	+2	+4
Nowata, Okla.	+9	+4	0	0	0	+4
Stillwater, Okla.	+5	+1	+1	+2	0	+4
Fayetteville, Ark.	+10	+10	-8	-1	-1	+10
Stuttgart, Ark.	+1	0	0	0	0	0
Curtis, La.	+8	+3	+3	+6	+8	+8
Denton, Texas	+2	+3	-2	+2	+2	0
Lubbock, Texas	+10	-5	-10	0	+5	+10
College Sta., Texas	-1	-3	+5	+6	-1	+2
Mean	+6	+1	-2	+2	+2	+5

Table 12: Mean plant height of strains in Uniform Group V, 1949

Location	S-100	D512-3	D514-13	D514-20	D517-3	N45-1466
		EAST COAST				
Petersburg, Va.	48	40	46	45	48	35
Williamsburg, Va.	44	37	40	40	36	32
Holland, Va.	40	31	34	42	29	33
Norfolk, Va.	47	38	43	38	42	34
Onley, Va.	29	22	23	24	22	18
Plymouth, N. C.	37	28	32	37	34	35
Mean	41	33	36	38	35	31
		UPPER AND CENTRAL SOUTH				
Orange, Va.	47	38	45	41	40	36
Charlotte C. H., Va.	39	36	32	34	34	35
Knoxville, Tenn.	56	43	51	50	52	40
Jackson, Tenn.	51	44	43	44	44	45
Watkinsville, Ga.	30	32	26	36	24	27
Experiment, Ga.	47	38	39	46	28	34
Mean	45	38	39	42	37	36
		DELTA				
Sikeston, Mo.	55	48	49	50	35	44
Wardell, Mo.	43	36	39	40	33	32
Clarkedale, Ark. 1/	26	25	20	24	22	24
Marianna, Ark.	46	40	38	40	40	38
Tunica, Miss.	41	37	34	36	33	34
Stoneville, Miss.	44	28	36	38	36	28
St. Joseph, La.	40	34	42	40	40	34
Hamburg, La.	50	30	35	38	28	30
Baton Rouge, La.	45	36	44	44	41	28
Mean	46	36	40	41	36	33
		WEST				
Bixby, Okla.	47	41	43	40	37	37
Nowata, Okla.	45	39	40	43	38	34
Stillwater, Okla.	38	37	32	32	33	37
Fayetteville, Ark.	39	34	33	37	34	35
Stuttgart, Ark.	26	22	22	21	24	19
Curtis, La.	45	24	38	48	33	28
Denton, Texas	31	33	23	22	24	35
Lubbock, Texas	30	38	24	27	20	24
College Sta., Texas	39	23	33	34	29	38
Mean	38	32	32	34	30	32

1/ - Not included in the mean.

Table 12: (Continued)

Location	D523-25	D523-30	R46-2062	R46-2076	L4-6290
		EAST COAST			
Petersburg, Va.	45	53	46	55	60
Williamsburg, Va.	42	44	40	42	54
Holland, Va.	36	46	36	42	45
Norfolk, Va.	41	42	42	46	61
Onley, Va.	26	28	19	26	38
Plymouth, N. C.	38	44	34	37	48
Mean	38	43	36	41	51
		UPPER AND CENTRAL SOUTH			
Orange, Va.	40	45	44	41	53
Charlotte C. H., Va.	39	38	41	40	49
Knoxville, Tenn.	55	57	50	55	67
Jackson, Tenn.	45	45	44	46	60
Watkinsville, Ga.	33	26	26	33	32
Experiment, Ga.	38	42	38	43	61
Mean	42	42	40	43	54
		DELTA			
Sikeston, Mo.	56	57	52	56	65
Wardell, Mo.	46	47	41	46	55
Clarkedale, Ark. 1/	24	25	23	25	33
Marianna, Ark.	42	46	41	44	57
Tunica, Miss.	38	42	31	38	53
Stoneville, Miss.	37	40	38	41	52
St. Joseph, La.	50	46	40	46	56
Hamburg, La.	40	32	40	45	55
Baton Rouge, La.	40	45	38	45	47
Mean	44	44	40	45	55
		WEST			
Bixby, Okla.	43	46	41	47	56
Nowata, Okla.	47	48	44	40	50
Stillwater, Okla.	37	42	37	35	43
Fayetteville, Ark.	36	39	37	35	51
Stuttgart, Ark.	27	28	27	27	37
Curtis, La.	47	43	46	43	44
Denton, Texas	29	31	30	29	40
Lubbock, Texas	25	25	28	24	38
College Sta., Texas	38	50	23	36	38
Mean	36	39	35	35	44

Table 13: Lodging scores for the strains in Uniform Group V, 1949

Location	S-100	D512-3	D514-13	D514-20	D517-3	N45-1466
			EAST COAST			
Petersburg, Va.	1.0	2.0	2.0	2.0	1.0	2.0
Williamsburg, Va.	3.0	2.0	4.0	4.0	3.0	3.0
Holland, Va.	1.0	2.0	2.0	2.0	2.0	1.0
Norfolk, Va.	1.2	3.2	3.7	2.2	1.7	2.0
Onley, Va.	1.0	3.0	2.0	2.7	1.0	2.7
Plymouth, N. C.	2.0	1.5	2.5	2.5	1.5	2.0
			UPPER AND CENTRAL SOUTH			
Orange, Va.	2.2	3.0	5.0	3.0	3.5	2.0
Charlotte C. H., Va.	2.0	3.0	3.0	2.0	2.0	2.0
Knoxville, Tenn.	2.5	3.2	2.8	3.2	1.6	1.8
Jackson, Tenn.	1.8	3.0	3.2	3.2	2.0	1.8
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Experiment, Ga.	1.0	4.0	2.0	3.0	2.0	1.0
State College, Miss.	1.0	2.0	1.0	1.0	1.0	2.0
			DELTA			
Sikeston, Mo.	1.8	2.3	2.5	2.0	2.3	2.3
Wardell, Mo.	2.5	3.0	3.0	3.0	3.0	2.5
Clarkedale, Ark.	2.0	4.0	3.0	3.0	3.0	3.0
Marianna, Ark.	2.0	1.0	3.0	2.0	2.0	2.0
Tunica, Miss.	2.5	3.5	2.8	2.8	1.8	3.2
Stoneville, Miss.	2.8	2.2	2.2	3.0	2.2	2.2
St. Joseph, La.	2.0	3.0	2.0	4.0	1.0	1.0
Hamburg, La.	2.0	1.0	3.0	3.0	2.0	1.0
Baton Rouge, La.	2.0	3.0	2.0	2.0	2.0	2.0
			WEST			
Bixby, Okla.	2.0	1.0	2.0	2.0	2.0	1.0
Nowata, Okla.	2.0	3.0	2.0	2.0	2.0	3.0
Stillwater, Okla.	2.0	2.0	1.0	1.0	1.0	2.0
Fayetteville, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, Ark.	1.0	2.0	2.0	2.0	1.0	1.0
Curtis, La.	2.0	1.0	3.0	2.0	2.0	1.0
Lubbock, Texas	1.0	2.0	1.0	1.0	2.0	1.0
College Station, Texas	1.0	1.0	2.0	2.0	1.0	2.0

Table 13: (Continued)

Location	D523-25	D523-30	R46-2062	R46-2076	L4-6290
		EAST COAST			
Petersburg, Va.	1.0	2.0	1.0	2.0	2.0
Williamsburg, Va.	4.0	4.0	3.0	4.0	3.0
Holland, Va.	1.0	2.0	1.0	3.0	3.0
Norfolk, Va.	2.2	2.0	1.5	3.0	1.5
Onley, Va.	1.2	3.2	2.0	1.0	1.2
Plymouth, N. C.	2.5	2.5	1.5	2.0	2.0
		UPPER AND CENTRAL SOUTH			
Orange, Va.	2.0	2.5	3.2	3.0	4.0
Charlotte C. H., Va.	2.0	3.0	2.0	2.0	3.0
Knoxville, Tenn.	2.7	2.2	1.4	3.3	2.7
Jackson, Tenn.	2.2	2.0	1.2	2.5	2.0
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0
Experiment, Ga.	2.0	2.0	2.0	3.0	3.0
State College, Miss.	1.0	1.0	1.0	3.0	1.0
		DELTA			
Sikeston, Mo.	2.0	2.3	2.3	2.5	2.5
Wardell, Mo.	3.0	3.5	2.5	3.0	2.5
Clarkedale, Ark.	3.0	3.0	3.0	3.0	4.0
Marianna, Ark.	2.0	3.0	2.0	2.0	2.0
Tunica, Miss.	2.8	2.5	2.0	3.0	2.5
Stoneville, Miss.	2.5	2.8	2.5	2.2	3.5
St. Joseph, La.	1.0	3.0	2.0	1.0	1.0
Hamburg, La.	2.0	1.0	2.0	3.0	3.0
Baton Rouge, La.	2.0	2.0	2.0	2.0	3.0
		WEST			
Bixby, Okla.	2.0	1.0	1.0	2.0	2.0
Nowata, Okla.	2.0	2.0	2.0	2.0	3.0
Stillwater, Okla.	1.0	3.0	2.0	2.0	2.0
Fayetteville, Ark.	1.0	1.0	1.0	1.0	1.0
Stuttgart, Ark.	2.0	2.0	1.0	2.0	2.0
Curtis, La.	3.0	2.0	2.0	3.0	2.0
Lubbock, Texas	1.0	1.0	1.0	2.0	1.0
College Station, Texas	1.0	2.0	1.0	1.0	2.0

Table 14: Mean seed weight for strains in Uniform Group V, 1949

Location	S-100	D512-3	D514-13	D514-20	D517-3	N45-1466
			EAST COAST			
Petersburg, Va.	17.0	13.0	17.0	15.0	20.0	18.0
Williamsburg, Va.	17.5	15.5	15.5	23.0	21.0	17.0
Holland, Va.	15.5	16.0	16.5	18.0	18.0	17.5
Plymouth, N. C.	13.0	11.6	13.2	15.4	15.6	13.7
Mean	15.8	14.0	15.5	17.8	18.7	16.6
			UPPER AND CENTRAL SOUTH			
Orange, Va.	17.0	15.0	16.0	18.0	15.0	16.0
Charlotte C. H., Va.	19.5	18.5	16.0	18.5	23.5	20.5
Knoxville, Tenn.	14.0	12.5	13.3	14.5	18.0	14.6
Jackson, Tenn.	16.0	13.3	15.1	16.2	18.6	13.4
Mean	16.6	14.8	15.1	16.8	18.8	16.1
			DELTA			
Sikeston, Mo.	13.1	10.4	11.8	13.0	15.7	12.7
Wardell, Mo.	12.9	11.8	12.1	12.5	15.7	12.4
Clarkedale, Ark.	18.0	15.0	14.0	16.0	15.0	9.0
Marianna, Ark.	14.0	13.0	12.0	13.0	15.0	14.0
Tunica, Miss.	14.4	14.6	14.2	14.8	17.3	16.0
Stoneville, Miss.	10.8	13.1	12.3	12.3	12.5	14.2
Mean	13.9	13.0	12.7	13.6	15.2	13.0
			WEST			
Bixby, Okla.	11.7	10.1	12.3	10.8	13.8	11.7
Nowata, Okla.	16.2	13.1	13.9	15.7	19.6	14.2
Stillwater, Okla.	15.1	14.3	12.5	13.2	14.9	16.1
Fayetteville, Ark.	13.0	12.0	8.0	9.0	11.0	8.0
Stuttgart, Ark.	15.0	13.0	15.0	16.0	19.0	16.0
Lubbock, Texas	17.0	17.0	16.0	17.0	18.0	17.0
College Sta., Texas	14.0	11.0	11.0	12.0	15.0	12.0
Mean	14.6	12.9	12.7	13.4	15.9	13.6

Table 14: (Continued)

Location	D523-25	D523-30	R46-2062	R46-2076	L4-6290
		EAST COAST			
Petersburg, Va.	19.0	-	21	21	17
Williamsburg, Va.	21.5	17.5	19.5	19.0	17.0
Holland, Va.	21.0	14.5	16.0	16.0	16.5
Plymouth, N. C.	17.5	15.4	14.6	15.0	13.9
Mean	19.8	15.8	17.8	17.8	16.1
		UPPER AND CENTRAL SOUTH			
Orange, Va.	20.0	16.0	19.0	18.0	17.0
Charlotte C. H., Va.	27.5	17.5	21.0	23.5	18.5
Knoxville, Tenn.	18.5	14.0	16.8	16.3	14.5
Jackson, Tenn.	17.0	15.7	17.3	16.4	15.3
Mean	20.8	15.8	18.5	18.6	16.3
		DELTA			
Sikeston, Mo.	15.4	14.4	16.6	16.6	13.0
Wardell, Mo.	14.9	12.4	14.3	13.7	13.2
Clarkedale, Ark.	19.0	13.0	21.0	18.0	17.0
Marianna, Ark.	16.0	14.0	15.0	16.0	14.0
Tunica, Miss.	17.7	15.8	17.9	18.2	15.9
Stoneville, Miss.	13.3	12.5	13.4	14.4	14.0
Mean	16.1	13.7	16.4	16.2	14.5
		WEST			
Bixby, Okla.	13.0	11.2	13.8	14.4	12.8
Nowata, Okla.	18.6	15.4	20.2	18.4	16.8
Stillwater, Okla.	16.5	16.0	19.4	16.5	15.0
Fayetteville, Ark.	9.0	8.0	12.0	17.0	12,0
Stuttgart, Ark.	18.0	15.0	18.0	17.0	14.0
Lubbock, Texas	16.0	16.0	18.0	17.0	16.0
College Sta., Texas	15.0	12.0	15.0	13.0	13.0
Mean	15.2	13.4	16.6	16.2	14.2

Table 15: Seed quality scores for strains in Uniform Group V, 1949

Location	S-100	D512-3	D514-13	D514-20	D517-3	N45-1466
EAST COAST						
Petersburg, Va.	2.0	1.0	1.0	1.0	2.0	2.0
Holland, Va.	3.0	1.0	3.0	2.0	2.0	1.0
Norfolk, Va.	2.2	2.0	3.0	2.0	3.0	2.0
Onley, Va.	2.0	1.0	1.7	1.0	2.0	1.7
Plymouth, N. C.	5.0	2.0	5.0	3.0	4.0	2.0
UPPER AND CENTRAL SOUTH						
Orange, Va.	1.0	2.0	2.0	2.0	2.0	1.0
Charlotte C. H., Va.	2.0	1.0	1.0	2.0	1.0	1.0
Knoxville, Tenn.	1.8	1.0	1.2	1.0	1.5	1.0
Jackson, Tenn.	3.0	1.8	2.5	2.0	2.2	1.0
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
DELTA						
Sikeston, Mo.	2.3	1.5	2.3	1.5	2.0	1.8
Wardell, Mo.	2.0	1.5	2.3	2.3	1.8	2.3
Tunica, Miss.	3.0	2.0	3.0	2.0	3.0	2.0
Stoneville, Miss.	2.0	3.0	2.0	4.0	3.0	3.0
St. Joseph, La.	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, La.	4.0	2.0	3.0	2.0	3.0	3.0
Hamburg, La.	5.0	4.0	4.0	4.0	5.0	4.0
WEST						
Bixby, Okla.	4.0	4.0	3.0	4.0	4.0	4.0
Nowata, Okla.	1.0	2.0	1.0	1.0	2.0	2.0
Stillwater, Okla.	3.0	4.0	3.0	4.0	4.0	3.0
Curtis, La.	2.0	1.0	2.0	2.0	2.0	5.0
Lubbock, Texas	1.0	2.0	1.0	1.0	2.0	1.0
College Sta., Texas	3.0	3.0	2.0	2.0	2.0	3.0

Table 15: (Continued)

Location	D523-25	D523-30	R46-2062	R46-2076	L4-6290
		EAST COAST			
Petersburg, Va.	2.0	1.0	2.0	2.0	1.0
Holland, Va.	2.0	2.0	5.0	4.0	3.0
Norfolk, Va.	2.5	1.5	3.0	2.0	3.0
Onley, Va.	1.7	1.5	2.0	2.0	1.5
Plymouth, N. C.	5.0	3.0	5.0	4.0	5.0
		UPPER AND CENTRAL SOUTH			
Orange, Va.	1.0	1.0	4.0	2.0	1.0
Charlotte C. H., Va.	2.0	1.0	2.0	1.0	2.0
Knoxville, Tenn.	1.2	1.0	2.5	2.0	1.2
Jackson, Tenn.	2.5	1.0	3.0	2.0	1.8
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0
		DELTA			
Sikeston, Mo.	1.8	1.8	2.5	2.0	2.3
Wardell, Mo.	2.0	2.0	2.0	2.8	1.8
Tunica, Miss.	2.0	2.0	3.0	3.0	3.0
Stoneville, Miss.	1.0	1.0	2.0	4.0	3.0
St. Joseph, La.	2.0	1.0	2.0	1.0	2.0
Baton Rouge, La.	4.0	4.0	5.0	4.0	5.0
Hamburg, La.	4.0	3.0	5.0	5.0	5.0
		WEST			
Bixby, Okla.	4.0	3.0	4.0	4.0	4.0
Nowata, Okla.	1.0	2.0	1.0	1.0	1.0
Stillwater, Okla.	5.0	3.0	4.0	3.0	4.0
Curtis, La.	2.0	2.0	3.0	2.0	5.0
Lubbock, Texas	1.0	1.0	2.0	2.0	1.0
College Sta., Texas	2.0	2.0	3.0	4.0	2.0

Table 16: Two-year summary of yield and oil content for strains in Uniform Group V, 1948-1949

Location	S-100	D512-3	D514-13	D514-20	D517-3	N45-1466
			YIELD			
			East Coast			
Petersburg, Va.	38.3	43.3	40.6	43.4	39.6	46.0
Williamsburg, Va.	27.4	32.7	25.0	24.4	25.4	32.0
Holland, Va.	34.2	38.3	31.8	33.0	35.3	41.1
Norfolk, Va.	24.0	22.2	24.0	22.6	24.3	27.8
Plymouth, N. C.	32.0	31.6	28.4	34.2	29.4	36.4
Mean	31.2	33.6	30.0	31.5	30.8	36.7
			UPPER AND CENTRAL SOUTH			
Charlotte C. H., Va.	26.1	26.4	20.8	24.4	24.0	24.8
Knoxville, Tenn.	29.7	25.0	23.0	23.1	25.6	25.8
Jackson, Tenn.	27.6	26.0	24.0	28.4	29.0	25.8
Watkinsville, Ga.	18.2	19.9	17.2	18.2	18.9	17.1
Crossville, Ala.	27.8	24.8	23.2	25.0	22.7	26.4
State College, Miss.	33.4	30.8	31.1	27.6	25.6	30.4
Mean	27.1	25.5	23.2	24.4	24.3	25.0
			DELTA			
Sikeston, Mo.	27.6	27.7	20.3	21.2	25.2	29.2
Marianna, Ark.	22.6	25.2	22.8	24.6	21.8	24.2
Tunica, Miss.	26.3	27.2	24.9	26.4	22.5	28.2
Stoneville, Miss.	24.1	26.4	29.0	26.2	23.8	28.6
St. Joseph, La.	41.4	39.1	40.1	40.9	30.0	35.4
Mean	28.4	29.1	27.4	27.9	24.7	29.1
			WEST			
Nowata, Okla.	33.8	24.8	31.0	24.4	29.5	25.2
Stillwater, Okla.	22.5	16.5	16.3	15.6	11.3	17.2
Stuttgart, Ark.	17.3	21.1	17.2	15.7	15.2	19.0
Curtis, La.	21.1	25.1	25.7	22.8	17.2	27.7
Lubbock, Texas	22.0	28.0	18.4	22.4	24.1	24.4
Mean	23.3	23.1	21.7	20.2	19.5	22.7
			OIL CONTENT			
Petersburg, Va.	19.0	20.8	19.4	20.9	20.2	20.9
Knoxville, Tenn.	18.8	19.8	19.1	20.4	19.7	20.2
Stoneville, Miss.	19.6	21.0	20.8	22.2	20.9	21.3
Stuttgart, Ark.	19.6	21.3	21.0	21.7	20.4	20.7

Preliminary Group V, 1949

Strain	Source or Originating Agency	Cross
S-100	Missouri A.E.S.	Sel. from rogue in Illini
D56-8	Delta Br. A.E.S. & U.S.R.S.L.	Boone x Magnolia
D614-16	Delta Br. A.E.S. & U.S.R.S.L.	Chief x Arksoy
D517-4	Delta Br. A.E.S. & U.S.R.S.L.	Arksoy x Patoka
D523-23	Delta Br. A.E.S. & U.S.R.S.L.	Dunfield x Arksoy
D523-45	Delta Br. A.E.S. & U.S.R.S.L.	Dunfield x Arksoy
D623-6	Delta Br. A.E.S. & U.S.R.S.L.	Dunfield x Arksoy
D523-9	Delta Br. A.E.S. & U.S.R.S.L.	Dunfield x Arksoy
D623-33	Delta Br. A.E.S. & U.S.R.S.L.	Dunfield x Arksoy
D632-15	Delta Br. A.E.S. & U.S.R.S.L.	Haberlandt x Dunfield
R46-2079	Rice Br. A.E.S. & U.S.R.S.L.	C143 x C233
R46-2089	Rice Br. A.E.S. & U.S.R.S.L.	Dunfield x Midwest
V-1-44	Va. Piedmont Field Station	Selection from S-100
V-2-44	Va. Piedmont Field Station	Selection from S-100

Thirteen new strains of group V maturity were grown along with S-100 at six locations. Nine of these strains were from the breeding program at the Delta Branch Experiment Station, Stoneville, Mississippi; two strains were selected at the Rice Branch Experiment Station, Stuttgart, Arkansas; and two strains were selected at the Piedmont Branch Station, Orange, Virginia. All strains included were quite similar to S-100 in maturity.

One of the most promising strains in this group is D623-9. This strain is distinctly superior to S-100 in seed quality and oil content. D623-9 yielded highly significantly more than S-100 on clay soil at Stoneville. Seed yield was above S-100 at four other locations, though not significantly so. Two other strains, D523-45 and D623-6, are closely related to D623-9. These two strains have given very similar performance, but are slightly less uniform.

D623-33 gave seed yields quite comparable to S-100, but has higher oil content, D632-15 was given the highest seed quality rating of the strains in preliminary group V at each location. It also has a very good oil content, along with seed yields quite comparable to S-100.

The two strains from the Virginia Piedmont Station were selected from S-100. The strain V-1-44 has an oil content somewhat above that of S-100, but at Sikeston and Jackson, this strain lodged appreciably more than S-100. V-2-44 was quite comparable to S-100 in yield and oil content at each location.

Table 17: Summary of yield data for strains in Preliminary Group V, 1949

Strains	Stillwater, Okla.	Sikeston, Mo.	Jackson, Tenn.	Stuttgart, Ark.	Tunica, Miss.	Stoneville, Miss. Loam	Stoneville, Miss. Clay
S-100	18.2	34.3	30.5	18.5	23.7	29.0	35.4
D56-8	10.0-	27.8-	31.3	14.1	17.3-	24.9	37.5
D614-16	13.3-	31.9	33.9	21.2	22.8	32.8	41.5+
D517-4	13.5-	33.8	35.8	20.4	23.2	30.5	41.2+
D523-23	12.0-	33.6	35.7	16.7	22.8	29.1	39.2+
D523-45	17.0	35.0	32.6	19.3	28.4+	29.8	40.7+
D623-6	22.0	34.8	37.7	16.6	26.8	23.6	41.6+
D623-9	17.3	37.2	33.8	14.8	26.9	31.0	45.5+
D623-33	20.0	31.4	35.5	20.1	23.5	33.1	37.4
D632-15	11.8-	33.3	29.7	17.2	22.7	22.5	39.2+
R46-2079	11.9-	30.2	27.6	15.3	22.4	26.6	-
R46-2089	15.3	31.2	32.2	14.8	20.7	27.5	-
V-1-44	18.9	36.1	34.7	17.6	22.5	28.2	-
V-2-44	20.8	35.4	36.3	16.5	25.4	25.9	-
Bus. Nec. for Sig. (5% level)	4.2	4.3	N.S.	N.S.	4.4	N.S.	3.7
(1% level)	5.6	5.8	-	-	5.9	-	5.0
Coef. of Variability	19%	9%	13%	21%	13%	20%	7%

(+) - Strains yielding significantly more than S-100.

