U S REGIONAL SOYBEAN LABORATORY
URBANA, ILLINOIS

RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS, 1946 PART II. SOUTHERN STATES

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

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RESULTS OF COOPERATIVE UNIFORM SOYBEAN TESTS
Part II. Southern States[1/2]

1946

Compiled by
Staff of the U. S. Regional Soybean Laboratory
Southern Section

CONTENTS

INTRODUCTION

Breeding to develop adapted high-yielding varieties of soybeans, having a composition most suited to industrial utilization, is the chief objective of the cooperative program between the U. S. Regional Soybean Laboratory and the State Agricultural Experiment Stations of the Southern States. Active breeding programs are under way at a number of locations, representative of a wide range in environmental conditions. The free exchange of material for preliminary study between cooperative breeders is providing an excellent basis for the evaluation of new strains over the region. Many new strains from this program have been selected from hybrid populations for further study. All promising material is classified into maturity groups and is grown along with check varieties at a sufficient number of locations to enable agronomists to determine the value of these strains over a wide range of environmental conditions.

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 For this reason citation to particular statements in the Report should not be published unless permission has been granted previously by the Laboratory or the state stations concerned.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

Strains adapted to the Southern States are entered in the progressively later-maturing tests, Groups IV-S, VI, VII, and VIII. At normal planting dates, the varieties and strains of Group IV-S mature from late August to early September. The varieties and strains of Group VI mature in early October, those of Group VII in late October, and those of Group VIII in early November. The maturity of the varieties within these groups are progressively later across the Upper South and earlier in the Lower South.

At the time the southern program was initiated in 1943, strains had not been developed of a maturity between Macoupin or S100 of Group IV, and Ogden-Arksoy varieties of Group VI. Varieties of this maturity would be particularly desirable as the early maturity and harvest would allow more time for seed-bed preparation and fall seeding of winter grains, an excellent cropping sequence in the South. The acreage per combine could also be materially increased by growing varieties of different maturities. In this connection, a group of new strains of Group V maturity, developed in the cooperative breeding program, were grown in preliminary tests at a number of locations in 1946. The better strains of this group were selected by the collaborators and entered as Uniform Test Group V in 1947 regional tests.

COOPERATING AGENCIES AND PERSONNEL FOR THE SOUTHERN STATES

Bureau of Plant Industry, Soils, and Agricultural Engineering;
Division of Forage Crops and Diseases: William J. Morse, Jackson L. Cartter, Paul R. Henson, Robert B. Carr, C. R. Adair, Edgar E. Hartwig, George E. Ritchey, J. L. Stephens.

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Arkansas Agricultural Experiment Station,
Agronomy Department: John L. Damerson, T. E. White.

Florida Agricultural Experiment Station,
Agronomy Department: George E. Ritchey.

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

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

Mississippi Agricultural Experiment Station,
Agronomy Department: J. F. O'Kelly, H. A. York, H. W. Bennett.

North Carolina Agricultural Experiment Station,
Agronomy Department: E. E. Hartwig.

Oklahoma Agricultural Experiment Station,
Agronomy Department: Hi W. Staten.

South Carolina Agricultural Experiment Station,
Agronomy Department: W. R. Paden, W. N. Henderson, Jr.

Tennessee Agricultural Experiment Station,
Agronomy Department: J. B. Washko, O. H. Long.

Texas Agricultural Experiment Station,
Agronomy Department: E. B. Reynolds, V. E. Schember, J. R. Quinby, P. B. Dunkle, D. L. Jones, H. D. Lynn.

Virginia Agricultural Experiment Station,
Agronomy Department: M. H. McVickar, E. T. Batten, H. M. Camper, Jr., M. T. Carter, R. P. Cocke, Paul Echols, G. D. Jones, R. D. Sears.