(-) - Strains yielding significantly less than S-100.

Table 17a: Summary of the oil content for strains in Preliminary Group V, 1949

Strains	Sikeston, Mo.	Jackson, Tenn.	Stuttgart, Ark.	Stoneville, Miss.	
				Sandy Loam	Clay
S-100	19.0	20.5	19.1	19.4	19.2
D56-8	21.7	23.2	21.1	20.1	22.7
D614-16	19.0	21.7	20.3	20.1	20.3
D517-4	19.4	22.5	22.0	20.3	20.8
D523-23	19.4	23.2	21.3	21.5	21.7
D623-45	20.6	21.6	22.0	22.1	22.2
D623-6	20.2	23.1	21.8	22.3	22.1
D623-9	20.0	22.9	22.3	21.8	22.1
D623-33	21.2	23.7	22.2	22.3	22.1
D632-15	20.8	23.3	22.7	21.1	21.7
R46-2079	19.6	21.8	20.5	21.1	-
R46-2089	20.0	21.4	20.8	20.6	-
V-1-44	19.3	21.3	20.3	20.0	-
V-2-44	19.2	20.7	19.6	19.1	-

Uniform Group VI, 1949

Variety or Strain	Source or Originating Agency	Origin
Ogden	Tenn. Agr. Exp. Sta.	Sel. from Tokio x P.I. 54610
Dortchsoy #2	Robert Dortch Seed Co. Scott, Ark.	Sel. from Ogden
Hale Ogden #2	George Hale, Blytheville, Ark.	Sel. from Ogden
Arksoy 2913	Ark. Agr. Exp. Sta.	Sel. from Arksoy
D517-14	Delta Br. A.E.S. & U.S.R.S.L.	Sel. from Arksoy x Patoka
D540-1	Delta Br. A.E.S. & U.S.R.S.L.	Sel. from Ogden x Arksoy
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
OK 710	Okla. A.E.S. & U.S.R.S.L.	Sel. from Chief x Arksoy

Ogden, the standard variety in group VI, is the most widely grown soybean variety in the Southern States. This variety is well adapted in the Tidewater area of Virginia and North Carolina, and in the Delta section of Missouri, Tennessee, Arkansas, Mississippi, and Louisiana. In these areas, it matures in early October if planted during May. Ogden is also widely grown in the Gulf Coast section of Alabama where it is grown as a second crop following potatoes or truck crops. It is an excellent variety from the standpoint of seed yield, erectness, and chemical composition of seed. Its main faults are in seed holding and in seed quality. Under most condition, Ogden will hold its seed approximately 14 to 18 days after reaching combine maturity. Under some conditions, the seed quality of Ogden is lower than is desired.

Dortchsoy #2 is a selection from Ogden very similar to Ogden in all respects. Its mean seed yield and oil content for the past three years has not differed from Ogden in any of the areas.

Hale Ogden 2 is a selection from Ogden included in these tests for the first time. Hale Ogden 2 is very similar to Ogden in growth characteristics and seed yield. It does appear to have a slight advantage in oil content over Ogden. Hale Ogden 2 has a slightly higher oil content than Ogden in 9 out of 10 comparisons, with a mean increase of 0.4 percent.

Arksoy 2913 has consistently yielded below Ogden. In the 1949 comparisons, Arksoy 2913 yielded significantly less than Ogden in 24 of 38 comparisons. In the East Coast and Delta sections, seed yields from Arksoy 2913 have been only about two-thirds the yield for Ogden. Arksoy 2913 has excellent seed-holding properties.

N45-2885 and N45-2994 have each been grown in the regional plantings for three years. Neither of these strains has been as consistent in seed production as Ogden. N45-2885 is more resistant to shattering than Ogden. It has an oil content that is approximately 0.5 percent below Ogden.

N45-2994 is five to seven days later than Ogden. It has excellent seed-holding properties, but has an oil content approximately 1.0 percent lower than Ogden. In the Southeast and Western sections, N45-2994 has given seed yields above Ogden. N45-2994 merits consideration for release in these areas, even though it does have a lower oil content. In other areas, seed yield has been below that for Ogden.

D517-14 and D540-1 have been evaluated for two years. The past season, D517-14 yielded significantly less than Ogden in 16 of the 38 tests. Its two year mean yield is below Ogden in all areas except the West. D517-14 is a much taller type than Ogden and lodges appreciably more. It does have slightly higher oil content than Ogden and has better seed holding qualities.

D540-1 is similar to Ogden in growth type and maturity. It holds its seed over a longer period than Ogden, but has lower oil content. The seed yield for D540-1 has been quite similar to Ogden in the Delta section.

OK 710 was grown in the regional plantings for the first time. This strain makes rather tall growth, but stands very well for a strain with its height. However, in seed yield, it was significantly below Ogden in 23 of the 38 tests. OK 710 has lower oil content than Ogden, but is less susceptible to shattering.

Table 18: Summary of yield data for strains in Uniform Group VI, 1949

Location	Ogden	Dortch. #2	Halo Ogden 2	Arksoy 2913	D517-14	D540-1	N45-2885	N45-2994	OK 710	L.S.D. (5%)	C.V.
EAST COAST											
Petersburg, Va.	41.0	40.4	48.3	29.0-	32.6	37.7	38.0	40.6	32.8	8.9	16%
Holland, Va.	46.5	35.5-	36.3-	32.3-	28.3-	42.7	46.5	45.9	29.0-	8.5	16%
Plymouth, N. C.	35.9	36.0	34.3	26.8-	24.6-	31.0-	30.3-	28.7-	26.5-	4.6	10%
Willard, N. C.	42.1	36.8-	41.7	29.5-	31.8-	33.9-	31.0-	37.6-	30.6-	4.3	8%
McCullers, N. C.	30.1	31.7	32.2	23.3-	31.2	33.8	33.1	31.4	29.0	4.0	9%
Mean	39.1	36.1	38.6	28.2	29.7	35.8	35.8	36.8	29.6		
SOUTHEAST											
Monetta, S. C.	29.3	29.1	30.7	22.6-	28.7	29.2	32.6	37.1+	21.1-	3.4	8%
Tallassee, Ala.	27.1	29.7	30.6	30.2	34.6+	28.3	33.6+	36.4+	20.9-	5.6	13%
Milton, Fla. 1/	14.9	14.5	18.6+	13.5	20.7+	17.0	18.8+	15.6	10.0-	3.0	13%
Fairhope, Ala.	24.9	30.5+	32.5+	20.8	24.5	25.1	29.4	31.2+	20.9	4.6	12%
Mean	27.1	29.8	31.3	24.5	29.3	27.5	31.9	34.9	21.0		
UPPER AND CENTRAL SOUTH											
Charlotte C. H., Va.	28.2	33.5+	33.3+	30.3	25.8	31.9	34.8+	32.3	20.6-	5.0	12%
Knoxville, Tenn.	31.5	31.5	32.2	22.8-	23.6-	30.5	23.0-	29.6	31.0	6.4	15%
Jackson, Tenn.	35.1	34.0	37.9	30.8	27.8-	30.8	27.9-	28.4-	29.7	6.3	14%
Crossville, Ala.	21.4	21.7	23.0	22.2	24.9+	24.1	19.2	21.1	19.7	3.3	10%
Athens, Ga.	32.3	34.4	35.2	32.4	30.9	30.9	28.4	30.2	26.2	8.2	18%
Watkinsville, Ga.	33.1	25.0-	32.0	25.9-	27.7-	23.4-	20.7-	22.2-	27.5-	4.1	11%
Experiment, Ga.	43.4	43.4	45.4	35.0	33.8	46.3	51.1	47.0	37.5	9.5	15%
Rome, Ga.	37.3	42.1	40.4	24.7-	33.2	26.2-	38.6	34.8	29.6-	6.9	14%
State College, Miss.	28.1	35.0+	34.3+	32.9	27.6	41.9+	37.6+	37.1+	22.8-	5.3	11%
Mean	32.3	33.4	34.8	28.6	28.4	31.8	31.2	31.4	27.1		

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

Table 18: (Continued)

Location	Ogden	Dortch. #2	Hale Ogden 2	Arksoy 2913	D517-14	D540-1	N45-2885	N45-2994	OK 710	L.S.D. (5%)	C.V.
					DELTA						
Sikeston, Mo.	27.0	30.2+	30.3+	20.6-	20.4-	26.5	21.4-	18.1-	23.0-	2.9	8%
Wardell, Mo.	35.7	39.5	42.0	20.4-	24.0-	34.8	31.9	28.3-	26.1-	7.0	15%
Clarkedale, Ark.	16.4	19.8	20.0	15.0	13.8	17.2	17.0	18.2	9.4	3.1	14%
Marianna, Ark.	21.4	24.2	20.6	16.8-	19.4	23.9	15.5-	24.1	20.4	4.5	15%
Tunica, Miss.	41.7	39.4	43.2	31.7-	32.0-	33.7-	35.0-	38.3	29.2-	6.3	13%
Stoneville, Miss.	39.2	42.1	39.7	27.4-	27.6-	29.5-	34.3	34.0	24.3-	7.4	15%
Stoneville, Miss. (After Oat Planting)	29.6	35.6+	33.6	28.8	22.8-	26.7	28.1	33.5	24.4-	4.4	10%
Desha County, Ark.	33.2	32.5	34.9	25.7-	32.8	31.0	33.4	29.5	31.2	4.9	11%
St. Joseph, La.	46.5	47.1	44.6	21.0-	15.6-	47.3	44.6	26.2-	19.2-	5.9	12%
Hamburg, La.	36.6	34.5	34.6	14.8-	23.9-	35.5	30.1-	26.0-	23.5-	5.2	12%
Baton Rouge, La.	36.7	39.9	36.1	22.5-	29.1-	36.5-	33.5-	34.8-	33.6-	5.4	11%
Mean	33.1	35.0	34.5	22.2	23.8	31.1	29.5	28.3	24.0		
					WEST						
Bixby, Okla.	36.7	34.6	39.1	22.7-	22.8-	30.6-	38.2	33.6	15.8-	5.9	13%
Stillwater, Okla.	33.0	32.3	31.6	21.6-	23.3	26.7	26.7	26.3	20.0-	4.0	10%
Fayetteville, Ark.1/	14.0	13.9	15.6	11.0	12.0	10.4-	11.4	13.6	8.8-	2.8	16%
Stuttgart, Ark.	23.6	23.6	25.1	21.3	24.6	20.9	19.0-	21.8	18.6-	3.4	11%
Lafayette County, Ark.	34.9	27.2	42.5	31.3	31.7	38.3	36.9	48.0+	35.4	10.2	20%
Curtis, La.	18.6	18.9	20.1	18.8	18.2	22.3	20.4	23.8	22.1	N.S.	20%
Lubbock, Texas	29.2	27.3	26.2	22.5-	24.1-	28.2	26.4	26.6	22.7-	4.3	12%
Chillicothe, Texas1/	5.1	5.7	8.7	7.6	10.8	12.0	5.8	6.6	7.5	2.3	20%
College Sta., Texas1/	17.1	11.6-	13.6-	10.8-	14.8	15.0	13.0-	-	17.6	2.5	12%
Mean	29.3	27.3	30.8	23.0	24.1	27.8	27.9	30.0	22.4		

1/ - Not included in the mean.

Table 19: Chemical composition of the strains in Uniform Group VI, 1949

Location	Ogden	Dortchsoy #2	Hale Ogden 2	Arksoy 2913	D517-14
		PERCENT OIL			
Petersburg, Va.	20.2	20.5	20.8	19.5	20.9
Plymouth, N. C.	18.7	19.4	19.3	20.3	17.9
McCullers, N. C.	20.4	20.3	20.9	19.4	21.7
Fairhope, Ala.	21.0	21.4	21.4	21.1	21.8
Jackson, Tenn.	21.0	21.5	22.3	20.3	21.7
Sikeston, Mo.	20.9	20.4	20.4	18.3	20.4
Stoneville, Miss.	20.6	21.2	20.9	20.4	22.0
Baton Rouge, La.	21.9	22.0	22.4	21.2	22.5
Stuttgart, Ark.	21.4	21.4	21.8	19.7	21.8
Stillwater, Okla.	20.6	20.9	20.9	18.9	20.5
Mean	20.7	20.9	21.1	19.9	21.1
		PERCENT PROTEIN			
Petersburg, Va.	41.0	40.8	40.5	44.0	40.7
Plymouth, N. C.	44.2	43.5	44.2	46.2	44.7
McCullers, N. C.	42.5	41.8	40.8	44.4	41.6
Fairhope, Ala.	42.6	42.3	42.1	43.2	41.4
Jackson, Tenn.	40.5	39.9	38.5	42.1	40.7
Sikeston, Mo.	38.8	40.2	38.3	45.5	42.4
Stoneville, Miss.	40.4	40.1	38.8	42.7	42.4
Baton Rouge, La.	42.7	40.7	40.6	43.4	42.7
Stuttgart, Ark.	45.5	45.5	44.3	48.1	44.9
Stillwater, Okla.	43.8	42.2	42.6	46.2	44.9
Mean	42.2	41.7	41.1	44.6	42.6
		IODINE NUMBER OF OIL			
Petersburg, Va.	137.2	137.4	136.9	135.6	131.7
Plymouth, N. C.	137.4	137.2	137.4	130.6	135.7
McCullers, N. C.	136.3	136.7	136.7	134.3	130.6
Fairhope, Ala.	134.6	134.6	135.8	133.2	133.4
Jackson, Tenn.	135.4	134.8	134.7	134.1	131.5
Sikeston, Mo.	134.7	134.7	134.1	132.7	129.7
Stoneville, Miss.	135.1	136.3	136.6	132.2	127.7
Baton Rouge, La.	134.5	134.7	134.7	133.0	128.5
Stuttgart, Ark.	130.8	131.5	130.9	129.8	127.2
Stillwater, Okla.	130.7	131.2	130.9	131.6	127.6
Mean	134.7	134.9	135.0	132.7	130.4

Table 19: (Continued)

Location	D540-1	N45-2885	N45-2994	OK 710
		PERCENT OIL		
Petersburg, Va.	19.4	20.2	19.5	20.1
Plymouth, N. C.	18.6	18.5	18.4	18.4
McCullers, N. C.	19.8	20.3	19.7	20.0
Fairhope, Ala.	20.4	20.8	20.4	20.5
Jackson, Tenn.	21.5	21.1	20.1	21.0
Sikeston, Mo.	19.0	19.6	18.1	18.6
Stoneville, Miss.	20.4	20.4	19.6	20.1
Baton Rouge, La.	20.6	21.5	21.3	20.5
Stuttgart, Ark.	19.7	20.1	19.1	19.8
Stillwater, Okla.	19.4	19.8	18.0	19.3
Mean	19.9	20.2	19.4	19.8
		PERCENT PROTEIN		
Petersburg, Va.	39.7	41.9	42.8	44.3
Plymouth, N. C.	45.9	45.3	46.4	47.0
McCullers, N. C.	43.3	40.5	43.6	44.1
Fairhope, Ala.	42.6	40.8	43.6	44.7
Jackson, Tenn.	40.5	39.7	42.3	42.4
Sikeston, Mo.	41.3	41.2	43.4	44.6
Stoneville, Miss.	42.0	41.1	42.9	43.8
Baton Rouge, La.	43.8	41.8	44.0	45.6
Stuttgart, Ark.	48.0	45.6	48.3	48.0
Stillwater, Okla.	46.4	43.9	45.9	46.6
Mean	43.4	42.2	44.3	45.1
		IODINE NUMBER OF OIL		
Petersburg, Va.	138.3	137.4	138.2	135.7
Plymouth, N. C.	136.9	137.4	135.1	136.0
McCullers, N. C.	137.2	137.1	136.6	136.3
Fairhope, Ala.	136.9	136.9	135.1	133.6
Jackson, Tenn.	133.7	133.5	136.0	133.7
Sikeston, Mo.	135.1	134.3	136.9	134.3
Stoneville, Miss.	136.0	135.7	136.3	133.2
Baton Rouge, La.	135.0	134.6	134.0	133.0
Stuttgart, Ark.	131.5	133.7	133.4	133.2
Stillwater, Okla.	130.6	130.3	134.3	132.1
Mean	135.1	135.1	135.6	134.1

Table 20: Relative maturity, days earlier (+) or later (-) than Ogden, for the strains in Uniform Group VI, 1949

Location	Planting Date	Ogden Matured	Dortch. #2	Hale Ogden 2	Arksoy 2913
		EAST COAST			
Petersburg, Va.	5-13	10-12	-1	-2	+3
Holland, Va.	5-16	10-1	0	0	+2
Plymouth, N. C.	5-5	10-12	0	0	0
Willard, N. C.	5-16	10-12	0	0	+1
McCullers, N. C.	5-18	10-13	0	0	+4
Mean			0	0	+2
		SOUTHEAST			
Monetta, S. C.	5-10	10-6	0	0	+2
Tallassee, Ala.	5-25	10-17	+1	+3	-1
Milton, Fla.1/	7-26	11-7	+8	+8	+13
Mean			0	+1	0
		UPPER AND CENTRAL SOUTH			
Charlotte C.H., Va.	5-19	10-25	-8	0	-8
Knoxville, Tenn.	5-10	10-12	0	0	+1
Jackson, Tenn.	5-6	10-12	0	0	0
Athens, Ga.	5-28	9-30	+4	+4	+8
Experiment, Ga.	5-21	10-3	+2	+4	+1
State College, Miss.	5-12	9-30	0	0	+3
Mean			0	+1	+1
		DELTA			
Sikeston, Mo.	5-12	10-18	0	+1	+1
Wardell, Mo.	5-16	10-16	+1	+2	+2
Marianna, Ark.	5-31	10-18	+7	0	0
Tunica, Miss.	5-9	10-10	+1	+2	+2
Stoneville, Miss.	5-10	10-14	0	0	0
Stoneville, Miss.2/	6-21	11-2	0	+1	+1
St. Joseph, La.	5-9	9-20	+1	+1	-2
Hamburg, La.	5-6	9-25	0	0	-5
Baton Rouge, La.	6-2	9-30	0	0	0
Mean			+1	+1	0
		WEST			
Bixby, Okla.	5-13	10-20	0	0	-2
Stillwater, Okla.	5-3	10-13	0	0	0
Fayetteville, Ark.	5-28	11-5	0	0	-8
Stuttgart, Ark.	6-2	10-14	0	0	0
Lafayette County, Ark.	5-12	9-27	+3	+3	+14
Curtis, La.	5-5	10-5	0	0	0
Lubbock, Texas	6-20	10-25	0	0	-3
College Sta., Texas	5-10	9-16	-3	+2	+2
Mean			0	+1	+1

1/ - Not included in the mean.

Table 20: (Continued)

Location	D517-14	D540-1	N45-2885	N45-2994	OK 710
		EAST COAST			
Petersburg, Va.	0	-4	+2	+5	-4
Holland, Va.	0	+3	+5	+8	+2
Plymouth, N. C.	0	-1	0	+7	-1
Willard, N. C.	+2	0	+1	+8	0
McCullers, N. C.	+3	-1	0	+10	0
Mean	+1	-1	+2	+8	-1
		SOUTHEAST			
Monetta, S. C.	+4	-5	-1	+9	-5
Tallassee, Ala.	+3	+3	0	-1	+1
Milton, Fla.1/	+8	+8	0	0	+22
Mean	+3	-1	0	+4	-2
		UPPER AND CENTRAL SOUTH			
Charlotte C. H., Va.	0	-8	-8	+2	-8
Knoxville, Tenn.	-3	0	0	+3	-2
Jackson, Tenn.	0	-5	0	0	0
Athens, Ga.	+4	-1	-1	+11	-1
Experiment, Ga.	+3	+2	+2	+9	-2
State College, Miss.	0	0	0	+7	+2
Mean	+1	-2	-1	+4	-1
		DELTA			
Sikeston, Mo.	+2	+1	+2	+10	0
Wardell, Mo.	+3	+2	+4	+9	-2
Marianna, Ark.	+5	-2	-1	+8	-4
Tunica, Miss.	+2	0	-2	+10	0
Stoneville, Miss.	+1	-2	0	+4	-4
Stoneville, Miss.2/	+2	+1	-11	+1	-5
St. Joseph, La.	-3	-3	0	+3	-1
Hamburg, La.	-5	+3	+2	+5	+4
Baton Rouge, La.	0	-3	+1	+4	-4
Mean	+1	0	+1	+7	-1
		WEST			
Bixby, Okla.	-2	-4	-5	+4	-10
Stillwater, Okla.	0	-6	+1	+4	-7
Fayetteville, Ark.	0	+10	-9	0	+10
Stuttgart, Ark.	0	0	0	0	0
Lafayette County, Ark.	+11	-2	+3	+24	+3
Curtis, La.	0	-4	+5	+10	+7
Lubbock, Texas	0	0	+3	+3	0
College Station, Texas	-8	-6	0	-	-8
Mean	0	-1	0	+6	0

2/ Planted after oats were harvested.

Table 21: Mean plant height for the strains in Uniform Group VI, 1949

Location	Ogden	Dortchsoy #2	Hale Ogden #2	Arksoy 2913
		EAST COAST		
Petersburg, Va.	40	41	41	39
Holland, Va.	37	32	32	31
Plymouth, N. C.	32	33	33	34
Willard, N. C.	31	30	32	35
McCullers, N. C.	34	35	34	33
Mean	35	34	34	34
		SOUTHEAST		
Monetta, S. C.	25	25	25	24
Tallassee, Ala.	32	30	31	32
Milton, Fla.[1]	12	10	12	14
Fairhope, Ala.	18	18	20	19
Mean	25	24	25	25
		UPPER AND CENTRAL SOUTH		
Charlotte C. H., Va.	38	39	38	33
Knoxville, Tenn.	45	48	47	45
Jackson, Tenn.	41	41	41	39
Athens, Ga.	25	25	26	26
Watkinsville, Ga.	31	26	31	32
Experiment, Ga.	27	25	25	32
Rome, Ga.	33	35	36	34
Mean	34	34	35	34
		DELTA		
Sikeston, Mo.	45	46	45	42
Wardell, Mo.	37	36	36	36
Clarkedale, Ark.	21	23	22	22
Marianna, Ark.	37	37	34	36
Tunica, Miss.	34	35	38	36
Stoneville, Miss.	32	30	32	30
Stoneville, Miss.	32	30	33	30
St. Joseph, La.	30	27	27	25
Hamburg, La.	26	24	24	20
Baton Rouge, La.	34	34	34	32
Mean	32	32	33	31
		WEST		
Bixby, Okla.	35	35	38	36
Stillwater, Okla.	34	29	35	31
Fayetteville, Ark.	36	37	38	35
Stuttgart, Ark.	26	24	25	23
Lafayette County, Ark.	30	28	32	30
Curtis, La.	23	24	25	32
Lubbock, Texas	18	19	18	19
Chillicothe, Texas	17	14	18	16
College Station, Texas	17	19	21	20
Mean	26	25	28	27

Table 21: (Continued)

Location	D517-14	D540-1	N45-2885	N45-2994	OK 710
		EAST COAST			
Petersburg, Va.	49	38	44	47	54
Holland, Va.	40	32	37	38	49
Plymouth, N. C.	40	35	41	39	43
Willard, N. C.	43	34	37	41	42
McCullers, N. C.	46	34	37	40	46
Mean	44	35	39	41	47
		SOUTHEAST			
Monetta, S. C.	39	30	33	31	37
Tallassee, Ala.	48	38	34	38	44
Fairhope, Ala.	28	18	21	25	25
Milton, Fla.1/	21	15	20	18	17
Mean	38	29	29	31	35
		UPPER AND CENTRAL SOUTH			
Charlotte C. H., Va.	42	37	39	41	37
Knoxville, Tenn.	52	43	47	52	56
Jackson, Tenn.	49	41	44	46	53
Athens, Ga.	30	27	30	31	30
Watkinsville, Ga.	30	26	32	32	30
Experiment, Ga.	42	31	27	33	38
Rome, Ga.	46	38	42	41	50
Mean	42	35	37	39	42
		DELTA			
Sikeston, Mo.	48	44	42	48	51
Wardell, Mo.	42	34	41	40	47
Clarkedale, Ark.	23	22	22	27	22
Marianna, Ark.	43	41	43	40	45
Tunica, Miss.	43	36	42	42	42
Stoneville, Miss.	48	32	34	37	53
Stoneville, Miss.	36	34	34	39	34
St. Joseph, La.	48	28	31	34	48
Hamburg, La.	46	28	29	38	48
Baton Rouge, La.	45	40	43	47	48
Mean	43	34	36	39	44
		WEST			
Bixby, Okla.	45	39	38	41	47
Stillwater, Okla.	44	37	33	38	42
Fayetteville, Ark.	35	35	37	41	35
Stuttgart, Ark.	32	22	28	33	31
Lafayette County, Ark.	51	33	37	42	54
Curtis, La.	52	24	29	29	44
Lubbock, Texas	27	20	24	27	18
Chillicothe, Texas	17	23	20	23	16
College Station, Texas	34	20	24	-	35
Mean	37	28	30	34	40

1/ - Not included in the mean.

Table 22: Lodging scores for strains in Uniform Group VI, 1949

Location	Ogden	Dortchsoy #2	Hale Ogden #2	Arksoy 2913
		EAST COAST		
Petersburg, Va.	1.0	2.0	2.0	3.0
Holland, Va.	1.0	1.0	1.0	3.0
Plymouth, N. C.	2.0	2.5	2.5	2.0
Willard, N. C.	1.5	1.0	1.5	2.0
McCullers, N. C.	2.0	2.5	2.0	2.5
		SOUTHEAST		
Monetta, S. C.	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.0	1.0	1.0	1.5
Fairhope, Ala.	1.0	1.0	1.0	1.0
		UPPER AND CENTRAL SOUTH		
Charlotte C. H., Va.	1.0	3.0	3.0	4.0
Knoxville, Tenn.	1.8	2.0	2.5	3.6
Jackson, Tenn.	2.2	1.8	2.8	2.2
Athens, Ga.	1.5	2.0	2.0	2.5
Watkinsville, Ga.	1.0	1.0	1.0	1.0
State College, Miss.	2.0	1.0	1.0	2.0
		DELTA		
Sikeston, Mo.	1.0	1.0	1.0	2.0
Wardell, Mo.	2.0	1.3	2.0	3.0
Clarkedale, Ark.	2.0	2.0	2.0	4.0
Marianna, Ark.	2.0	1.0	3.0	2.0
Tunica, Miss.	2.0	2.0	2.0	2.8
Stoneville, Miss.	2.0	2.0	2.0	2.2
Stoneville, Miss.	2.0	2.0	2.0	2.8
Desha County, Ark.	2.0	2.0	3.0	3.0
St. Joseph, La.	2.0	1.0	1.0	1.0
Hamburg, La.	1.0	1.0	1.0	1.0
Baton Rouge, La.	2.0	2.0	2.0	2.0
		WEST		
Bixby, Okla.	1.0	1.0	1.0	1.0
Stillwater, Okla.	1.0	2.0	1.0	2.0
Fayetteville, Ark.	1.0	1.0	1.0	1.0
Stuttgart, Ark.	1.0	1.0	1.0	1.0
Lafayette County, Ark.	2.0	2.0	1.0	4.0
Curtis, La.	1.0	1.0	2.0	3.0
Lubbock, Texas	1.0	1.0	1.0	1.0
College Station, Texas	1.0	1.0	1.0	1.0

Table 22: (Continued)

Location	D517-14	D540-1	N45-2885	N45-2994	OK 710
		EAST COAST			
Petersburg, Va.	3.0	2.0	2.0	2.0	2.0
Holland, Va.	3.0	1.0	1.0	3.0	2.0
Plymouth, N. C.	4.0	2.5	2.5	3.0	2.0
Willard, N. C.	4.0	1.5	2.5	2.0	3.0
McCullers, N. C.	5.0	1.5	3.0	2.0	4.0
		SOUTHEAST			
Monetta, S. C.	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.8	1.2	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0
		UPPER AND CENTRAL SOUTH			
Charlotte C. H., Va.	3.0	2.0	3.0	1.0	3.0
Knoxville, Tenn.	4.4	2.8	3.0	1.6	2.1
Jackson, Tenn.	3.0	2.2	1.8	2.2	1.8
Athens, Ga.	3.0	2.5	2.5	3.0	2.5
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0
State College, Miss.	2.0	2.0	3.0	3.0	2.0
		DELTA			
Sikeston, Mo.	2.3	1.5	1.8	1.5	1.8
Wardell, Mo.	2.8	2.3	2.3	3.0	2.3
Clarkedale, Ark.	3.0	2.0	3.0	3.0	2.0
Marianna, Ark.	1.0	1.0	2.0	1.0	2.0
Tunica, Miss.	2.5	2.0	2.2	2.0	2.0
Stoneville, Miss.	4.6	2.0	2.0	2.8	3.0
Stoneville, Miss.	2.8	2.0	2.0	2.0	2.3
Desha County, Ark.	4.0	3.0	3.0	3.0	4.0
St. Joseph, La.	4.0	1.0	1.0	2.0	3.0
Hamburg, La.	3.0	1.0	2.0	3.0	3.0
Baton Rouge, La.	3.0	2.0	2.0	2.0	2.0
		WEST			
Bixby, Okla.	2.0	2.0	2.0	3.0	2.0
Stillwater, Okla.	3.0	2.0	2.0	2.0	2.0
Fayetteville, Ark.	1.0	1.0	1.0	1.0	1.0
Stuttgart, Ark.	3.0	1.0	1.0	2.0	2.0
Lafayette County, Ark.	5.0	2.0	2.0	4.0	2.0
Curtis, La.	3.0	2.0	2.0	3.0	3.0
Lubbock, Texas	1.0	1.0	1.0	1.0	1.0
College Station, Texas	1.0	1.0	1.0	-	2.0

Table 23: Seed quality scores for strains in Uniform Group VI, 1949

Location	Ogden	Dortchsoy #2	Hale Ogden #2	Arksoy 2913
		EAST COAST		
Petersburg, Va.	2.0	2.0	3.0	2.0
Holland, Va.	2.0	1.0	1.0	2.0
Plymouth, N. C.	3.0	3.0	3.0	2.0
Willard, N. C.	2.0	2.0	2.0	2.0
McCullers, N. C.	2.0	2.0	2.0	2.0
		SOUTHEAST		
Monetta, S. C.	2.0	2.0	2.0	2.0
		UPPER AND CENTRAL SOUTH		
Charlotte C. H., Va.	1.0	1.0	1.0	1.0
Knoxville, Tenn.	1.2	1.2	1.2	1.8
Jackson, Tenn.	1.5	1.2	1.2	1.2
Watkinsville, Ga.	1.0	1.0	1.0	1.0
		DELTA		
Sikeston, Mo.	1.3	1.0	1.0	1.3
Wardell, Mo.	1.5	1.3	1.3	2.0
Tunica, Miss.	2.0	2.0	2.0	2.0
Stoneville, Miss.	2.0	2.0	2.0	2.0
Stoneville, Miss.	3.0	3.0	3.0	2.0
St. Joseph, La.	1.0	1.0	1.0	2.0
Hamburg, La.	3.0	3.0	3.0	2.0
Baton Rouge, La.	2.0	2.0	2.0	2.0
		WEST		
Bixby, Okla.	3.0	3.0	3.0	4.0
Stillwater, Okla.	3.0	3.0	3.0	3.0
Curtis, La.	3.0	4.0	4.0	4.0
Lubbock, Texas	1.0	1.0	2.0	2.0
Chillicothe, Texas	3.0	1.0	2.0	1.0
College Station, Texas	3.0	2.0	2.0	3.0

Table 23: (Continued)

Location	D517-14	D540-1	N45-2885	N45-2994	OK 710
		EAST COAST			
Petersburg, Va.	2.0	1.0	2.0	2.0	2.0
Holland, Va.	2.0	2.0	1.0	2.0	3.0
Plymouth, N. C.	3.0	2.0	2.0	2.0	3.0
Willard, N. C.	2.0	2.0	2.0	2.0	2.0
McCullers, N. C.	2.0	2.0	2.0	2.0	2.0
		SOUTHEAST			
Monetta, S. C.	2.0	2.0	1.0	2.0	2.0
		UPPER AND CENTRAL SOUTH			
Charlotte C. H., Va.	2.0	2.0	1.0	1.0	2.0
Knoxville, Tenn.	1.0	1.2	1.2	2.2	1.2
Jackson, Tenn.	1.2	1.2	1.5	2.5	1.2
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0
		DELTA			
Sikeston, Mo.	2.0	1.8	2.0	1.5	1.8
Wardell, Mo.	2.5	1.8	2.3	1.3	2.5
Tunica, Miss.	2.0	3.0	2.0	2.0	2.0
Stoneville, Miss.	2.0	3.0	2.0	1.0	2.0
Stoneville, Miss.	3.0	2.0	3.0	2.0	3.0
St. Joseph, La.	2.0	1.0	1.0	2.0	2.0
Hamburg, La.	3.0	3.0	3.0	3.0	3.0
Baton Rouge, La.	2.0	2.0	2.0	2.0	2.0
		WEST			
Bixby, Okla.	3.0	3.0	3.0	3.0	4.0
Stillwater, Okla.	3.0	3.0	3.0	4.0	3.0
Curtis, La.	3.0	4.0	3.0	3.0	4.0
Lubbock, Texas	1.0	1.0	2.0	2.0	2.0
Chillicothe, Texas	2.0	2.0	2.0	3.0	2.0
College Station, Texas	4.0	3.0	4.0	-	2.0

Table 24: Mean seed weight for strains in Uniform Group VI, 1949

Location	Ogden	Dortchsoy #2	Hale Ogden #2	Arksoy 2913
		EAST COAST		
Petersburg, Va.	17.0	16.7	16.0	15.5
Holland, Va.	17.0	16.0	15.0	18.5
Plymouth, N. C.	16.4	15.3	15.9	14.2
Willard, N. C.	16.7	15.1	15.0	14.1
McCullers, N. C.	16.7	14.7	15.0	14.1
Mean	16.8	15.6	15.4	15.3
		SOUTHEAST		
Monetta, S. C.	14.9	15.5	15.5	13.9
		UPPER AND CENTRAL SOUTH		
Charlotte C. H., Va.	16.5	17.0	20.0	17.0
Knoxville, Tenn.	14.5	13.8	13.9	13.2
Jackson, Tenn.	15.2	14.6	14.2	13.4
Athens, Ga.	19.3	20.2	18.4	16.0
Mean	16.4	16.4	16.6	14.9
		DELTA		
Sikeston, Mo.	12.9	12.2	12.8	12.6
Wardell, Mo.	13.3	12.7	12.4	12.4
Clarkedale, Ark.	19.0	19.0	17.0	17.0
Marianna, Ark.	15.0	15.0	15.0	14.0
Tunica, Miss.	18.8	16.4	19.3	-
Stoneville, Miss.	19.0	20.8	19.2	18.0
Stoneville, Miss.	14.4	14.0	13.5	13.1
Baton Rouge, La.	17.0	16.4	15.9	12.6
Mean	16.2	15.8	15.6	14.2
		WEST		
Bixby, Okla.	14.7	15.2	16.4	14.6
Stillwater, Okla.	18.2	17.0	17.7	14.4
Fayetteville, Ark.	17.0	20.0	18.0	15.0
Stuttgart, Ark.	15.0	15.0	14.0	12.0
Lubbock, Texas	17.0	17.0	18.0	16.0
Chillicothe, Texas	23.0	24.0	23.0	17.0
College Station, Texas	11.0	10.0	11.0	10.0
Mean	16.6	16.9	16.9	14.1

Table 24: (Continued)

Location	D517-14	D540-1	N45-2885	N45-2994	OK 710
		EAST COAST			
Petersburg, Va.	18.0	17.5	16.0	17.0	16.5
Holland, Va.	17.0	20.0	16.5	20.5	14.0
Plymouth, N. C.	16.0	16.0	14.9	17.9	13.0
Willard, N. C.	14.6	15.2	14.8	16.4	13.0
McCullers, N. C.	15.8	15.0	14.5	16.5	15.2
Mean	16.3	16.7	15.3	17.7	14.3
		SOUTHEAST			
Monetta, S. C.	15.1	15.7	14.8	17.0	13.4
		UPPER AND CENTRAL SOUTH			
Charlotte C. H., Va.	19.5	15.0	20.5	16.5	14.5
Knoxville, Tenn.	14.0	14.0	12.8	14.4	13.5
Jackson, Tenn.	13.3	13.6	12.6	16.0	12.5
Athens, Ga.	18.8	17.6	16.2	19.0	18.0
Mean	16.4	15.0	15.5	16.5	14.6
		DELTA			
Sikeston, Mo.	13.3	12.3	12.5	14.1	12.1
Wardell, Mo.	13.9	12.0	12.2	13.5	11.7
Clarkedale, Ark.	13.0	18.0	11.0	12.0	12.0
Marianna, Ark.	17.0	16.0	14.0	16.0	15.0
Tunica, Miss.	17.0	16.6	16.7	16.5	15.4
Stoneville, Miss.	19.7	17.6	18.5	19.1	16.6
Stoneville, Miss.	14.2	14.0	13.0	14.7	11.7
Baton Rouge, La.	15.1	14.7	15.4	15.5	15.6
Mean	15.4	15.2	14.2	15.2	13.8
		WEST			
Bixby, Okla.	14.9	15.4	13.4	15.6	12.2
Stillwater, Okla.	16.4	17.2	16.7	16.7	14.2
Fayetteville, Ark.	15.0	12.0	18.0	18.0	15.0
Stuttgart, Ark.	14.0	16.0	13.0	14.0	13.0
Lubbock, Texas	16.0	18.0	16.0	17.0	16.0
Chillicothe, Texas	18.0	19.0	18.0	19.0	16.0
College Station, Texas	10.0	11.0	9.0	-	11.0
Mean	14.9	15.5	13.0	16.7	13.9

Table 25: Two-year summary of yield for strains in Uniform Group VI, 1948-49

Location	Ogden	Dortch. #2	Arksoy 2913	D517-14	D540-1	N45-2885	N45-2994
			EAST COAST				
Plymouth, N. C.	39.6	40.8	30.1	29.5	33.2	36.6	37.4
Willard, N. C.	40.0	38.6	29.0	34.8	35.6	34.8	38.6
McCullers, N. C.	33.0	28.8	23.6	27.5	30.4	29.4	26.8
Mean	37.5	36.1	27.6	30.6	33.1	33.6	34.3
			SOUTHEAST				
Monetta, S. C.	31.8	31.0	26.0	31.2	31.4	32.3	36.8
Fairhope, Ala.	28.4	30.0	18.7	22.8	27.3	27.6	30.0
Mean	30.1	30.5	22.4	27.0	29.4	30.0	33.4
			UPPER AND CENTRAL SOUTH				
Knoxville, Tenn.	27.6	26.2	19.0	19.2	26.6	22.4	24.3
Jackson, Tenn.	27.0	26.0	23.2	20.8	22.6	21.6	22.8
State College, Miss.	25.8	31.1	31.4	24.4	35.6	33.4	33.3
Mean	26.8	27.8	24.5	21.5	28.3	25.8	26.8
			DELTA				
Sikeston, Mo.	28.5	29.6	23.2	23.5	28.2	26.8	25.2
Clarkedale, Ark.	21.8	23.0	17.2	17.8	21.8	20.8	21.0
Marianna, Ark.	21.8	24.0	19.0	22.0	23.0	20.1	22.3
Tunica, Miss.	34.1	33.8	25.6	24.8	30.4	30.4	30.8
Stoneville, Miss.	31.4	29.9	20.2	23.0	33.4	28.8	32.9
Winchester, Ark.	28.1	29.7	21.6	27.0	25.1	28.4	27.4
St. Joseph, La.	41.6	44.3	24.2	22.0	46.8	42.9	28.4
Baton Rouge, La.	24.2	30.0	17.2	21.6	24.6	24.4	23.8
Mean	28.9	30.5	21.0	22.7	29.2	27.8	26.5
			WEST				
Stuttgart, Ark.	22.8	24.4	20.6	25.3	22.6	19.2	25.4
Curtis, La.	18.8	22.8	20.3	19.6	25.6	23.8	29.2
Lubbock, Texas	26.2	25.2	19.9	24.4	26.0	26.8	26.0
Mean	22.6	24.1	20.3	23.1	24.7	23.3	26.8

Table 26: Two-year summary of oil content for strains in Uniform Group VI, 1948-1949

Location	Ogden	Dortchsoy #2	Arksoy 2913	D517-14	D540-1	N45-2885	N45-2994
Plymouth, N. C.	19.6	19.9	19.9	19.4	18.8	18.9	18.7
McCullers, N. C.	20.4	19.8	19.8	21.5	19.9	19.6	18.9
Fairhope, Ala.	21.0	21.2	20.5	21.4	20.1	20.4	20.5
Jackson, Tenn.	21.6	21.8	20.6	22.4	20.9	20.9	20.4
Stoneville, Miss.	20.6	20.4	19.6	20.8	20.4	19.5	19.7
Baton Rouge, La.	23.1	23.3	22.5	24.3	22.0	23.2	22.3
Stuttgart, Ark.	20.8	20.8	19.8	21.8	19.4	19.4	18.8

Table 27: Three-year summary of yield for strains in Uniform Group VI, 1947-1949

Location	Ogden	Dortchsoy #2	Arksoy 2913	N45-2885	N45-2994
		EAST COAST			
Plymouth, N. C.	36.8	35.7	25.0	32.7	30.5
McCullers, N. C.	31.7	32.0	26.3	30.7	30.2
Willard, N. C.	36.9	35.5	26.2	32.6	38.0
Mean	35.1	34.4	25.8	32.0	32.9
		SOUTHEAST			
Monetta, S. C.	26.6	26.5	22.3	27.2	30.4
		UPPER AND CENTRAL SOUTH			
Knoxville, Tenn.	28.0	26.8	16.4	21.5	20.7
Jackson, Tenn.	23.8	22.2	20.5	18.8	20.7
State College, Miss.	29.5	30.9	28.1	29.3	31.3
Mean	27.1	26.6	21.7	23.2	24.2
		DELTA			
Clarkedale, Ark.	22.5	24.3	17.2	20.1	21.7
Tunica, Miss.	28.7	29.1	20.4	22.6	22.6
Stoneville, Miss.	30.4	31.3	19.6	24.0	28.4
St. Joseph, La.	37.7	40.8	23.8	38.5	20.5
Mean	29.8	31.4	20.2	26.3	23.3
		WEST			
Stuttgart, Ark.	18.8	19.6	16.1	15.6	20.4

Table 28: Three-year summary of oil content for strains in Uniform Group VI, 1947-1949

Location	Ogden	Dortchsoy #2	Arksoy 2913	N45-2885	N45-2994
		Percentage Oil			
Plymouth, N. C.	19.8	20.1	19.5	19.4	18.8
McCullers, N. C.	21.0	20.5	20.1	20.2	19.5
Jackson, Tenn.	21.9	21.9	20.8	21.2	20.5
Stoneville, Miss.	20.3	20.4	19.3	19.3	19.5
Baton Rouge, La.	22.5	22.9	22.1	23.0	21.9
Stuttgart, Ark.	20.6	20.5	19.3	19.0	20.1
Mean	21.0	21.0	20.2	20.4	20.0

Preliminary Group VI, 1949

Ten strains, along with Ogden, were grown at six locations. Two of these strains, Harrell and F. C. 31745, are farmers' selections made in southeastern Virginia. Harrell is grown to a limited extent in the Tidewater section of southeastern Virginia and northeastern North Carolina. The seed yield of Harrell was slightly below Ogden at all locations, except Stoneville. Oil content is approximately 1.5 percent below Ogden.

F.C. 31745 showed promise in 1948 as having resistance to the fungus causing purple seed stain. Purple spot development was not heavy enough in 1949 to further evaluate this strain. F. C. 31745 is very susceptible to shattering.

Four of the better appearing strains are D542-81, N45-1497, N46-1703, and N46-2566. D542-81 is very similar in appearance to N45-2885. Seed yield and oil content are quite comparable to Ogden. N45-1497 has approximately 1.0 percent higher oil content than Ogden with comparable seed yield. Because of its oil content, N45-1497 will be used as a parent in future crosses. N46-1703 is a yellow-seeded type with growth very similar to Ogden. It is approximately two days earlier than Ogden, has superior seed quality, and is superior in seed holding. In these tests, its seed yield was somewhat below Ogden at all locations except Sikeston. N46-2566 gives the best combination of agronomic characters along with resistance to bacterial pustule and wildfire of any strain in this maturity.

The two strains, R46-2230 and R46-2260 are much too late for this group. Both lodged badly at all locations.