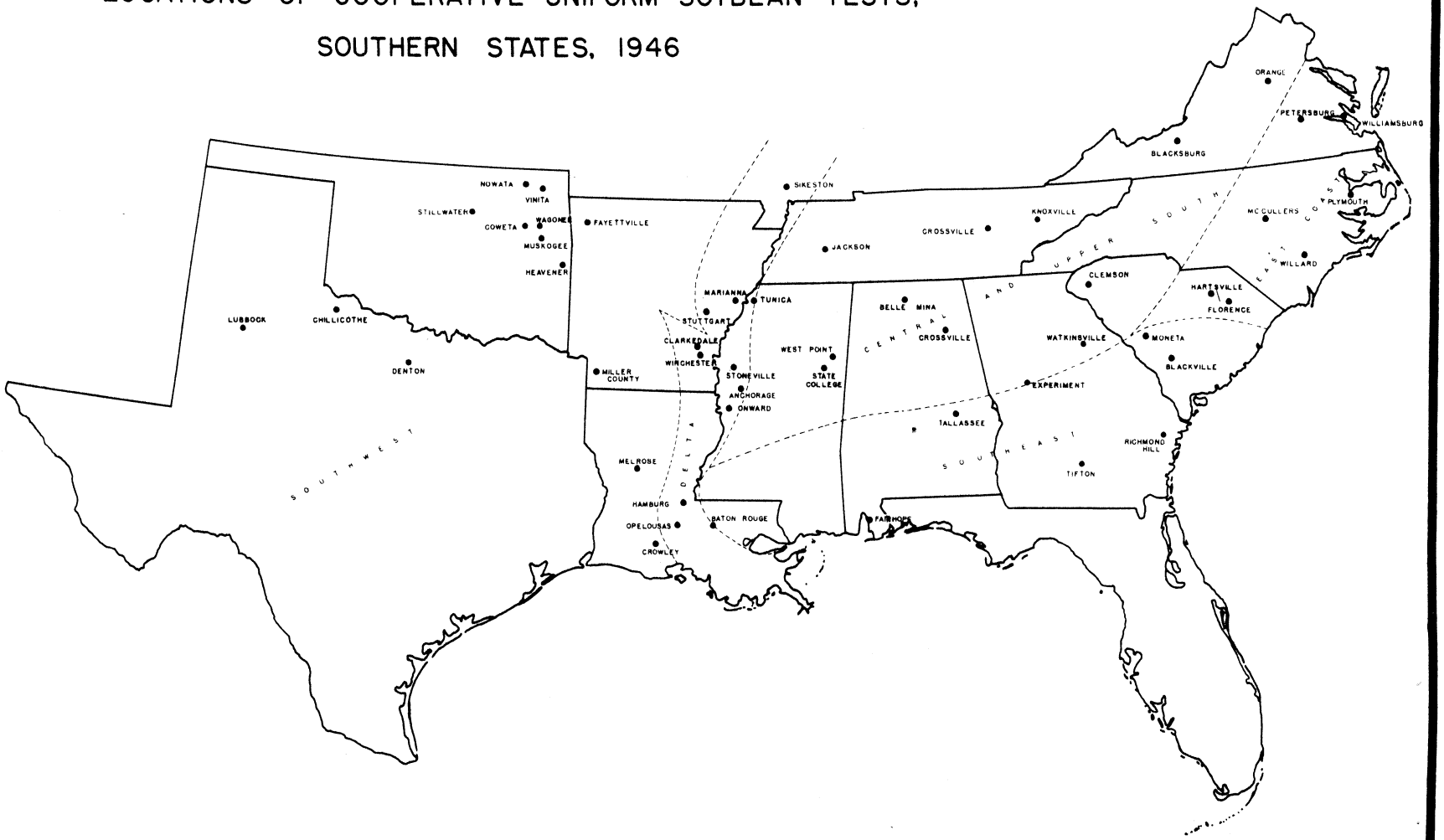
LOCATION OF COOPERATIVE NURSERIES

Location	Cooperator	III	IV-S	VI	VII	VIII
Belle Mina, Ala.	Tenn. Valley Substation			x	x	x
Crossville, Ala.	Sand Mountain Substation			x	x	x
Fairhope, Ala.	Gulf Coast Substation			x	x	x
Tallassee, Ala.	Ala. Agr. Exp. Sta.			x	x	
Clarkedale, Ark.	Delta Substa. Cotton Br. Sta.			x	x	x
Fayetteville, Ark.	Ark. Agr. Exp. Sta.		x	x	x	
Marianna, Ark.