Table 29: Summary of the seed yield data for strains in Preliminary Group VI, 1949

Strain	Cross	LOCATIONS					
		Plymouth, N. C.	Willard, N. C.	Sikeston, Mo.	Stoneville, Miss.	Stuttgart, Ark.	Stillwater Okla.
Ogden		35.9	40.3	27.8	33.2	23.2	30.2
Harrell		29.9	37.2	24.6-	35.7	20.5	18.6-
F. C. 31745		33.8	33.0	23.3-	33.2	11.6-	17.7-
D542-81	Herman x Ogden	31.8	37.2	22.0-	34.3	18.3	27.7
D642-116	Herman x Ogden	30.0	31.2-	23.1-	30.8	20.1	25.8
N45-1497	Ralsoy x Ogden	35.9	41.0	24.9-	29.7	24.0	26.6
N45-3102	Ralsoy x Ogden	29.5	37.3	27.7	26.3	19.0	29.6
N46-1703	Volstate x Ogden	29.9	32.6-	29.0	29.7	16.8-	25.1
N46-2566	S-100 x CNS	30.2	43.3	24.5-	32.2	21.9	34.5
R46-2230	Chief x Arksoy	29.4	33.7	17.7-	33.6	22.0	29.8
R46-2260	Arksoy x Patoka	29.0	34.6	22.3-	27.4	19.6	32.2
Bushels necessary for significance (5% level)		N.S.	7.6	2.8	N.S.	5.5	5.6
Coefficient of variability		12%	14%	8%	15%	20%	14%

Table 30: Summary of the percentage of oil for strains in Preliminary VI, 1949

Strain	Plymouth, N. C.	Sikeston, Mo.	Stoneville, Miss.	Stuttgart, Ark.	Mean
Ogden	19.7	20.8	21.2	21.2	20.7
Harrell	18.3	18.5	20.1	19.8	19.2
F. C. 31745	19.5	20.4	21.0	20.6	20.2
D542-81	19.6	20.6	22.2	20.7	20.8
D642-116	19.1	19.9	21.7	21.3	20.5
N45-1497	20.4	21.7	22.8	21.9	21.7
N45-3102	19.1	21.3	22.0	20.9	20.4
N46-1703	18.9	20.8	21.6	21.1	20.6
N46-2566	17.8	20.1	21.0	20.3	19.8
R46-2230	19.0	18.4	21.2	20.4	19.8
R46-2260	20.3	19.8	22.5	21.3	21.0

UNIFORM GROUP VII, 1949

Variety or Strain	Source or Originating Agency	Origin
Roanoke	N. Car. A.E.S. & U.S.R.S.L.	Sel. from a mixed seed lot
Volstate	Tenn. A.E.S.	Sel. from Tokyo x P.I. 54610
N44-937	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Palmetto x Ogden
N45-3036	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Ralsoy x Ogden
N45-3563	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Ogden x Missoy
N45-3728	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Ogden x Palmetto
Dortchsoy 31	R. L. Dortch Seed Co., Scott, Arkansas	Sel. from Ogden
N45-3799	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Palmetto x Ogden
N46-2652	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Volstate x Palmetto
N46-2802	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Volstate x Palmetto
N46-2872	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Vol/Volstate x Palmetto
N46-2881	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Vol/Volstate x Palmetto
N46-3008	N. Car. A.E.S. & U.S.R.S.L.	Sel. from Vol/Volstate x Palmetto

The maturity of varieties in Group VII is approximately 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, the standard for Group VI.

Roanoke is well adapted to the Upper Coastal Plain and Piedmont areas of North Carolina, South Carolina, Georgia, and Alabama. Many of the newer strains in the group with Palmetto parentage were selected with the anticipation that they should be better adapted than Roanoke to the Coastal Plain of south Georgia and Alabama.

Three named varieties, Roanoke, Volstate, and Dortchsoy 31, along with ten strains from the North Carolina breeding program were included in the Group VII nurseries. Results from 37 locations are summarized. Two strains, N44-937 and N45-3563, have now been grown in the regional plantings three years. In 1949, N44-937 yielded significantly below Roanoke in 14 of the 37 locations. Its mean yield was lower than that of Roanoke in each production area. In comparing the three year data, N44-937 yielded less than Roanoke at all locations except Tifton, Georgia, St. Joseph and Baton Rouge, Louisiana. The oil content for N44-937 is approximately 2 percent below that for Roanoke.

N45-3563 is well adapted in the Southeast. In this area it grows slightly taller than Roanoke and has superior seed quality. In all tests, N45-3563 has given an average oil content 0.4 percent below Roanoke. However, at Tifton and Fairhope, where it has surpassed Roanoke in seed yield, it has also surpassed

it in oil content. N45-3563 tends to lodge more than Roanoke in most areas. However, in the Southeast, it stands very well and the taller growth is an advantage.

Three strains, N45-3036, N45-3728, and Dortchsoy 31, have been included in these plantings for two years. N45-3036 has a growth type quite comparable to Roanoke, but does not stand as well. It has an average oil content 1.5 per cent below Roanoke. N45-3036 has given a higher yield than Roanoke in the Southeast, where it yielded significantly more than Roanoke in four of the nine plantings. Its two-year mean yield in the Southeast is four bushels higher than Roanoke.

N45-3728 is a tall type also giving its best relative performance in the Southeast. It has given consistently good yields at Tifton, Georgia. The oil content of N45-3728 has averaged 1.5 percent lower than Roanoke. While N45-3728 has yielded well in the Southeast, and has a satisfactory growth type for that area, it has given evidence of being more susceptible to Sclerotium rolfsii than most other varieties.

Dortchsoy 31 has produced seed yields quite comparable to Roanoke in all areas. However, it has averaged 1.3 percent lower in oil content. Dortchsoy 31 has a shorter growth type than Roanoke. This is a disadvantage in most of the Upper Coastal Plain and Piedmont areas, but in areas where Roanoke tends to lodge, Dortchsoy 31 will stand better.

Six strains, N45-3799, N46-2652, N46-2802, N46-2872, N46-2881, and N46-3008 were included for the first time. Of these, N46-2872 and N46-2881 gave quite promising performances. Each gave seed yields significantly higher than Roanoke in 7 of the 18 plantings in the East Coast and Southeast. N46-2872 has an oil content 0.9 percent lower than Roanoke, while N46-2881 equals Roanoke. Each of these strains averaged 5 inches taller than Roanoke in the Southeast.

N46-2652 is the tallest of the group with plant type quite similar to its Palmetto parent. Like N45-3728, it is well adapted at Tifton, Georgia. At Milton, Florida, N46-2652, when planted July 26, made good growth and was the highest yielding strain. Oil content for this strain is approximately 1.0 percent lower than Roanoke, but 0.4 percent higher than N45-3728, a type which it closely resembles.

N45-3799 is the earliest strain in the group, averaging approximately 8 to 10 days earlier than Roanoke. Although a tall growing strain, N45-3799 stands very well. Seed yields were quite comparable to Roanoke, but oil content is 0.8 percent lower.

Table 31: Summary of yield in bushels per acre for the strains in Group VII, 1949

Location	Roanoke	Vol-state	N44-937	N45-3036	N45-3563	N45-3728	Dortch. #31
			EAST COAST				
Petersburg, Va.	35.7	35.3	41.3	34.4	24.9-	46.0+	49.8+
Williamsburg, Va.	37.0	32.6-	23.4-	36.3	31.0-	33.7	36.6
Onley, Va.	34.7	29.1-	23.5-	30.2	29.1-	26.9-	34.7
Norfolk, Va.	35.8	37.0	28.0	38.1	35.8	35.8	37.0
Holland, Va.	40.7	38.0	37.7	40.8	41.4	45.8	44.6
Plymouth, N. C..	31.5	31.6	30.7	30.5	28.4	34.5	29.3
Willard, N. C.	32.2	31.8	30.4	32.6	34.7	30.2	28.3
McCullers, N. C.	32.1	29.5	25.7-	30.2	32.3	32.8	31.5
Florence, S. C.	29.2	22.7-	25.1	36.3+	34.8	32.1	32.8
Mean	34.3	32.0	29.5	34.4	32.5	35.3	36.1
			SOUTHEAST				
Monetta, S. C.	25.8	24.7	28.4	35.6+	30.3+	37.3+	30.9+
Charleston, S. C.(6/3)	20.4	23.1	17.3	22.3	19.1	22.5	23.2
Charleston, S.C.(6/22)	21.5	21.3	14.0	22.8	23.5	21.9	23.2
Tifton, Ga.	16.7	16.2	25.4+	29.8+	28.8+	30.9+	19.7
Tallassee, Ala.	32.2	30.4	20.4-	35.2	29.8	29.0	29.8
Milton, Fla.	15.1	13.3	12.9	17.7+	16.7	17.6	14.8
Davisville, Fla.	36.4	38.4	29.5-	36.9	36.4	42.1+	40.1+
Fairhope, Ala.	28.3	29.8	29.1	33.9+	32.2	33.5+	31.3
Poplarville, Miss.	28.0	27.0	18.4-	25.4	24.4	19.4-	27.2
Mean	24.9	24.9	21.7	28.8	26.8	28.2	26.7

Table 31: (Continued

Location	N45-3799	N46-2652	N46-2802	N46-2872	N46-2881	N46-3008	L.S.D. (5%)	C.V.
				EAST COAST				
Petersburg, Va.	41.8	43.2	43.6	48.0+	48.8+	37.8	8.8	15%
Williamsburg, Va.	31.7-	32.3-	37.6	37.6	37.0	29.7-	4.1	8%
Onley, Va.	29.1-	23.5-	25.8-	30.2	26.9-	25.8-	5.2	13%
Norfolk, Va.	38.1	38.1	32.5	39.2	37.0	34.7	N.S.	13%
Holland, Va.	45.0	43.8	40.0	45.8	51.1+	38.1	5.7	9%
Plymouth, N. C.	36.3	27.4	30.0	38.3	33.0	33.7	5.8	13%
Willard, N. C.	35.1	27.9	30.9	40.0+	33.2	30.9	5.8	12%
McCullers, N. C.	36.5	28.8	30.8	33.5	33.5	25.7-	5.5	12%
Florence, S. C.	31.3	25.9	31.9	33.2	28.8	28.3	6.1	14%
Mean	36.1	32.3	33.7	38.4	36.6	31.6		
				SOUTHEAST				
Monetta, S. C.	34.8+	28.8	29.0	31.6+	26.8	28.4	3.4	8%
Charleston, S. C.	16.1	19.7	21.0	28.3+	29.8+	30.6+	7.2	22%
Charleston, S. C.	14.3	22.0	18.6	24.0	21.7	22.8	7.8	26%
Tifton, Ga.	22.7	32.0+	23.4	24.0+	26.0+	23.5	7.2	21%
Tallassee, Ala.	24.5-	29.6	25.7-	33.6	34.8	23.6-	5.1	12%
Milton, Fla.	16.4	19.2+	17.6	15.6	18.9+	18.6+	2.6	11%
Davisville, Fla.	37.8	39.8	40.4+	40.1+	41.2+	41.5+	3.5	6%
Fairhope, Ala.	34.0+	30.6	33.3+	36.5+	31.0	33.2+	4.8	8%
Poplarville, Miss.	16.0-	21.0-	22.1-	32.4	24.5	29.0	5.6	16%
Mean	24.1	27.0	25.7	29.6	28.3	27.9		

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

Table 31: (Continued)

Location	Roanoke	Vol-state	N44-937	N45-3036	N45-3563	N45-3728	Dortch. #31
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	34.5	34.8	26.0-	33.0	31.2	29.4	32.3
Crossville, Ala.	24.8	20.0-	13.4-	24.0	16.6-	17.5-	21.8
Athens, Ga.	28.6	29.7	28.4	35.0+	29.0	30.1	32.9
Watkinsville, Ga.	30.6	26.8	14.7-	25.4-	18.1-	18.1-	27.0
Experiment, Ga.	42.6	42.0	33.4-	43.8	34.0	34.0	44.0
State College, Miss.	28.5	34.0+	34.0+	26.2	28.4	33.4+	28.9
Mean	31.6	31.2	25.0	31.2	26.2	27.1	31.2
			DELTA				
Clarkedale, Ark.[1]	15.6	16.0	9.8-	17.8	12.2-	10.5-	13.0
Marianna, Ark.[1]	11.0	14.5	9.0	14.2	11.0	11.5	12.8
Stoneville, Miss.	41.5	41.9	25.9-	33.2	36.1	30.1-	30.8-
Stoneville, Miss. (after oats planting)	36.1	31.5	25.0-	31.9	28.2-	27.6-	32.3
Desha County, Ark.	30.4	32.2	20.5-	30.1	31.6	28.8	29.0
St. Joseph, La.	34.6	33.2	35.2	21.7-	25.9-	25.3-	17.7-
Hamburg, La.	22.1	24.8	17.1-	12.5-	20.4	24.9	11.7-
Baton Rouge, La.	26.8	29.6	36.4+	32.0	36.5+	44.9+	41.4+
Mean	29.6	29.8	24.3	25.6	27.4	27.6	25.5
			WEST				
Stuttgart, Ark.	22.0	20.6	20.0	24.0	22.9	19.6	22.6
Lafayette County, Ark.	23.0	28.6	22.4	22.4	28.0	34.6	26.0
Curtis, La.	20.4	23.3	15.9	20.9	27.5	29.1+	20.0
Chillicothe, Texas[1]	4.0	5.8	3.2	6.5	4.2	7.3	5.1
College Sta., Texas	11.5	13.6	19.2+	11.2	14.0	9.6	11.6
Mean	19.2	21.5	19.4	19.6	23.1	23.2	20.1

Table 31: (Continued)

Location	N45-3799	N46-2652	N46-2802	N46-2872	N46-2881	N46-3008	L.S.D. (5%)	C.V.
			UPPER AND CENTRAL SOUTH					
Clemson, S. C.	26.5-	29.4	34.3	30.7	32.9	33.3	5.3	12%
Crossville, Ala.	17.3-	21.2-	21.5-	22.6	20.8-	22.1	3.1	11%
Athens, Ga.	29.9	30.4	30.9	35.8+	33.3	34.7+	5.3	12%
Watkinsville, Ga.	20.7-	21.6-	24.5-	25.7-	26.3	21.6-	4.5	14%
Experiment, Ga.	49.0	31.4-	34.4	45.4	41.6	35.8	9.2	16%
State College, Miss.	26.6	29.1	22.3-	27.6	30.2	26.1	4.2	10%
Mean	28.3	27.2	28.0	31.3	30.8	28.9		
			DELTA					
Clarkedale, Ark. 1/	12.9	15.6	12.4	16.1	14.2	14.9	3.3	17%
Marianna, Ark. 1/	16.2	11.2	11.4	11.0	14.5	10.1	3.2	19%
Stoneville, Miss.	35.2-	30.9-	35.6-	43.2	37.4	42.3	5.5	11%
Stoneville, Miss. (after oats)	29.8-	29.7-	32.3	27.9-	32.8	24.0-	6.1	14%
Desha County, Ark.	37.0+	28.9	27.5	35.8	36.1	30.1	6.2	15%
St. Joseph, La.	38.6	32.0	34.0	40.1	36.7	31.4	6.3	15%
Hamburg, La.	19.9	23.7	24.1	30.7+	26.3	29.0+	5.0	16%
Baton Rouge, La.	29.8	34.8	34.5	30.7	34.2	29.1	8.8	18%
Mean	29.0	28.1	28.5	32.1	31.1	28.7		
			WEST					
Stuttgart, Ark.	21.7	19.8	22.2	22.9	20.4	19.6	N.S.	13%
Lafayette County, Ark.	27.9	33.2	29.9	29.1	28.9	27.5	N.S.	26%
Curtis, La.	17.8	29.9+	29.9+	32.6+	26.6	25.8	5.7	16%
Chillicothe, Texas 1/	6.2	3.4	1.8	5.7	4.8	2.6	0.6	26%
College Sta., Texas	24.8+	11.4	12.2	13.8	11.6	9.2	3.2	17%
Mean	23.0	23.6	23.6	24.6	21.9	20.5		

1/ - Not included in the mean.

Table 32: Chemical composition of strains in Uniform Group VII, 1949

Location	Roanoke	Vol-state	N44-937	N45-3036	N45-3563	N45-3728
			PERCENT OIL			
Petersburg, Va.	21.1	21.2	19.4	19.6	20.1	19.6
McCullers, N. C.	21.5	21.0	19.2	20.3	20.7	19.8
Florence, S. C.	22.2	21.6	20.2	20.2	21.5	19.5
Tifton, Ga.	22.1	21.9	20.4	20.7	22.8	21.3
Fairhope, Ala.	21.2	20.8	20.1	19.6	21.3	20.0
Davisville, Fla.	23.2	23.0	20.4	21.0	22.6	21.7
Clemson, S. C.	22.5	21.4	19.9	22.1	22.0	20.7
Stoneville, Miss.	22.2	21.7	19.4	20.3	21.2	20.3
Baton Rouge, La.	22.4	22.7	19.6	20.4	22.3	20.9
Stuttgart, Ark.	21.2	21.2	20.2	20.4	21.8	20.8
Mean	22.0	21.7	19.9	20.5	21.6	20.5
			PERCENT PROTEIN			
Petersburg, Va.	40.9	40.6	45.0	41.9	42.4	42.1
McCullers, N. C.	39.1	39.4	44.0	43.3	41.1	41.8
Florence, S. C.	38.8	38.8	44.6	43.1	40.4	41.5
Tifton, Ga.	40.5	39.2	43.8	45.4	41.5	42.9
Fairhope, Ala.	41.5	41.1	43.6	44.9	42.2	41.2
Davisville, Fla.	40.7	40.1	44.5	44.4	41.0	42.0
Clemson, S. C.	37.4	36.9	40.5	39.5	36.7	38.7
Stoneville, Miss.	38.1	38.6	44.1	43.1	41.8	42.9
Baton Rouge, La.	41.2	40.4	46.8	45.9	42.8	43.8
Stuttgart, Ark.	41.6	42.5	44.9	46.1	43.2	42.8
Mean	40.0	39.8	44.2	43.8	41.3	42.0
			IODINE NUMBER OF OIL			
Petersburg, Va.	135.3	135.4	135.1	134.0	135.6	136.5
McCullers, N. C.	135.0	135.6	135.0	132.8	134.9	134.8
Florence, S. C.	131.8	135.8	134.0	133.2	134.4	135.8
Tifton, Ga.	134.5	133.7	132.6	134.6	134.0	131.7
Fairhope, Ala.	136.4	136.3	133.7	133.4	135.1	135.1
Davisville, Fla.	132.1	133.7	130.9	131.5	133.2	131.7
Clemson, S. C.	134.8	135.3	136.0	135.6	136.8	136.3
Stoneville, Miss.	134.5	135.4	131.7	134.6	134.0	133.5
Baton Rouge, La.	133.7	133.3	127.2	129.4	132.9	131.2
Stuttgart, Ark.	132.8	132.9	132.4	131.3	134.0	133.7
Mean	134.1	134.7	132.9	133.0	134.5	134.0

Table 32: (Continued)

Location	Dortch. 31	N45-3799	N46-2652	N46-2802	N46-2872	N46-2881	N46-3008
			PERCENT OIL				
Petersburg, Va.	20.4	20.4	19.9	20.4	19.6	20.8	20.2
McCullers, N. C.	20.2	20.6	20.2	20.7	20.4	21.2	20.4
Florence, S. C.	20.8	20.1	20.7	21.4	21.2	21.8	21.3
Tifton, Ga.	21.4	21.8	21.6	21.9	21.5	22.9	22.7
Fairhope, Ala.	20.0	21.5	20.6	21.3	21.1	21.2	21.5
Davisville, Fla.	21.4	22.1	22.1	22.3	22.4	23.2	23.4
Clemson, S. C.	21.5	21.7	21.2	21.6	21.7	22.6	22.0
Stoneville, Miss.	20.4	21.1	21.2	21.0	21.2	22.3	22.2
Baton Rouge, La.	20.9	21.6	21.8	21.8	21.9	22.9	22.6
Stuttgart, Ark.	20.3	21.0	20.0	20.5	19.5	21.7	20.8
Mean	20.7	21.2	20.9	21.3	21.1	22.1	21.7
			PERCENT PROTEIN				
Petersburg, Va.	40.7	42.2	42.6	41.1	41.7	38.6	37.7
McCullers, N. C.	40.9	41.1	42.2	40.7	40.4	40.2	40.5
Florence, S. C.	39.9	41.8	41.6	40.0	39.2	38.7	38.8
Tifton, Ga.	42.6	43.0	42.9	42.0	40.1	40.0	40.1
Fairhope, Ala.	42.1	41.9	42.0	41.6	41.7	41.5	39.5
Davisville, Fla.	41.8	42.0	41.5	42.0	40.7	40.7	40.0
Clemson, S. C.	38.6	37.6	38.6	38.2	36.6	36.6	36.1
Stoneville, Miss.	42.2	40.8	41.3	41.6	39.0	38.2	37.6
Baton Rouge, La.	43.1	43.7	41.7	42.8	41.1	40.1	41.0
Stuttgart, Ark.	43.7	44.0	43.4	42.9	41.7	42.0	41.6
Mean	41.6	41.8	41.8	41.3	40.2	39.7	39.3
			IODINE NUMBER OF OIL				
Petersburg, Va.	136.8	135.5	134.4	134.3	133.4	136.0	135.4
McCullers, N. C.	136.7	134.0	132.7	133.7	132.5	135.8	135.0
Florence, S. C.	136.8	133.9	131.8	133.3	132.8	137.1	135.2
Tifton, Ga.	136.0	132.9	128.6	131.4	131.8	134.6	133.0
Fairhope, Ala.	139.1	133.0	131.2	133.5	133.3	137.5	136.3
Davisville, Fla.	135.7	131.4	127.5	130.6	129.2	133.0	132.1
Clemson, S. C.	136.7	134.5	134.6	134.7	134.3	137.2	136.9
Stoneville, Miss.	136.6	133.3	130.9	133.2	132.9	136.9	135.4
Baton Rouge, La.	135.4	128.7	126.6	130.1	130.7	134.3	132.1
Stuttgart, Ark.	134.8	132.1	131.6	133.2	131.7	135.1	133.7
Mean	136.5	132.9	131.0	132.8	132.3	135.8	134.5

Table 33: Relative maturity, days earlier (-) or later (+) than Roanoke, for the strains in Uniform Group VII, 1949

Location	Date Planted	Roanoke Matured	Vol-state	N44-937	N45-3036	N45-3563	N45-3728
			EAST COAST				
Petersburg, Va.	5-13	10-27	-7	-12	+2	-4	-5
Williamsburg, Va.	5-31	10-28	-3	-3	+2	0	-8
Holland, Va.	5-16	10-15	-6	-14	-12	+3	-7
Plymouth, N. C.	5-5	10-27	0	-3	+1	+1	-1
Willard, N. C.	5-16	10-26	0	-2	0	0	0
McCullers, N. C.	5-18	10-27	0	-7	+1	0	-2
Florence, S. C.	5-9	10-25	0	-10	0	0	-3
Mean			-2	-7	-1	0	-4
			SOUTHEAST				
Monetta, S. C.	5-10	10-17	-1	-9	+6	0	-3
Tifton, Ga.	4-9	10-11	-1	-9	+3	+1	-7
Tallassee, Ala.	5-25	10-21	-1	0	+3	-1	-3
Milton, Fla.	7-26	11-15	0	-8	-8	-8	+14
Davisville, Fla.	6-23	10-19	+2	-1	0	-2	-2
Mean			-3	-7	+3	-4	-3
			UPPER AND CENTRAL SOUTH				
Athens, Ga.	5-28	10-23	-2	-20	0	-2	-8
Experiment, Ga.	5-21	10-15	0	+3	+5	+5	+3
State College, Miss.	5-12	10-25	0	-15	0	+3	-14
Mean			-1	-11	+2	+2	-7
			DELTA				
Stoneville, Miss.	5-10	11-3	+1	-2	-2	-4	-3
Stoneville, Miss.	6-21	11-8	-1	-4	-4	-3	-5
Hamburg, La.	5-6	10-15	+5	-3	+3	-3	+10
Baton Rouge, La.	6-2	10-20	0	-8	-8	-2	-5
Mean			+1	-4	-3	-3	-1
			WEST				
Stuttgart, Ark.	6-2	10-24	+2	+2	+2	+2	+2
Lafayette C., Ark.	5-12	11-7	-1	-6	0	0	-20
Curtis, La.	5-5	10-22	0	-7	+6	-2	-4
College Sta., Tex.	5-10	11-5	+1	-48	+1	+1	-4
Chillicothe, Tex.	6-21	12-2	0	-14	-14	0	-14
Mean			0	-15	-1	0	-8

Table 33: (Continued)

Location	Dortch. 31	N45-3799	N46-2652	N46-2802	N46-2872	N46-2881	N46-3008
			EAST COAST				
Petersburg, Va.	-5	-10	-2	0	0	+2	-2
Williamsburg, Va.	-10	-8	-3	-3	0	-2	-3
Holland, Va.	-5	-15	+5	+4	+2	-5	0
Plymouth, N. C.	-2	-7	-2	-1	+2	+1	-1
Willard, N. C.	-2	-12	0	0	+2	0	0
McCullers, N. C.	-1	-6	+1	0	0	+1	0
Florence, S. C.	0	-11	0	0	0	+1	0
Mean	-4	-10	0	0	+1	0	-1
			SOUTHEAST				
Monetta, S. C.	0	-10	0	0	0	+1	-3
Tifton, Ga.	-1	-7	-1	+1	+1	+4	0
Tallassee, Ala.	-3	-1	-1	-1	-1	+1	-2
Milton, Fla.	0	-8	+14	-8	0	0	0
Davisville, Fla.	-2	-4	-1	-4	+6	+6	-2
Mean	-4	-8	0	-5	+1	+4	-4
			UPPER AND CENTRAL SOUTH				
Athens, Ga.	-2	-18	0	-2	0	-5	-5
Experiment, Ga.	+1	+4	+4	0	0	0	0
State College, Miss.	-16	-15	+3	0	0	+3	-2
Mean	-6	-10	+2	-1	0	-1	-3
			DELTA				
Stoneville, Miss.	-7	-9	-2	-2	+3	0	+1
Stoneville, Miss.	-1	-5	-6	-4	-4	0	-3
Hamburg, La.	-3	-5	+10	+5	+10	+8	0
Baton Rouge, La.	-10	-15	0	-5	+5	+3	-5
Mean	-5	-8	0	-1	+3	+3	-2
			WEST				
Stuttgart, Ark.	+2	+2	+2	+2	+2	+2	+2
Lafayette County, Ark.	-3	-13	0	-5	+2	-3	-5
Curtis, La.	-2	-12	+6	+1	+6	+8	+6
College Sta., Texas	0	-48	-1	0	+1	+1	-4
Chillicothe, Texas	0	-14	0	0	0	0	0
Mean	-1	-17	+1	0	+2	+2	0

Table 34: Mean plant height for the strains in Uniform Group VII, 1949

Location	Roanoke	Vol-state	N44-937	N45-3036	N45-3563	N45-3728	Dortch. 31
			EAST COAST				
Petersburg, Va.	55	46	55	45	40	50	48
Williamsburg, Va.	46	46	46	44	47	60	36
Onley, Va.	38	32	32	38	36	36	31
Norfolk, Va.	37	44	45	36	39	48	35
Holland, Va.	39	39	48	38	46	51	37
Plymouth, N. C.	41	42	44	41	39	45	34
Willard, N. C.	38	39	48	43	43	49	33
McCullers, N. C.	45	44	46	40	42	54	39
Florence, S. C.	38	38	48	36	40	50	32
Mean	42	41	46	40	42	48	36
			SOUTHEAST				
Monetta, S. C.	38	38	48	36	42	54	30
Charleston, S. C. (1)	29	33	37	34	32	38	24
Charleston, S. C. (2)	28	26	35	27	29	32	22
Tifton, Ga.	23	22	49	33	35	54	22
Tallassee, Ala.	40	44	50	42	42	54	30
Milton, Fla.	14	10	27	18	18	22	9
Davisville, Fla.	32	31	50	38	37	48	30
Fairhope, Ala.	30	21	29	26	27	27	18
Poplarville, Miss.	38	36	50	42	41	58	35
Mean	30	29	42	33	34	43	24
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	34	33	37	33	36	36	26
Athens, Ga.	32	-	32	33	32	42	23
Watkinsville, Ga.	35	34	37	34	36	39	28
Experiment, Ga.	36	32	30	38	36	52	28
Mean	34	33	34	35	35	42	26
			DELTA				
Clarkedale, Ark.	27	21	28	26	26	26	21
Marianna, Ark.	40	44	49	42	41	45	39
Stoneville, Miss.	36	34	53	34	39	58	30
St. Joseph, La.	30	30	56	27	32	56	24
Hamburg, La.	24	25	48	32	33	55	16
Baton Rouge, La.	36	36	56	26	36	60	26
Mean	32	32	48	31	34	50	26
			WEST				
Stuttgart, Ark.	33	38	34	29	35	35	27
Lafayette C., Ark.	37	39	50	38	40	64	28
Curtis, La.	24	30	54	25	33	60	22
College Sta., Texas	28	28	28	26	28	48	20
Chillicothe, Texas	18	22	25	22	23	22	17
Mean	28	31	38	28	32	46	23

Table 34: (Continued)

Location	N45-3799	N46-2652	N46-2802	N46-2872	N46-2881	N46-3008
			EAST COAST			
Petersburg, Va.	48	56	54	54	45	56
Williamsburg, Va.	35	53	48	42	44	46
Onley, Va.	34	49	45	46	35	42
Norfolk, Va.	36	49	42	36	42	35
Holland, Va.	41	56	43	45	44	39
Plymouth, N. C.	41	49	43	43	41	42
Willard, N. C.	43	52	43	43	40	46
McCullers, N. C.	46	52	44	45	45	44
Florence, S. C.	38	54	46	46	40	48
Mean	40	52	45	44	42	44
			SOUTHEAST			
Monetta, S. C.	42	56	46	46	40	50
Charleston, S.C. (1)	36	38	36	36	37	31
Charleston, S.C. (2)	27	36	31	31	31	30
Tifton, Ga.	38	54	34	33	32	34
Tallassee, Ala.	44	68	48	48	45	49
Milton, Fla.	26	26	22	19	22	20
Davisville, Fla.	36	44	40	35	40	38
Fairhope, Ala.	28	34	31	23	27	23
Poplarville, Miss.	42	60	42	42	40	42
Mean	36	46	37	35	35	35
			UPPER AND CENTRAL SOUTH			
Clemson, S. C.	34	37	36	35	37	37
Athens, Ga.	32	58	36	35	32	39
Watkinsville, Ga.	39	56	36	39	39	43
Experiment, Ga.	38	42	32	26	42	36
Mean	36	48	35	34	38	39
			DELTA			
Clarkedale, Ark.	30	36	25	28	29	28
Marianna, Ark.	45	48	46	45	47	37
Stoneville, Miss.	40	62	38	48	44	42
St. Joseph, La.	40	80	37	32	42	45
Hamburg, La.	32	65	36	34	31	38
Baton Rouge, La.	39	65	37	35	38	40
Mean	38	59	36	37	38	38
			WEST			
Stuttgart, Ark.	32	45	42	37	33	41
Lafayette C., Ark.	41	64	55	44	44	50
Curtis, La.	36	80	34	48	38	48
College Sta., Texas	32	50	35	39	29	37
Chillicothe, Texas	20	28	24	26	28	26
Mean	32	53	38	39	34	40

Table 35: Summary of lodging scores for strains in Uniform Group VII, 1949

Location	Roanoke	Vol-state	N44-937	N45-3036	N45-3563	N45-3728
			EAST COAST			
Petersburg, Va.	2.0	3.0	2.0	2.0	3.0	2.0
Williamsburg, Va.	3.0	3.0	4.0	4.0	4.0	2.0
Onley, Va.	2.7	2.2	1.2	1.5	2.2	1.5
Norfolk, Va.	4.0	2.7	2.0	2.3	2.7	1.5
Holland, Va.	3.0	3.0	1.0	2.0	4.0	3.0
Plymouth, N. C.	3.0	2.5	3.5	2.5	4.0	3.0
Willard, N. C.	2.0	2.0	2.0	2.0	2.5	2.5
McCullers, N. C.	3.0	2.5	4.5	2.5	4.5	4.5
Florence, S. C.	2.0	2.0	2.5	2.0	2.5	2.5
			SOUTHEAST			
Monetta, S. C.	2.0	2.0	2.0	2.0	2.0	2.0
Charleston, S. C. (1)	2.0	3.0	3.0	2.0	4.0	3.0
Charleston, S. C. (2)	2.0	2.0	3.0	2.0	3.0	2.0
Tallassee, Ala.	1.5	1.5	1.2	2.0	2.0	1.8
Davisville, Fla.	1.0	1.0	2.0	2.0	2.0	2.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Clemson, S. C.	1.5	1.5	1.2	2.0	2.0	1.8
Athens, Ga.	2.5	3.0	2.5	2.0	3.0	4.0
Watkinsville, Ga.	1.0	1.0	2.0	1.0	2.0	3.0
Experiment, Ga.	2.0	2.0	1.0	3.0	3.0	1.0
State College, Miss.	2.0	2.0	2.0	1.0	3.0	1.0
			DELTA			
Clarkedale, Ark.	3.0	4.0	3.0	4.0	3.0	3.0
Marianna, Ark.	3.0	3.0	1.0	2.0	3.0	2.0
Stoneville, Miss.	3.0	2.8	3.0	2.2	3.8	3.2
St. Joseph, La.	2.0	1.0	4.0	1.0	4.0	4.0
Hamburg, La.	2.0	2.0	3.0	2.0	3.0	3.0
Baton Rouge, La.	3.0	3.0	4.0	2.0	3.0	4.0
			WEST			
Stuttgart, Ark.	3.0	2.0	3.0	2.0	2.0	1.0
Lafayette C., Ark.	2.0	2.0	2.0	3.0	3.0	3.0
Curtis, La.	3.0	3.0	4.0	3.0	4.0	4.0
College Sta., Texas	1.0	1.0	1.0	1.0	1.0	1.0

Table 35: (Continued)

Location	Dortch. 31	N45-3799	N46-2652	N46-2802	N46-2872	N46-2881	N46-3008
			EAST COAST				
Petersburg, Va.	2.0	2.0	3.0	3.0	2.0	2.0	3.0
Williamsburg, Va.	2.0	1.0	3.0	3.0	3.0	3.0	4.0
Onley, Va.	1.0	1.5	2.2	2.2	2.2	1.2	3.5
Norfolk, Va.	1.2	1.7	3.0	2.7	3.0	2.5	4.7
Holland, Va.	2.0	2.0	2.0	4.0	2.0	1.0	2.0
Plymouth, N. C.	2.5	1.0	5.0	3.0	4.5	3.0	4.5
Willard, N. C.	1.0	2.0	4.0	3.5	2.5	2.0	3.5
McCullers, N. C.	3.0	2.5	4.5	4.0	3.5	3.0	5.0
Florence, S. C.	1.0	1.5	3.5	2.0	2.0	2.0	5.0
			SOUTHEAST				
Monetta, S. C.	1.0	2.0	3.0	2.0	2.0	2.0	3.0
Charleston, S. C. (1)	1.0	2.0	3.0	3.0	3.0	2.0	3.0
Charleston, S. C. (2)	1.0	2.0	3.0	2.0	2.0	1.0	2.0
Tallassee, Ala.	1.2	1.2	1.5	1.8	1.8	1.3	2.0
Davisville, Fla.	1.0	2.0	2.0	2.0	2.0	2.0	2.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	1.2	1.2	1.5	1.8	1.8	1.3	2.0
Athens, Ga.	1.0	3.0	3.5	3.0	3.5	2.0	4.0
Watkinsville, Ga.	1.0	3.0	3.0	1.0	2.0	2.0	3.0
Experiment, Ga.	1.0	1.0	3.0	1.0	4.0	1.0	2.0
State College, Miss.	1.0	1.0	2.0	2.0	3.0	1.0	2.0
			DELTA				
Clarkedale, Ark.	2.0	4.0	4.0	3.0	4.0	3.0	4.0
Marianna, Ark.	2.0	1.0	3.0	3.0	4.0	2.0	4.0
Stoneville, Miss.	2.2	2.0	3.8	3.2	3.5	2.8	4.0
St. Joseph, La.	1.0	2.0	4.0	1.0	1.0	1.0	4.0
Hamburg, La.	1.0	1.0	3.0	2.0	2.0	2.0	2.0
Baton Rouge, La.	2.0	3.0	4.0	3.0	3.0	2.0	3.0
			WEST				
Stuttgart, Ark.	2.0	3.0	2.0	2.0	2.0	1.0	4.0
Lafayette C., Ark.	2.0	2.0	4.0	3.0	3.0	2.0	3.0
Curtis, La.	2.0	3.0	5.0	4.0	4.0	3.0	4.0
College Sta., Texas	1.0	2.0	1.0	1.0	1.0	1.0	2.0

Table 36: Seed quality scores for strains in Uniform Group VII, 1949

Location	Roanoke	Vol-state	N44-937	N45-3036	N45-3563	N45-3728
			EAST COAST			
Petersburg, Va.	1.0	1.0	2.0	2.0	1.0	1.0
Onley, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Norfolk, Va.	1.0	1.0	2.0	1.0	1.0	2.0
Holland, Va.	1.0	1.0	3.0	1.0	3.0	3.0
Plymouth, N. C.	2.0	2.0	3.0	2.0	2.0	3.0
Willard, N. C.	1.0	1.0	2.0	2.0	1.0	2.0
McCullers, N. C.	1.0	1.0	2.0	2.0	1.0	2.0
Florence, S. C.	1.0	1.0	2.0	2.0	1.0	2.0
			SOUTHEAST			
Monetta, S. C.	2.0	2.0	2.0	2.0	1.0	1.0
Charleston, S. C.	3.0	3.0	4.0	4.0	3.0	3.0
Charleston, S. C.	2.0	2.0	3.0	2.0	2.0	3.0
Davisville, Fla.	1.0	2.0	2.0	2.0	1.0	2.0
			UPPER AND CENTRAL SOUTH			
Clemson, S. C.	1.0	1.0	1.0	1.0	1.0	2.0
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
			DELTA			
Stoneville, Miss.	1.0	1.0	2.0	2.0	2.0	3.0
St. Joseph, La.	3.0	2.0	4.0	3.0	4.0	4.0
Hamburg, La.	3.0	3.0	5.0	4.0	4.0	5.0
Baton Rouge, La.	3.0	3.0	5.0	2.0	2.0	3.0
			WEST			
Curtis, La.	3.0	2.0	4.0	2.0	3.0	3.0
Chillicothe, Texas	3.0	3.0	3.0	3.0	3.0	3.0

Table 36: (Continued)

Location	Dortch. 31	N45-3799	N46-2652	N46-2802	N46-2872	N46-2881	N46-3008
			EAST COAST				
Petersburg, Va.	1.0	2.0	2.0	2.0	2.0	2.0	2.0
Onley, Va.	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Norfolk, Va.	1.0	1.0	1.2	1.0	1.0	1.0	1.0
Holland, Va.	2.0	3.0	3.0	3.0	1.0	3.0	1.0
Plymouth, N. C.	3.0	3.0	2.0	2.0	2.0	2.0	2.0
Willard, N. C.	1.0	2.0	2.0	2.0	1.0	1.0	2.0
McCullers, N. C.	2.0	2.0	1.0	1.0	1.0	1.0	2.0
Florence, S. C.	2.0	2.0	2.0	2.0	1.0	2.0	2.0
			SOUTHEAST				
Monetta, S. C.	2.0	2.0	1.0	2.0	1.0	2.0	2.0
Charleston, S. C.	2.0	4.0	4.0	3.0	3.0	2.0	2.0
Charleston, S. C.	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Davisville, Fla.	1.5	2.0	1.5	1.0	1.0	2.0	2.0
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	1.0	1.0	2.0	2.0	2.0	1.0	2.0
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0	1.0	1.0
			DELTA				
Stoneville, Miss.	2.0	3.0	2.0	2.0	1.0	1.0	1.0
St. Joseph, La.	3.0	4.0	3.0	2.0	2.0	2.0	2.0
Hamburg, La.	4.0	5.0	5.0	4.0	3.0	3.0	4.0
Baton Rouge, La.	2.0	5.0	3.0	3.0	2.0	2.0	2.0
			WEST				
Curtis, La.	3.0	4.0	2.0	2.0	2.0	3.0	3.0
Chillicothe, Texas	3.0	3.0	3.0	2.0	2.0	3.0	3.0

Table 37: Mean seed weight, per 100 seeds, for the strains in Uniform Group VII, 1949

Location	Roanoke	Vol-state	N44-937	N45-3036	N45-3563	N45-3728
			EAST COAST			
Petersburg, Va.	19.0	20.0	15.0	20.0	16.5	14.0
Williamsburg, Va.	18.0	18.5	15.5	22.0	15.0	16.0
Holland, Va.	20.0	18.0	17.0	22.0	17.5	16.5
Plymouth, N. C.	14.2	15.1	13.5	18.0	13.7	13.5
Willard, N. C.	15.2	15.4	13.0	18.9	14.7	15.1
McCullers, N. C.	16.0	15.5	13.4	20.0	16.0	15.0
Florence, S. C.	15.2	15.0	13.1	19.1	15.2	13.9
Mean	16.8	16.8	14.4	20.0	15.5	14.8
			SOUTHEAST			
Monetta, S. C.	14.0	13.8	13.7	19.5	14.1	14.4
Charleston, S. C. (1)	17.6	16.1	15.8	18.6	17.3	15.4
Charleston, S. C. (2)	15.0	14.5	11.9	16.7	13.7	12.6
Tifton, Ga.	15.7	13.8	13.0	19.6	16.9	13.7
Davisville, Fla.	19.0	17.6	15.0	20.0	17.3	15.4
Poplarville, Miss.	14.9	14.2	13.6	15.9	14.8	13.5
Mean	16.0	15.0	13.8	18.4	15.7	14.2
			UPPER AND CENTRAL SOUTH			
Clemson, S. C.	15.3	14.8	12.4	17.5	13.0	12.4
Athens, Ga.	19.6	20.0	15.4	21.9	17.8	17.9
			DELTA			
Clarkedale, Ark.	20.0	18.0	17.0	15.0	15.0	16.0
Marianna, Ark.	12.0	14.0	9.0	15.0	13.0	13.0
Stoneville, Miss.	19.7	19.5	16.5	21.5	19.2	18.0
Stoneville, Miss. (after oats planting)	14.9	14.0	12.3	15.7	13.2	13.2
Baton Rouge, La.	16.9	17.9	15.9	17.4	14.9	14.9
Mean	16.7	16.7	14.1	16.9	15.1	15.0
			WEST			
Stuttgart, Ark.	13.0	12.0	12.0	16.0	13.0	11.0
Chillicothe, Texas	19.0	19.0	15.0	20.0	17.0	19.0
Mean	16.0	15.5	13.5	19.0	15.0	15.0

Table 37: (Continued)

Location	Dortch. 31	N45-3799	N46-2652	N46-2802	N46-2872	N46-2881	N46-3008
			EAST COAST				
Petersburg, Va.	16.0	16.0	17.0	15.5	17.5	16.5	15.5
Williamsburg, Va.	18.5	17.0	16.5	16.5	19.0	18.5	15.5
Holland, Va.	16.5	17.5	17.5	20.5	18.5	18.5	16.0
Plymouth, N. C.	14.1	13.5	15.5	16.1	16.7	15.3	13.4
Willard, N. C.	14.8	14.4	15.9	16.5	16.3	15.2	13.2
McCullers, N. C.	15.9	14.9	15.3	16.7	17.2	16.4	13.2
Florence, S. C.	15.0	14.2	14.2	15.1	15.0	14.5	12.5
Mean	15.8	15.4	16.0	16.7	17.2	16.4	14.2
			SOUTHEAST				
Monetta, S. C.	14.5	13.9	15.6	15.0	15.2	15.0	13.0
Charleston, S. C.	15.3	15.0	16.8	17.4	18.9	15.7	15.0
Charleston, S. C.	13.9	14.1	13.8	12.9	15.3	13.0	13.0
Tifton, Ga.	16.9	13.4	14.8	14.7	15.3	14.4	13.3
Davisville, Fla.	16.8	15.0	15.8	17.2	18.4	17.5	15.6
Poplarville, Miss.	12.8	13.4	15.3	14.6	14.4	12.8	12.7
Mean	15.0	14.1	15.4	15.3	16.2	14.7	13.8
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	14.0	12.5	16.5	14.4	14.0	13.5	13.6
Athens, Ga.	20.3	17.6	19.2	19.5	20.2	19.1	17.0
			DELTA				
Clarkedale, Ark.	21.0	16.0	16.0	18.0	16.0	18.0	18.0
Marianna, Ark.	15.0	12.0	14.0	14.0	15.0	14.0	15.0
Stoneville, Miss.	19.2	15.8	16.2	19.5	20.0	19.4	17.2
Stoneville, Miss. (after oats planting)	13.0	13.5	13.5	15.4	14.5	13.7	12.7
Baton Rouge, La.	15.9	17.0	15.5	16.6	16.8	15.0	15.1
Mean	16.8	14.9	15.0	16.7	16.5	16.0	15.6
			WEST				
Stuttgart, Ark.	13.0	14.0	12.0	12.0	13.0	12.0	11.0
Chillicothe, Texas	23.0	16.0	17.0	19.0	19.0	18.0	17.0
Mean	18.0	15.0	14.5	15.5	16.0	15.0	14.0

Table 38: Two-year summary of yield for strains in Uniform Group VII, 1948-1949

Location	Roanoke	Vol-state	N44-937	N45-3036	N45-3563	N45-3728	Dortch. 31
			EAST COAST				
Petersburg, Va.	33.2	33.7	38.4	34.5	32.2	43.5	43.6
Williamsburg, Va.	35.3	32.6	24.4	37.2	33.6	31.4	35.6
Holland, Va.	42.2	38.6	40.2	44.0	44.1	42.6	45.0
Norfolk, Va.	26.3	26.5	21.2	30.8	25.8	26.4	28.4
Plymouth, N. C.	30.8	28.1	27.6	29.4	29.2	33.1	26.8
Willard, N. C.	34.8	33.4	30.4	33.4	33.7	29.4	30.0
McCullers, N. C.	25.8	26.6	25.2	25.8	24.6	25.7	27.2
Florence, S. C.	35.2	27.3	27.8	36.2	34.9	33.6	33.3
Mean	32.9	30.8	29.4	33.9	32.3	33.2	33.7
			SOUTHEAST				
Monetta, S. C.	27.9	25.8	29.2	32.8	30.4	34.8	30.2
Charleston, S. C.	25.5	26.1	19.2	24.1	28.9	26.6	26.3
Tifton, Ga.	18.7	15.5	28.1	28.8	28.2	35.2	20.8
Tallassee, Ala.	33.7	32.1	18.8	36.5	31.1	28.9	31.5
Fairhope, Ala.	27.7	27.4	26.4	30.2	30.6	32.4	28.5
Mean	26.7	25.4	24.3	30.5	29.8	31.6	27.5
			UPPER AND CENTRAL SOUTH				
Clemson, S. C.	29.2	28.4	22.4	26.0	25.0	21.8	26.6
Watkinsville, Ga.	24.2	22.2	16.6	21.5	19.2	18.8	22.0
State College, Miss.	30.0	29.9	28.0	27.8	29.2	29.0	29.5
Mean	27.8	26.8	22.3	25.1	24.5	23.2	26.0
			DELTA				
Clarkedale, Ark.	24.4	22.4	14.9	19.4	16.0	15.9	20.1
Stoneville, Miss.	33.6	34.0	23.8	28.1	31.1	24.8	25.8
Winchester, Ark.	30.1	32.4	24.8	29.8	34.4	32.5	35.5
St. Joseph, La.	32.8	34.6	34.0	26.2	28.7	28.0	19.4
Hamburg, La.	16.2	18.8	18.2	13.2	17.2	18.8	9.6
Baton Rouge, La.	23.4	24.4	24.9	25.4	26.5	30.2	31.2
Mean	26.8	27.8	23.4	23.7	25.6	25.0	23.6
			WEST				
Stuttgart, Ark.	24.2	22.1	21.8	24.7	23.6	23.0	23.2
Curtis, La.	23.7	24.9	16.0	23.3	26.9	27.2	25.5
Mean	24.0	23.5	18.9	24.0	25.2	25.1	24.4

Table 39: Two-year summary of oil content for strains in Uniform Group VII, 1948-1949

Location	Roanoke	Vol-state	N44-937	N45-3036	N45-3563	N45-3728	Dortch. #31
Petersburg, Va.	20.6	20.8	19.3	19.7	20.0	19.3	20.0
McCullers, N. C.	21.8	21.4	19.6	20.6	21.0	20.3	21.1
Florence, S. C.	22.2	21.6	19.7	20.3	21.4	19.6	20.8
Fairhope, Ala.	21.4	20.8	19.4	20.1	21.7	20.4	20.0
Clemson, S. C.	21.1	20.4	19.7	20.6	20.1	19.0	20.2
Stoneville, Miss.	21.9	21.4	18.4	20.2	21.2	20.2	19.9
Baton Rouge, La.	23.6	23.1	20.8	21.8	22.8	21.2	21.5
Stuttgart, Ark.	20.8	20.6	20.0	19.8	21.1	20.5	19.8
Mean	21.7	21.3	19.6	20.4	21.2	20.0	20.4

Table 40: Three-year summary of yield and oil content for strains in Uniform Group VII, 1947-1949

Location	Roanoke	Volstate	N44-937	N45-3563
		EAST COAST		
Petersburg, Va.	37.6	39.4	37.1	34.8
Plymouth, N. C.	29.2	28.7	24.3	27.3
Willard, N. C.	34.1	32.9	30.9	35.4
McCullers, N. C.	32.4	31.0	27.4	29.3
Florence, S. C.	33.1	26.2	29.1	33.8
Mean	33.3	31.6	29.8	32.1
		SOUTHEAST		
Monetta, S. C.	25.8	24.1	24.6	28.3
Tifton, Ga.	17.5	15.0	25.9	25.2
Mean	21.6	19.6	25.2	26.8
		UPPER AND CENTRAL SOUTH		
Clemson, S. C.	26.9	25.3	20.2	23.2
Watkinsville, Ga.	20.1	18.1	14.5	15.5
State College, Miss.	31.5	31.9	28.0	30.1
Mean	26.2	25.1	21.2	22.9
		DELTA		
Clarkedale, Ark.	24.0	22.9	14.6	16.8
Stoneville, Miss.	32.3	30.0	21.3	27.7
St. Joseph, La.	30.2	30.9	32.1	26.5
Baton Rouge, La.	21.8	23.7	26.0	26.9
Mean	27.1	26.8	23.5	24.5
		WEST		
Stuttgart, Ark.	20.8	19.2	18.0	19.8
		OIL CONTENT		
Petersburg, Va.	20.8	20.8	19.5	20.0
McCullers, N. C.	21.9	21.2	19.5	20.9
Florence, S. C.	21.9	21.4	19.5	21.3
Clemson, S. C.	21.1	20.4	19.7	20.1
Stoneville, Miss.	21.9	21.7	18.8	21.4
Stuttgart, Ark.	21.1	20.9	19.9	21.0

Preliminary Group VII, 1949

Twenty-three new strains, along with Roanoke and N45-3563, were grown at six locations, Willard, North Carolina; Monetta, South Carolina; Tifton, Georgia; Poplarville, Mississippi; Experiment, Georgia; and Baton Rouge, Louisiana. Practically all strains make taller growth than Roanoke. Most of these strains had proved to have satisfactory seed holding qualities.

The strains having the highest oil content of this group are N46-2845 and N47-3545, two selections from the backcross of Volstate/Volstate x Palmetto. Both strains have higher oil content than Roanoke. N46-2845 yielded significantly more than Roanoke only at Tifton. At all locations other than Tifton, this strain showed severe lodging. N47-3545 yielded significantly more than Roanoke at Willard and Monetta. Its growth is quite comparable to Roanoke.

One of the best yielding strains in the group is N45-2176, a selection from Ogden x Biloxi. This strain has good growth characteristics. It is being reselected to give more uniform seed characteristics.

N47-3332 is a very tall type that stood quite well at most locations. It gave good seed yields along with an oil content only slightly below Roanoke. N47-3479 yielded significantly more than Roanoke at four of the six locations and has a very similar oil content. Both of these strains should be in the Group VII nursery in 1950. N47-3479 is a sub-line out of N46-2881 which was included in Group VII.

N47-309, which was included at only three locations, is a bacterial pustule resistant strain from the cross Volstate x CNS. In comparison with CNS, this strain possesses superior agronomic qualities along with a higher oil content. Seed yield was quite comparable to Roanoke, but oil content is lower.

Table 41: Summary of the yield data for strains in Preliminary Group VII, 1949

Strain	Cross	Willard, N. C.	Monetta, S.C.	Tifton, Ga.	Poplar-ville, Miss.	Experi-ment, Ga.	Baton Rouge, La.
Roanoke		26.0	23.1	17.2	24.3	33.9	34.2
N45-3563	Ogden x Missoy	32.7+	29.1+	26.8+	26.6	31.9	37.5
D67-58	Boone x Monetta	34.1+	31.4+	26.6+	28.5	38.3	32.6
D420-1198	Dunfield x Arksoy	30.6	33.4+	29.9+	22.7	30.3	27.1
D623-161	L7-1355 x Arksoy 2913	28.4	26.6	26.7+	29.2+	28.4	33.9
N45-2176	Ogden x Biloxi	37.6+	38.5+	33.4+	26.8	32.6	38.9
N45-3803	Palmetto x Ogden	33.0+	30.1+	24.5+	25.8	36.1	35.9
N46-1545	Ogden x Volstate	24.6	24.6	19.8	29.0	40.4	37.8
N46-2797	Volstate x Palmetto	31.3+	33.3+	27.9+	29.7+	31.5	33.7
N46-2845	Vol./Volstate x Palmetto	27.9	26.5	31.7+	27.4	25.2	28.7
N47-309	Volstate x CNS	30.4	30.3+	-	25.1	-	-
N47-2930	Volstate x Woods Yellow	28.2	25.4	23.4+	18.9-	23.9	29.9
N47-2981	Volstate x Mamotan	32.4+	32.4+	19.4	25.5	40.5	37.4
N47-3225	Volstate x Mamotan	33.5+	30.6+	19.7	22.2	45.2+	33.9
N47-3301	Volstate x Palmetto	27.6	35.4+	28.2+	21.6	38.2	34.1
N47-3332	Volstate x Palmetto	28.2	32.4+	30.4+	28.1	30.2	37.6
N47-3470	Vol./Volstate x Palmetto	32.5+	31.5+	20.7	27.7	32.3	30.6
N47-3479	Vol./Volstate x Palmetto	31.6+	31.6+	28.2+	33.4+	33.6	40.4
N47-3529	Vol./Volstate x Palmetto	23.1	25.4	-	-	-	-
N47-3545	Vol./Volstate x Palmetto	35.2+	30.6+	19.4	27.5	36.4	29.8
N47-3392	Vol./Volstate x Palmetto	-	-	34.6+	28.7	24.6	33.8
Bushels necessary for significance (5% level)		4.8	4.3	5.8	4.8	8.9	7.9
Coefficient of variability		11%	10%	16%	13%	18%	16%

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

Table 41a: Percentage of oil for the strains in Preliminary Group VII, 1949

Strain	Willard, N. C.	Poplarville, Miss.	Baton Rouge, La.
Roanoke	21.8	21.6	22.7
N45-3563	21.5	21.7	21.4
D67-58	19.6	20.4	21.0
D420-1198	20.2	20.4	22.5
D623-161	20.4	21.0	22.5
N45-2176	20.3	20.4	22.0
N45-3803	18.8	19.3	20.1
N46-1545	21.0	21.6	22.1
N46-2797	20.5	21.0	21.4
N46-2845	21.9	22.6	23.5
N47-309	20.2	21.0	-
N47-2930	20.7	20.2	21.0
N47-2981	20.6	20.8	22.0
N47-3225	21.0	20.4	21.9
N47-3301	20.0	20.5	21.1
N47-3332	21.1	22.0	22.4
N47-3470	21.0	21.6	21.9
N47-3479	21.5	22.0	22.9
N47-3529	20.4	-	-
N47-3545	22.2	22.9	22.9
N47-3392	-	19.8	20.9

UNIFORM GROUP VIII, 1949

Variety or Strain	Source or Originating Agency	Origin
Acadian	La. Agric. Expt. Station	Sel. from P.I. 60406 x P.I. 04910
Seminole	U. S. Dept. of Agric.	Plant Introduction No. 93058 from Hangchow, China
Cherokee	U. S. Dept. of Agric.	Plant Introduction No. 93057 from Hangchow, China
J.E.W. 45	J. E. Wannamaker, St. Matthews, S. Car.	Selection from mixed seed lot
Yelnando	Coker Pedigreed Seed Co. Hartsville, S. Car.	Selection from Yelredo x Nanda
F.C. 31592	U. S. Dept. of Agric.	Introduction from Indonesia
P.I. 85897	U. S. Dept. of Agric.	Introduction from Shiznoke, Japan
La. 41-1219	La. Agric. Expt. Sta.	Selection from Tanloxi x P.I. 60406
Majos	Coker Pedigreed Seed Co. Hartsville, S. Car.	Selection from Tokyo x Yelredo

The varieties and strains of Group VIII maturity represent the latest maturing strains available. In the Gulf Coast area, these varieties mature about November 1. In most areas, varieties of Group VII maturity will give higher seed yields and have higher oil content, than the varieties in Group VIII, if planted during May. However, the extra growth made by the later varieties is an advantage for plantings made after mid-June in south Georgia. At Baton Rouge, Louisiana, varieties of Group VIII maturity have far better seed quality than the earlier varieties.

Six strains have been included in this group for three years. These are Acadian, Seminole, Cherokee, J.E.W. 45, Yelnando, and P.I. 85897. At Monetta, the four strains Acadian, Seminole, J.E.W. 45 and Yelnando have given quite comparable seed yields. At Tifton, Acadian and Seminole were top producers, while at Baton Rouge, Acadian was distinctly superior to the other strains. Cherokee has been one of the lower seed producers each year. Cherokee shatters more than any of the other strains.

One strain, F.C. 31592, has been grown two years. Seed yields each year were quite comparable to those for Acadian in the Southeast, but somewhat lower in other areas. The oil content of F.C. 31592 is slightly higher than for Acadian. F.C. 31592 has black seed coat and green cotyledons but has a high degree of resistance to bacterial pustule.

Two strains, La. 41-1219 and Majos were included for the first time. The plant type of La. 41-1219 is very similar to that of Acadian. Seed yield was quite comparable to that of Acadian at all locations except Tifton. Oil content was higher than Acadian at Tifton and Baton Rouge, but somewhat lower at Davisville, Florida.

Majos is somewhat variable in plant type. It yielded better than Acadian at Davisville, Florida, and Experiment, Georgia, but less at Tifton, Georgia, and Curtis, Louisiana. Majos has good oil content.

Table 42: Summary of the yield data for strains in Uniform Group VIII, 1949

Location	Aca-dian	Semi-nole	Chero-kee	J.E.W.-45	Yel-nando	F.C. 31592	P.I. 85897	La. 41-1219	Majos	L.S.D. (5%)	C.V.
SOUTHEAST											
Monetta, S. C.	32.8	30.8	24.5-	33.5	34.1	29.2	32.4	33.6	25.5-	4.8	11%
Experiment, Ga.	19.9	30.3+	12.2-	30.9+	26.2+	22.4	21.6	18.4	31.1+	5.8	17%
Tifton, Ga.	27.5	29.3	15.7-	21.0-	27.5	31.1	29.5	17.5-	21.0-	5.5	15%
Tallassee, Ala.	25.7	33.6+	13.9-	31.2+	27.8	28.6	28.7	28.8	29.4	5.5	14%
Davisville, Fla.	31.0	38.4+	28.4	36.4+	36.1+	31.8	37.3+	34.4	43.3+	4.9	11%
Mean	25.4	32.5	18.9	30.6	30.3	28.6	29.9	26.5	30.1		
DELTA											
Stoneville, Miss.	34.8	11.9-	15.0-	28.3	24.6	18.7-	29.5	33.7	28.2	10.5	29%
St. Joseph, La.	29.2	-	17.0-	-	14.4-	-	19.7	29.0	25.6	6.4	19%
Baton Rouge, La.	32.4	-	26.8	-	28.4	-	36.5	32.2	27.3	7.3	16%
WEST											
Stuttgart, Ark.	20.8	22.8	22.0	22.1	13.5	20.3	22.2	22.0	19.2	5.0	17%
Curtis, La.	29.0	-	12.8-	-	15.9-	-	17.5-	26.5	14.4-	4.7	15%
Chillicothe, Texas	1.4	-	1.4	-	5.0	-	1.3	2.9	2.6	1.5	40%

Table 43: Chemical composition of the strains in Uniform Group VIII, 1949

Location	Acadian	Seminole	Cherokee	J.E.W45	Yel-nando	F.C. 31592	P.I. 85897	La. 41-1219	Majos
				PERCENT OIL					
Monetta, S. C.	20.1	19.0	18.4	19.4	20.2	20.8	18.5	20.2	20.7
Tifton, Ga.	20.6	21.1	19.9	20.6	21.4	21.8	20.6	21.3	22.7
Davisville, Fla.	20.2	20.9	18.6	20.9	21.1	20.4	20.8	19.4	21.2
Baton Rouge, La.	20.3	-	18.0	-	20.4	-	20.1	21.3	22.7
				PERCENT PROTEIN					
Monetta, S. C.	41.9	43.8	45.7	43.6	42.4	40.9	42.5	43.6	39.9
Tifton, Ga.	42.0	42.6	45.3	44.6	42.1	41.1	42.9	42.0	39.0
Davisville, Fla.	42.8	42.6	45.5	42.9	41.7	40.6	41.4	42.2	39.7
Baton Rouge, La.	43.6	-	43.9	-	43.4	-	44.1	43.2	38.6
				IODINE NUMBER OF OIL					
Monetta, S. C.	136.4	133.3	133.4	129.4	126.6	132.2	132.9	137.1	132.1
Tifton, Ga.	135.5	131.5	132.6	128.9	127.2	130.6	132.8	135.1	130.3
Davisville, Fla.	136.9	133.8	133.9	128.8	127.4	134.3	131.3	138.6	131.1
Baton Rouge, La.	136.4	-	132.3	-	125.2	-	129.9	135.6	129.3

Table 44: Relative maturity data, days earlier (-) or later (+) than Acadian, of the varieties in Uniform Group VIII, 1949

Location	Date Planted	Acadian Matured	Semi-nole	Chero-kee	J.E.W. 45	Yel-nando	F.C. 31592	P.I. 85897	La. 41-1219	Majos
				SOUTHEAST						
Monetta, S. C.	5-10	11-5	0	0	-3	0	0	0	0	0
Experiment, Ga.	5-21	11-1	+4	-1	-3	-3	0	0	-1	+2
Tifton, Ga.	4-19	10-28	-12	-4	-12	-3	-2	-4	-3	+5
Tallassee, Ala.	5-25	10-29	-2	-2	-2	-3	-1	+1	-1	+1
Davisville, Fla.	6-23	10-27	-8	0	-5	-6	-3	-4	0	-1
				DELTA						
Stoneville, Miss.	5-10	11-4	+4	+5	-1	-1	+11	+11	+3	+11
St. Joseph, La.	5-9	11-1	-	+14	-	-7	-	+6	0	+19
Baton Rouge, La.	6-2	11-1	-	+6	-	+4	-	+12	0	+9
				WEST						
Stuttgart, Ark.	6-2	11-4	0	0	0	0	0	0	0	0
Curtis, La.	5-5	11-5	-	+5	-	+5	-	+5	+5	+5

Table 45: Mean plant height of the strains in Uniform Group VIII, 1949

Location	Acadian	Seminole	Cherokee	JE W 45	Yel-nando	F.C. 31592	P.I. 85397	La. 41-1219	Majos
				SOUTHEAST					
Monetta, S. C.	54	42	42	42	48	42	48	54	36
Tifton, Ga.	57	41	47	42	46	53	39	57	36
Tallassee, Ala.	64	52	49	45	55	61	47	64	45
Davisville, Fla.	58	43	45	40	42	46	45	57	42
				DELTA					
Stoneville, Miss.	62	51	50	49	46	52	46	63	40
St. Joseph, La.	72	-	56	-	35	-	40	65	33
Baton Rouge, La.	68	-	50	-	46	-	42	72	36
				WEST					
Stuttgart, Ark.	50	41	42	33	38	44	42	49	32
Curtis, La.	65	-	60	-	40	-	52	80	30
Chillicothe, Texas	27	-	22	-	33	-	29	26	26

Table 46: Lodging scores for strains in Uniform Group VIII, 1949

Location	Acadian	Seminole	Cherokee	J.E.W. 45	Yel-nando	F.C. 31592	P.I. 85897	La. 41-1219	Majos
				SOUTHEAST					
Monetta, S. C.	3.0	4.0	2.0	1.0	3.0	3.0	2.0	3.0	1.0
Experiment, Ga.	3.0	4.0	2.0	4.0	4.0	3.0	3.0	3.0	3.0
Tallassee, Ala.	1.2	2.2	2.2	2.5	1.5	2.2	2.8	2.0	3.2
Davisville, Fla.	3.0	2.0	3.0	2.0	2.0	2.0	2.0	3.0	2.0
				DELTA					
Stoneville, Miss.	3.7	4.0	3.0	4.0	3.3	4.3	4.0	3.7	3.7
St. Joseph, La.	4.0	-	4.0	-	4.0	-	3.0	3.0	3.0
Baton Rouge, La.	4.0	-	3.0	-	3.0	-	3.0	3.0	4.0
				WEST					
Stuttgart, Ark.	3.0	4.0	2.0	4.0	5.0	5.0	4.0	3.0	4.0
Curtis, La.	5.0	-	5.0	-	5.0	-	5.0	5.0	5.0

Table 47: Seed quality scores for strains in Uniform Group VIII, 1949

Location	Acadian	Seminole	Cherokee	J.E.W.'45	Yel-nando	F.C. 31592	P.I. 85897	La. 41-1219	Majos
				SOUTHEAST					
Monetta, S. C.	1.0	2.0	1.0	2.0	2.0	1.0	2.0	1.0	1.0
Davisville, Fla.	4.0	2.0	3.0	2.0	2.0	3.0	2.5	4.0	2.5
				DELTA					
Stoneville, Miss.	1.0	2.0	2.0	2.0	2.0	3.0	2.0	1.0	3.0
St. Joseph, La.	1.0	-	2.0	-	3.0	-	2.0	1.0	2.0
Baton Rouge, La.	1.0	-	1.0	-	1.0	-	1.0	1.0	1.0
				WEST					
Curtis, La.	2.0	-	2.0	-	3.0	-	3.0	1.0	3.0
Chillicothe, Texas	3.0	-	3.0	-	2.0	-	3.0	3.0	2.0

Table 48: Mean seed weight, grams per 100 seeds, for the strains in Uniform Group VIII, 1949

Location	Acadian	Seminole	Cherokee	J.E.W. 45	Yel-nando	F.C. 31592	P.I. 85897	La. 41-1219	Majos
				SOUTHEAST					
Monetta, S. C.	13.5	31.4	23.0	20.8	19.7	26.4	16.0	12.7	20.6
Davisville, Fla.	14.2	28.1	22.9	17.9	16.9	23.3	16.2	12.3	19.9
				DELTA					
Stoneville, Miss.	13.1	26.8	21.1	18.1	17.2	26.0	16.9	12.7	21.1
				WEST					
Stuttgart, Ark.	10.0	18.0	16.0	17.0	13.0	21.0	12.0	10.0	17.0
Chillicothe, Texas	16.0	-	17.0	-	19.0	-	16.0	15.0	20.0

Table 49: Three-year summary of yield and oil content of strains in Uniform Group VIII, 1947-1949

Location	Acadian	Seminole	Cherokee	J.E.W 45	Yelnando	P.I. 85897
			YIELD			
Monetta, S. C.	28.0	27.5	25.0	29.2	28.5	26.2
Tifton, Ga.	25.5	25.6	17.2	16.3	22.5	22.4
Baton Rouge, La.	31.7	21.5	22.4	22.9	25.9	28.1
			OIL CONTENT			
Monetta, S. C.	19.6	18.8	18.0	19.3	19.5	19.1
Tifton, Ga.	19.9	19.8	18.9	19.3	20.0	19.9
Baton Rouge, La.	20.7	19.9	18.7	19.8	20.2	20.4

SOYBEAN DISEASE INVESTIGATIONS IN THE SOUTHERN STATES

by Howard W. Johnson

This is the fourth 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 of 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, Division of Forage Crops and Diseases: Howard W. Johnson, J. L. Weimer, J. L. Allison, J. H. Graham, Quintin L. Holdeman, and staff of the 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 1949, as in previous years. The bacterial foliage diseases (pustule, blight, and wildfire) were again the most prevalent and widespread diseases in this region. Other diseases present in the nurseries were: mosaic, downy mildew, frogeye leafspot, helminthosporium leafspot, brown spot, anthracnose, sclerotial blight, charcoal rot, and purple seed stain. Helminthosporium leafspot was more prevalent in Louisiana and Mississippi than in previous years. Pod and seed spotting by this fungus was recognized for the first time in the United States, indicating that this is a seed-borne disease and may therefore increase in prevalence.

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 bacterial leaf diseases appeared to develop more slowly on strain L6-5679 than on the other strains in this group.

Group V: No strain in this group, as now constituted, appears to possess any appreciable resistance to the bacterial foliage diseases.

Group VI: All the strains in this group, as now constituted, possess fair to moderate resistance to the bacterial foliage diseases, except Arksoy 2913 which is extremely susceptible.

Group VII: Three of the North Carolina strains, N45-3728, N46-2652, and N46-2872, in this group appeared somewhat outstanding for resistance to the bacterial foliage diseases at a number of locations. Other strains also appeared to have moderate resistance when compared with Volstate and Roanoke, the standard varieties in this group.

Group VIII: Cherokee, Seminole, and P.C. 31592 appeared fairly resistant, as in previous years.

Readings on the prevalence of Helminthosporium leafspot at the three Delta locations in Louisiana (Baton Rouge, Hamburg, and St. Joseph) showed that the following strains were the most susceptible to this disease:

Group VI maturity: D517-14 and Oklahoma 710
Group VII maturity: N45-3036
Group VIII maturity: La. 85897

The prevalence of purple seed stain was determined in the seed harvest of the various maturity groups at Baton Rouge and showed:

1. In Group V, the percentage of purple stained seed varied from 3.5 per cent in D512-3 to 38.0 per cent in S-100. The average of the group was 19.2 per cent purple stained seeds.

2. In Group VI, the percentage varied from 0.5 per cent in Arksoy 2913 to 22.0 in Oklahoma 710. The average for the group was 6.7 per cent.

3. In Group VII, the percentage varied from 4.5 per cent in Roanoke to 15.7 per cent in N45-3563. The average for the group was 9.0 per cent.

4. In Group VIII, the percentage varied from zero in three Louisiana strains included as extras (La. 41-1219, La. 41-1201, and La. 38-34) to 5.2 per cent in Cherokee. The average for the group was 1.0 per cent.

These data confirm the observations made in North Carolina in 1948 that early maturing varieties and strains have more puple stained seeds than do the later maturing varieties. However, the existence of strains and varieties in all maturity groups with a low percentage of purple stained seeds suggests that there is some type of resistance to this fungus disease in the soybean material now being tested in the uniform groups.

Eighty varieties and strains of soybeans were planted in replicated plots at Rocky Mount, North Carolina, in 1949 on land where peanuts had been severely reduced in stand by sclerotial blight (Sclerotium rofsii) in 1948. The disease was much less severe on soybeans in 1949 than it had been on peanuts in 1948 and many of the varieties and strains remained entirely free of sclerotial blight. The varieties and strains that were damaged most severely by this disease are: N45-3728, Biloxi, Palmetto, S-100, N47-3510, and N45-3799. This test illustrates again the difficulties inherent in the attempts to obtain soybeans resistant to sclerotial blight.

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

Three varieties of soybeans, i.e., Ralsoy, Ogden, and Roanoke, were used in dusting tests at McCullers, and Plymouth, North Carolina, in 1949. A dust containing 7 per cent metallic copper applied on seven dates between July 7 and September 23 gave small but seemingly insignificant reduction of leaf injury from bacterial diseases. However, the average yield of the three varieties was increased approximately 4.5 bushels per acre at McCullers and approximately 6.0 bushels per acre at Plymouth by this copper dust. Sulphur dust produced smaller yield increases that were not significant by statistical test. Phygon dust failed to increase yields or to reduce bacterial infections. In a similar test at Rocky Mount, North Carolina, yields were not increased significantly by any dust or any schedule of applications, and no appreciable control of bacterial diseases was observed in the dusted plots.

In North Carolina, the soybean wildfire organism was isolated from dark brown lesions on the pods, from healthy-appearing seed under these pod lesions, from stem lesions, and from discolored pulvini and pedicels. This work proves that the wildfire bacterium can attack other parts of the soybean plant than the leaves, although it is on the leaves that the most striking symptoms of the disease becomes evident.

A field test in North Carolina, using several lots of seed harvested from soybean plants heavily infected with the three leafspot bacteria (pustule, blight, and wildfire) and one lot of disease-free seed, indicated that the organisms do survive on, or in, infected seed. From 0.5 to 1.5 per cent of the seedlings showed primary infection from one-year-old seed. Practically no infection developed on seedlings from three-year-old seed, indicating that the bacteria had died during that interval between harvest and planting.

A laboratory test was conducted in North Carolina to determine the length of the survival period of the three soybean bacterial parasites in sterilized soil, in field soil, and in diseased leaves buried in field soil. It was shown that all three organisms could survive in sterilized soil for more than six months. In field soil, on the other hand, the wildfire organism survived for only a short time, while the pustule and blight organisms survived long enough to suggest this as a possible method of overwintering. All three organisms survived for several months in diseased leaves buried in field soil, indicating that this is a probable method of overwintering.

At Baton Rouge, Louisiana, S-100 and Ogden soybeans were inoculated in the field at four different stages of growth with a heavy spore suspension made from six different isolates of the soybean anthracnose fungus. The number of pods which aborted were counted in an effort to determine if anthracnose was a cause of this condition. No significant differences were found between the inoculated plots and the non-inoculated checks. The total number of aborted pods in 600 feet of row of S-100 soybeans was 1989, while in a similar length of row of Ogden, 6697 pods aborted. In spite of this heavy loss of pods, Ogden continues to flower over a long period of time and completes the growing season with sufficient pods set on to be superior in yield to other adapted varieties of comparable maturity. Although the soybean anthracnose fungus is often found fruiting on these aborted pods, it appears from the data obtained in this test that some factor other than anthracnose is primarily responsible for pod abortion.

At Baton Rouge, Louisiana, Helminthosporium vignicola was found sporulating in the spring on soybean stems that had overwintered in the field. This fungus was isolated from spots on soybean pods and seeds in the fall. These results suggest methods by which this fungus is able to overwinter and indicate that the disease may increase in prevalence on soybeans in the South, since the causal fungus is seed borne.

A chlorotic spotting of soybean leaves in Louisiana was found to be associated with the nymph stage of white fly. A similar spotting on garden bean has been attributed to this insect, but this is the first observation of its occurrence on soybeans in the United States.

Observations and isolations of a preliminary nature in Louisiana indicate that feeding punctures of the green stink-bug may be a factor in the failure of soybean seed to develop fully, resulting in one or more flat cavities in a pod. It appears that these feeding injuries may provide a court of entry for various bacteria and fungi which infect the young seed. Such injury and subsequent infection either prevent the seed from developing or result in a discolored seed if development does proceed. Further work to prove or disprove this hypothesis seems warranted.

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

In North Carolina, treating 1948 seed with Arasan and Spergon before planting in the spring of 1949 increased the stand of seedlings approximately 10 per cent. Seed produced in 1947 and treated with Arasan in the spring of 1948 was stored in the laboratory until planting time in April 1949. The treated seed gave much better emergence than untreated seed of the same seed lot stored in the same location. Emergence and survival were improved, but to a lesser degree, when the stored, untreated seed (1947 crop) was treated with Arasan before planting in April 1949. This test provides further evidence that treating soybean seed with a fungicidal dust will aid in maintaining viability during the storage period.

In a soybean seed treatment test at Stoneville, Mississippi, involving four seed lots of soybeans and ten treatments, improvement in stand over the non-treated check ranged from 3.7 per cent with Dow 9-B to 26.3 per cent with Spergon. Four of the treatments, i.e., Spergon, Arasan, Arasan slurry, and New Improved Ceresan, increased the stand of seedlings more than 20 per cent. Of these four treatments, Arasan increased the yield by an amount that was highly significant by statistical test, while Spergon and New Improved Ceresan increased the yield by lesser amounts which were, however, significant by statistical test. The increase in yield due to treatment with Arasan slurry failed slightly to reach the level required for statistical significance. It would appear from these yield data that at a seeding rate of ten seeds per foot of row, an increase in stand between 20 and 25 per cent over the non-treated check is required to produce an increase in yield that is significant by statistical test.

The stand and yield data from the Stoneville seed treatment test are summarized in tables 1 and 2.

Table 1: Average number of plants obtained from each hundred treated and non-treated soybean seeds at Stoneville, Mississippi, in 1949[1/]

Treatment	Rate (oz. per bu.)	N. Car. Ogden	Miss. Ogden	S-100	D523-30	All Varieties	Increase over check
Arasan dust	2	72.2[2/]	67.3	48.3	62.3	62.5[3/]	+22.5**
Arasan S.F.	1-1/2	71.8	56.5	49.3	71.0	62.2	+22.2**
Spergon	2	70.5	68.0	54.8	71.8	66.3	+26.3**
New Improved Ceresan	1	71.3	63.2	47.8	68.0	62.6	+22.6**
2% Ceresan	2	73.0	51.5	45.2	54.0	55.9	+15.9**
Ceresan M	1	69.5	54.2	45.5	52.0	55.3	+15.3**
Yellow Cuprocide	2	64.7	52.5	35.0	31.7	46.0	+6.0**
Dow 9B	3	59.3	36.0	31.7	47.7	43.7	+3.7**
Phygon dust	1	64.7	51.8	35.0	55.5	51.8	+11.8**
Non-treated	0	49.7	33.7	35.7	41.2	40.0	0.0
All Treatments		66.7	53.5	42.8	55.5	54.6	+14.6

1/ - Planted May 12 and 13, 1949; stand count made June 7, 1949

2/ - Each figure is average number of plants from six 10-foot rows of 100 seeds each.

3/ - Each figure is average number of plants from twenty-four 10-foot rows of 100 seeds each.

** - Increase in number of plants over the non-treated check is highly significant, L.S.D.: 5 percent level, 1.91 plants; 1 percent level, 2.52 plants.

Table 2. Effect of seed treatment on the yield of soybeans at Stoneville, Mississippi, in 1949[1/]

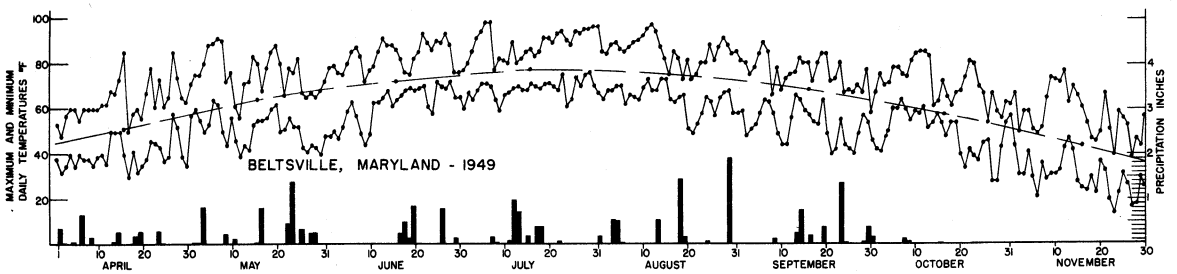
Treatment	Rate (oz. per bu.)	N. C. Ogden	Miss. Ogden	S-100	D523-30	All Varieties	Difference from check in grams
Arasan dust	2	936[2/]	888	686	679	797[3/]	+93**
Arasan S.F.	1-1/2	742	840	748	746	769	+65
Spergon	2	921	845	694	695	789	+85*
New Improved Ceresan	1	767	905	739	713	781	+77*
2% Ceresan	2	910	773	662	698	761	+57
Ceresan M	1	766	848	626	663	726	+22
Yellow Cuprocide	2	912	799	568	532	702	-02
Dow 9B	3	786	784	469	730	692	-08
Phygon dust	1	816	718	588	600	681	-23
Non-treated	0	820	764	553	681	704	0
All treatments		838	816	633	673	740	+36

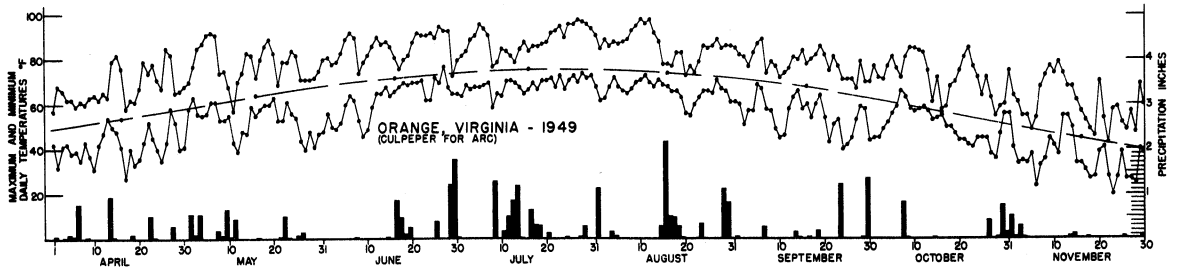
1/ - Planted May 12 and 13, 1949; S-100 and 523-30 harvested Sept. 30, and Ogden harvested Nov. 2, 1949.

2/ - Each figure is average yield in grams of seed from six 10-foot rows.

3/ - Each figure is average yield in grams of seed from twenty-four 10-foot rows.

** - Increase in yield over non-treated check is highly significant.
* - Increase in yield over non-treated check is significant.
LSD - 5 per cent level - 69 grams; 1 per cent level - 91 grams.


BELTSVILLE, MARYLAND - 1949
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


ORANGE, VIRGINIA - 1949
(CULPEPER FOR ARC)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
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JUNE
JULY
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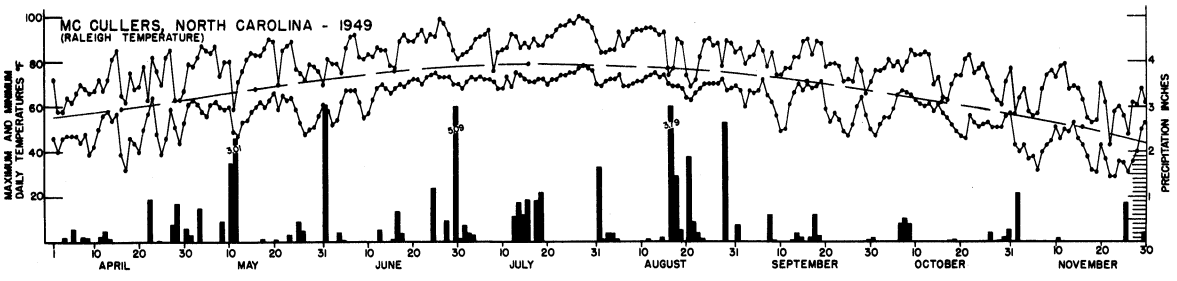
SEPTEMBER
OCTOBER
NOVEMBER


MC CULLERS, NORTH CAROLINA - 1949
(RALEIGH TEMPERATURE)
3.04
5.09
3.19
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
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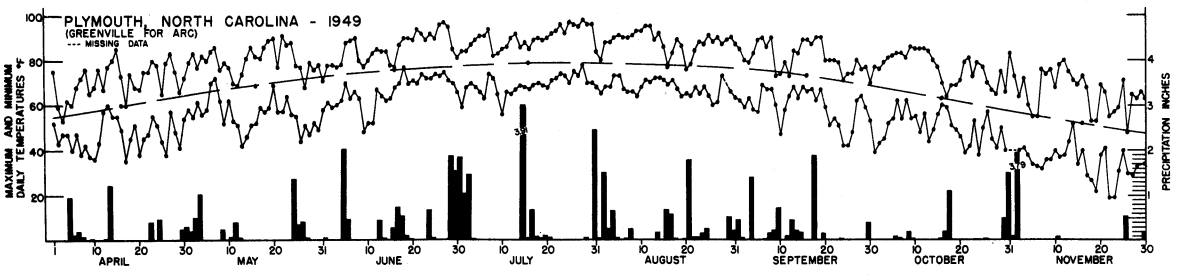
OCTOBER
NOVEMBER


PLYMOUTH, NORTH CAROLINA - 1949
(GREENVILLE FOR ARC)
--- MISSING DATA
3.31
3.79
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
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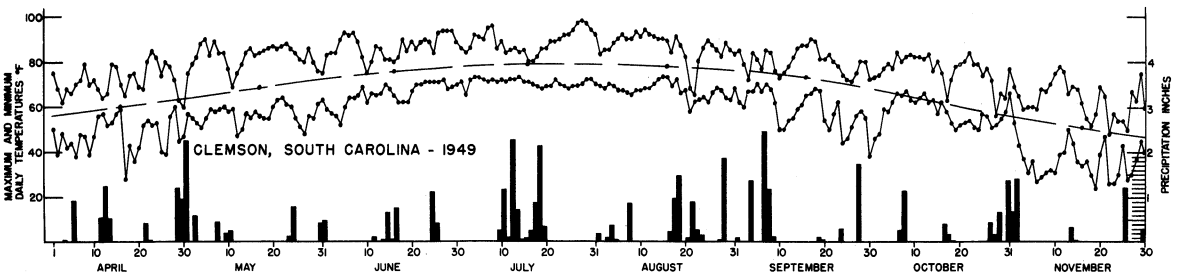
SEPTEMBER
OCTOBER
NOVEMBER


CLEMSON, SOUTH CAROLINA - 1949
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
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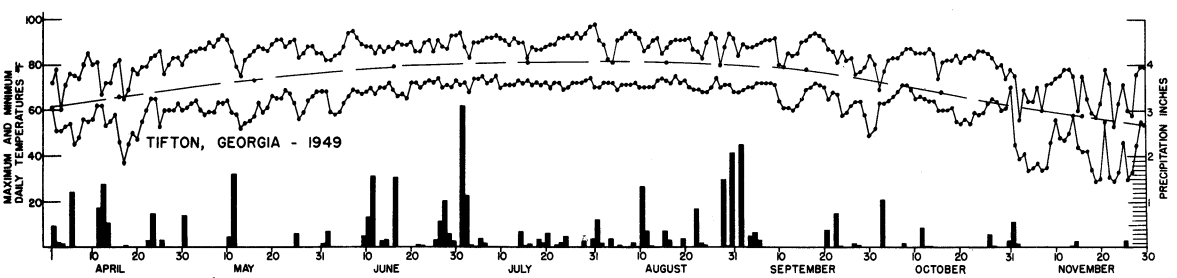
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


TIFTON, GEORGIA - 1949
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
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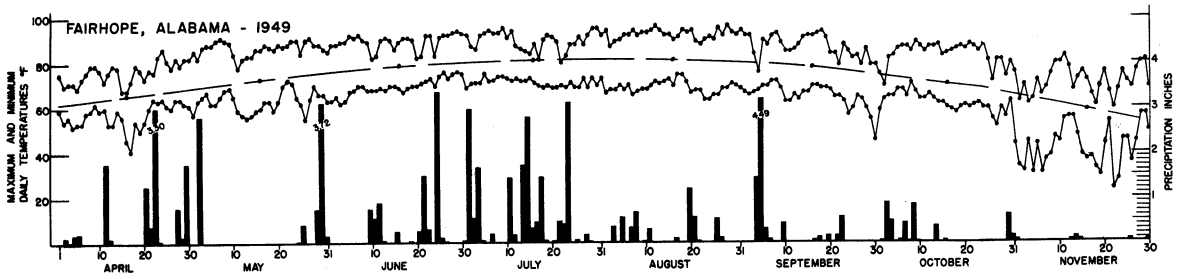
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


FAIRHOPE, ALABAMA - 1949
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
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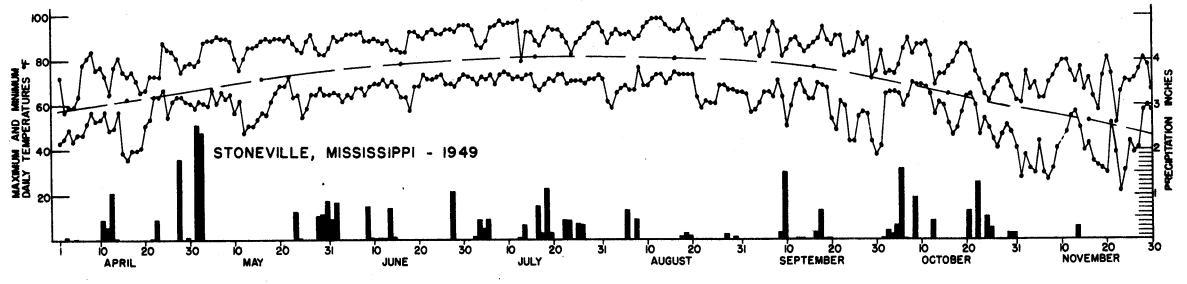
OCTOBER
NOVEMBER


STONEVILLE, MISSISSIPPI - 1949
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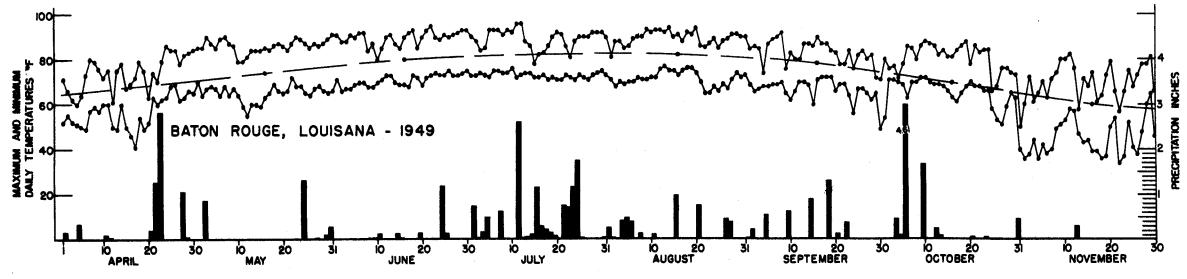
BATON ROUGE, LOUISANA - 1949
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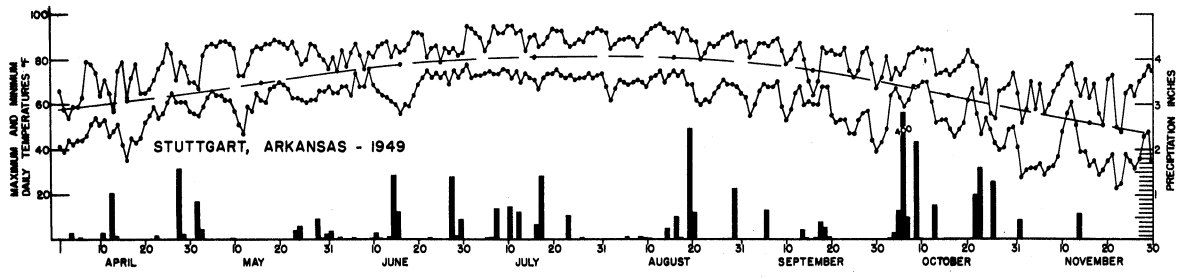
STUTTGART, ARKANSAS - 1949
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
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OCTOBER
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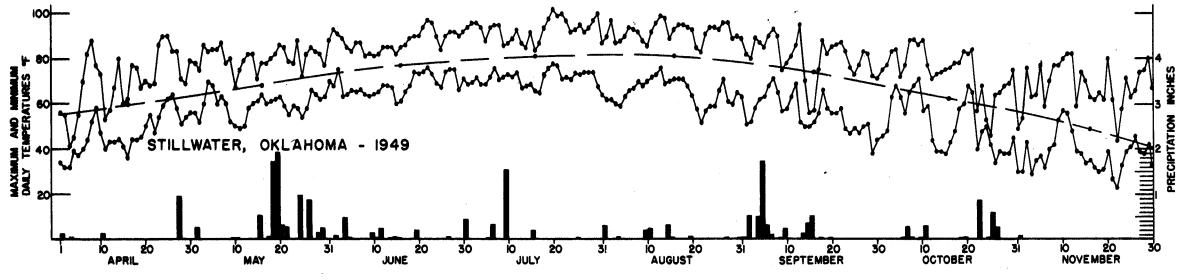
STILLWATER, OKLAHOMA - 1949
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OCTOBER
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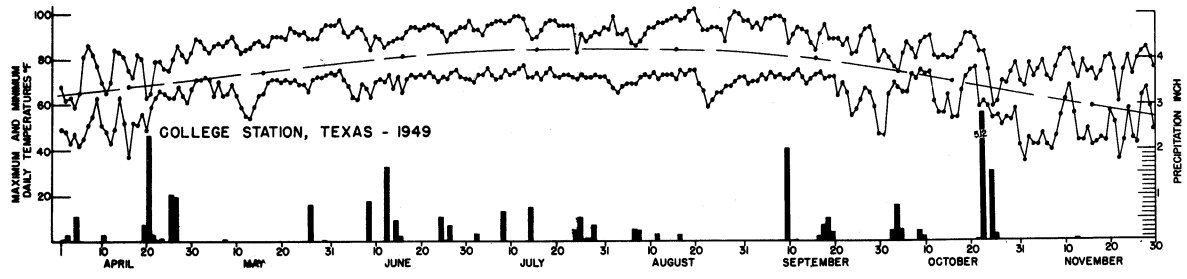
COLLEGE STATION, TEXAS - 1949
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
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APRIL
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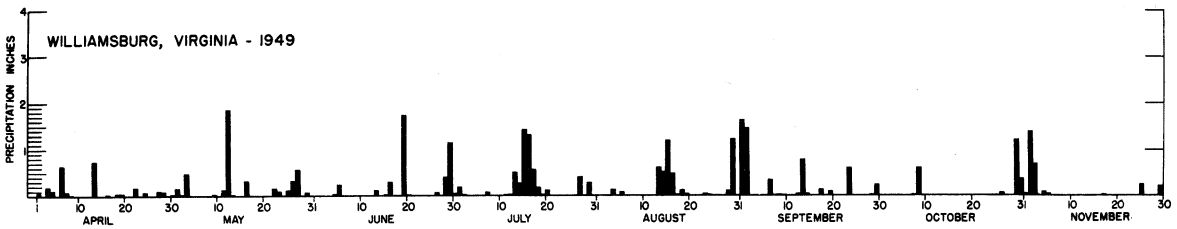
OCTOBER
NOVEMBER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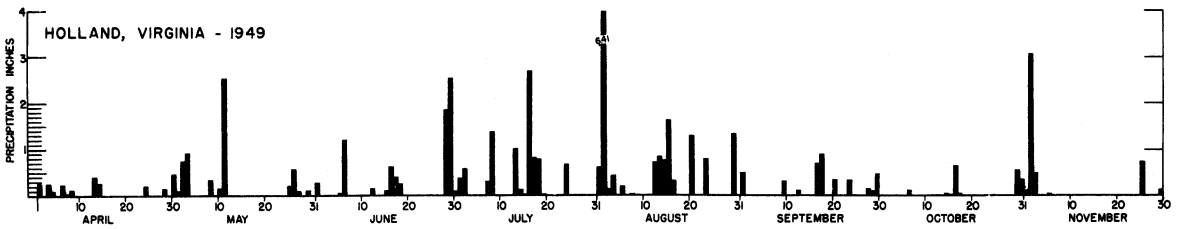
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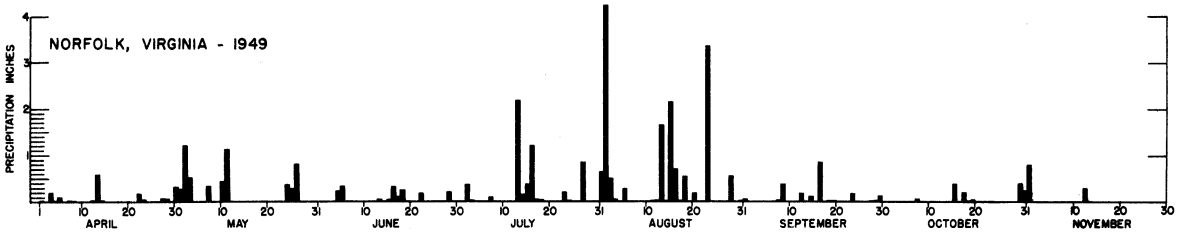
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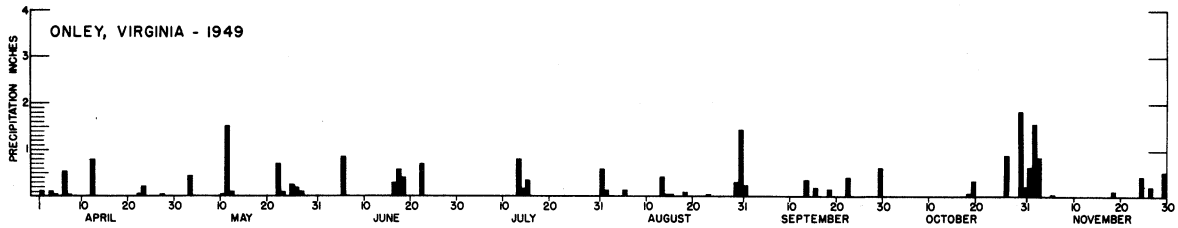
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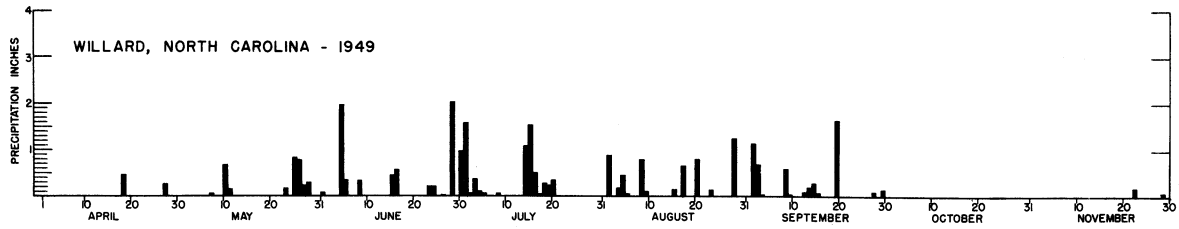
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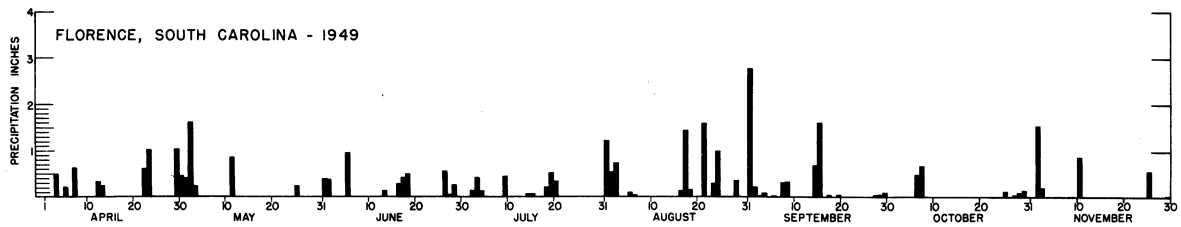
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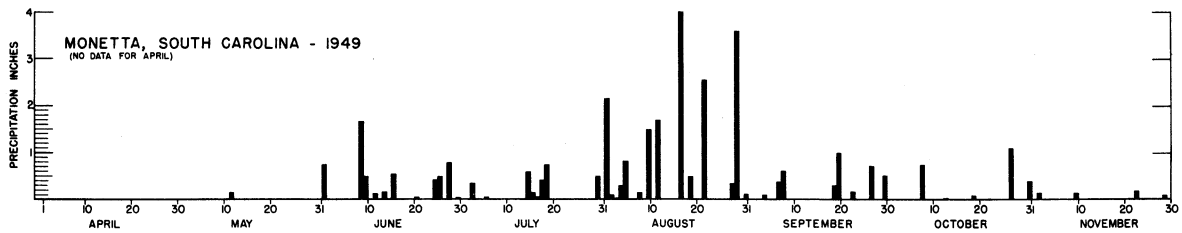
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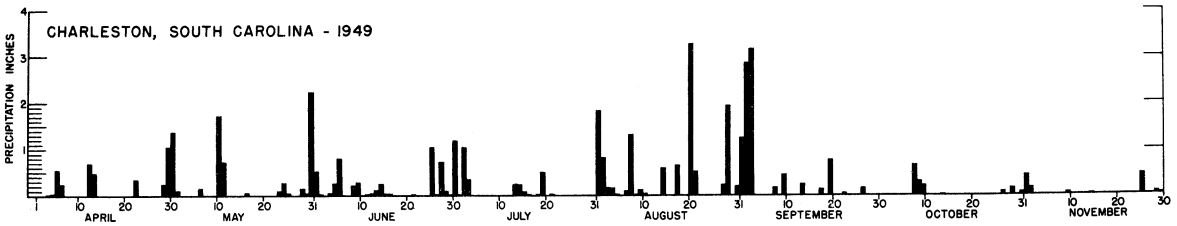
CHARLESTON, SOUTH CAROLINA - 1949
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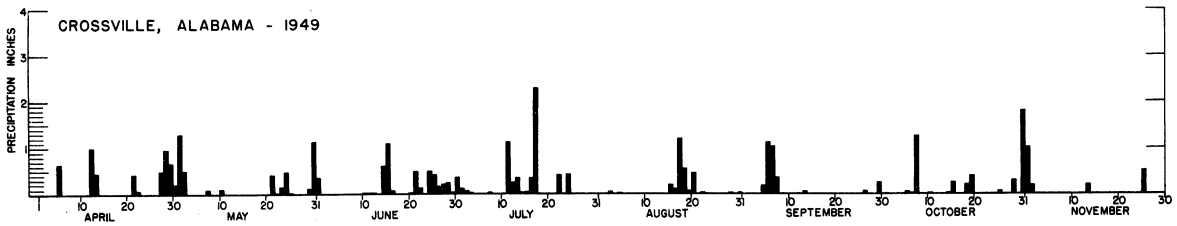
NOVEMBER


CROSSVILLE, ALABAMA - 1949
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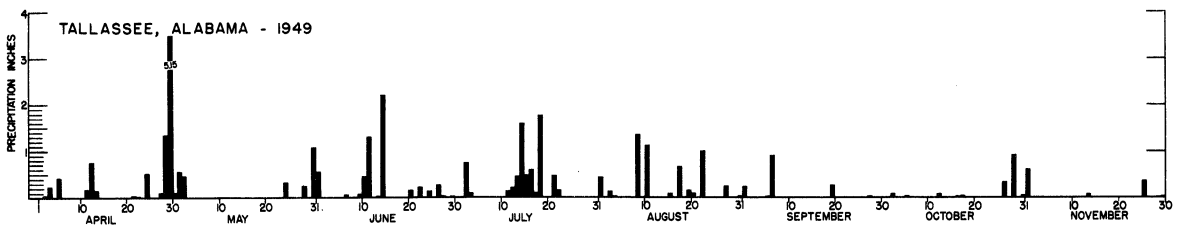
TALLASSEE, ALABAMA - 1949
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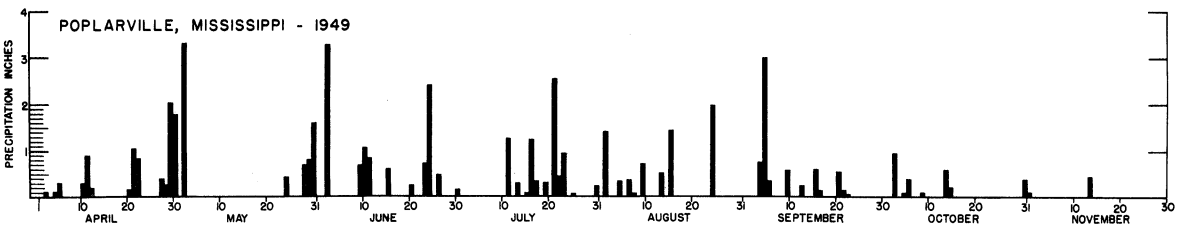
POPLARVILLE, MISSISSIPPI - 1949
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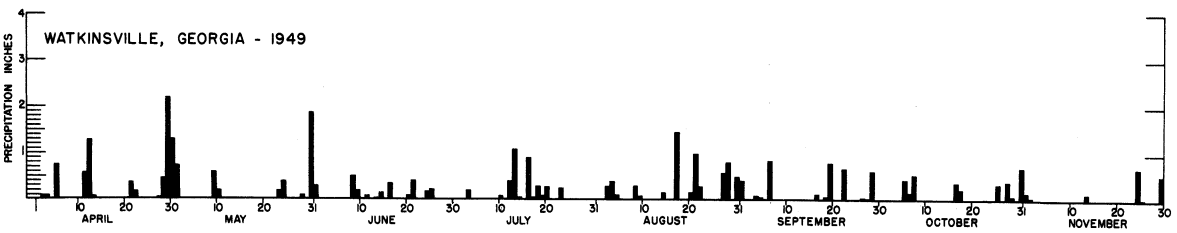
WATKINSVILLE, GEORGIA - 1949
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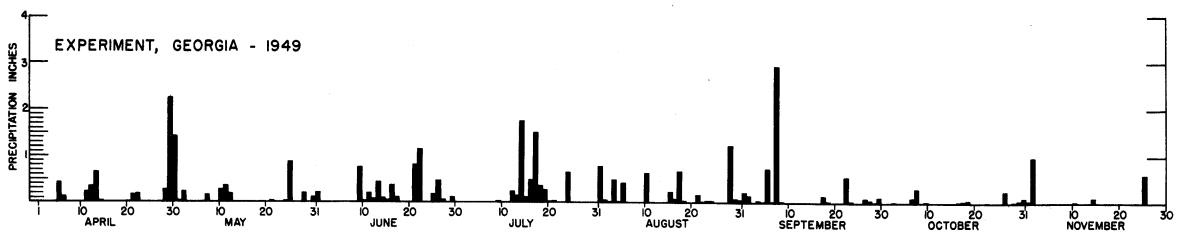
EXPERIMENT, GEORGIA - 1949
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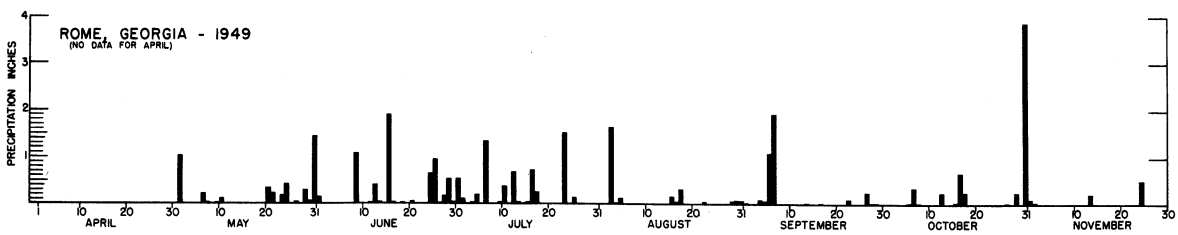
ROME, GEORGIA - 1949
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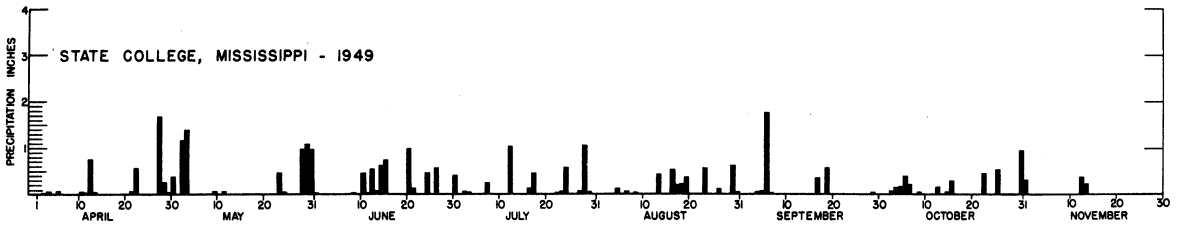
STATE COLLEGE, MISSISSIPPI - 1949
PRECIPITATION INCHES
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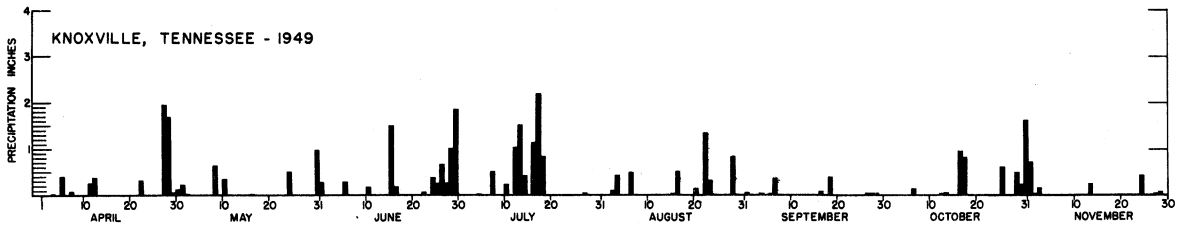
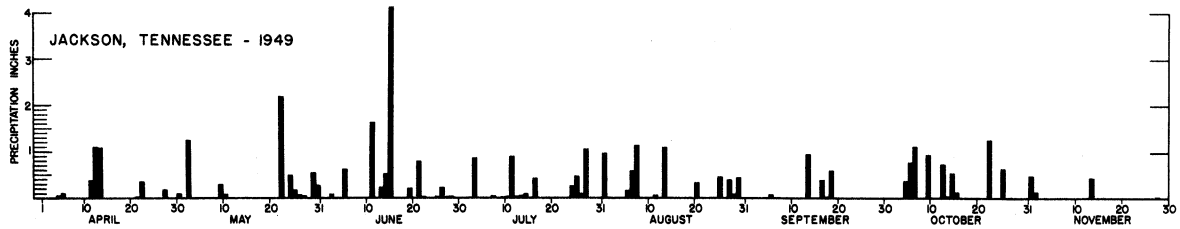
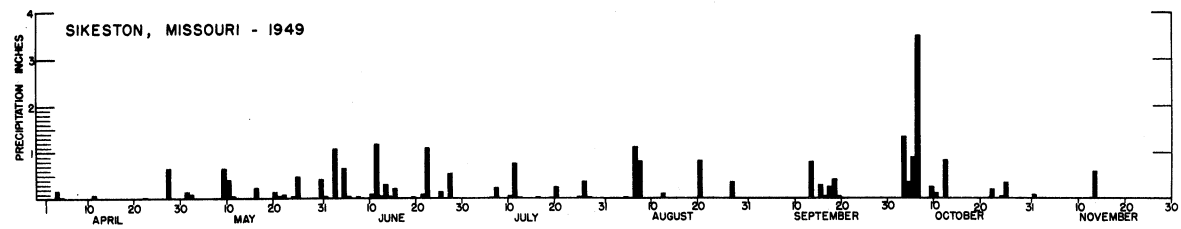
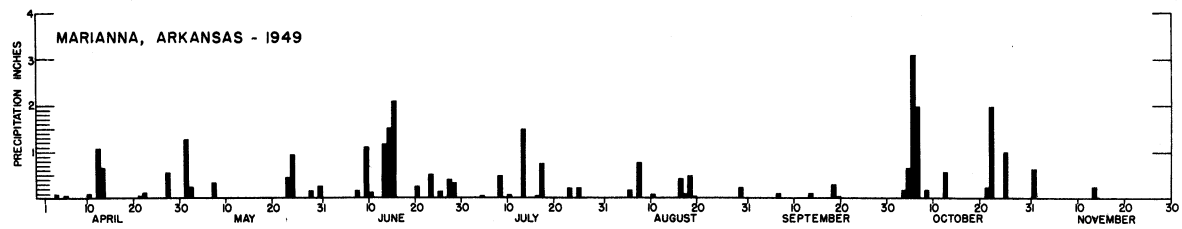
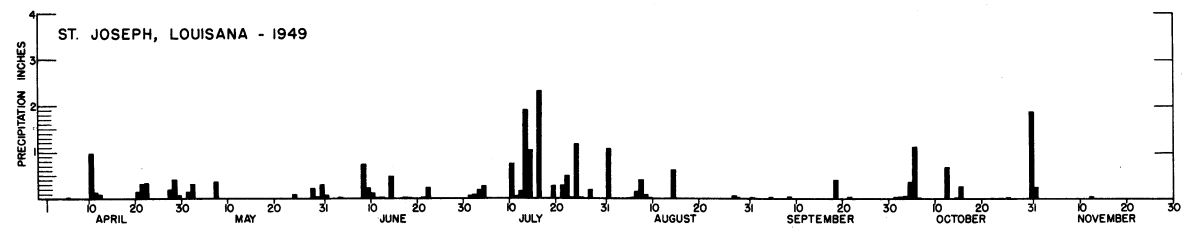
SEPTEMBER
OCTOBER
NOVEMBER

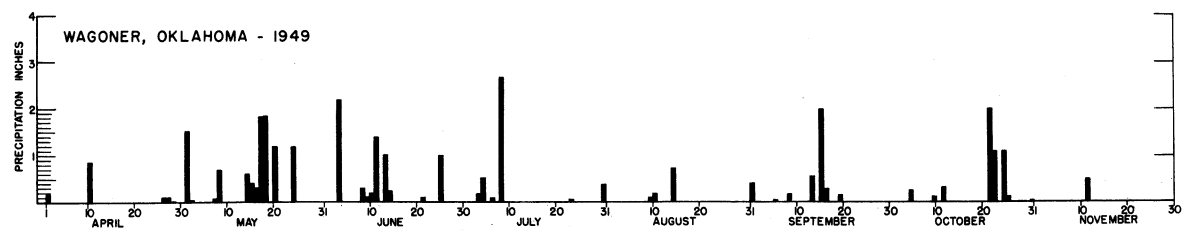

KNOXVILLE, TENNESSEE - 1949
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

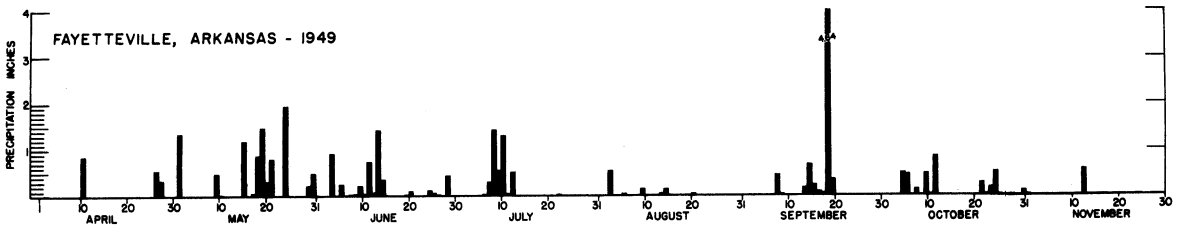

JACKSON, TENNESSEE - 1949
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

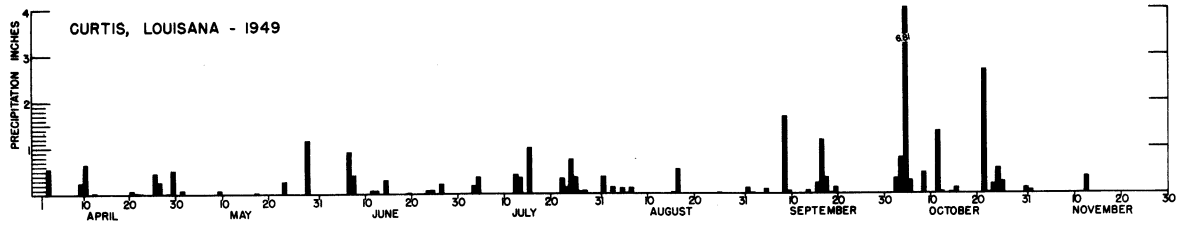

SIKESTON, MISSOURI - 1949
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

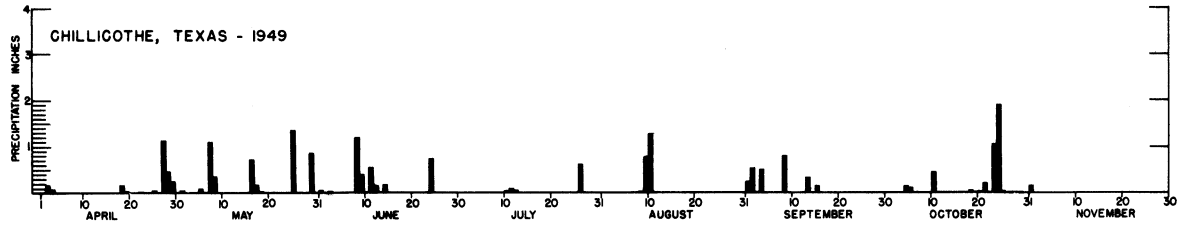

MARIANNA, ARKANSAS - 1949
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

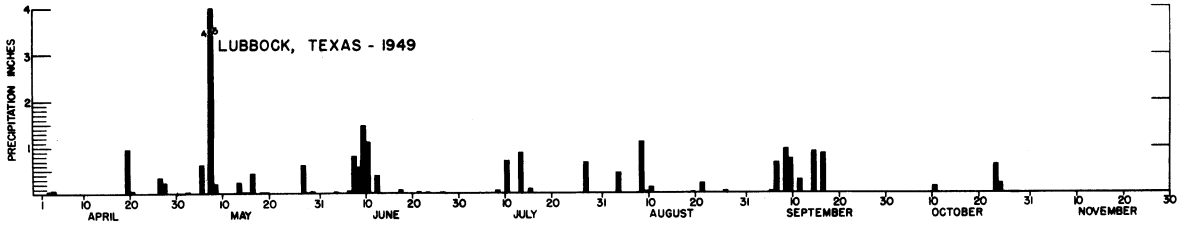

ST. JOSEPH, LOUISANA - 1949
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


WAGONER, OKLAHOMA - 1949
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


FAYETTEVILLE, ARKANSAS - 1949
PRECIPITATION INCHES
4.14
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


CURTIS, LOUISANA - 1949
PRECIPITATION INCHES
6.81
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


CHILLICOTHE, TEXAS - 1949
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


LUBBOCK, TEXAS - 1949
PRECIPITATION INCHES
4.06
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER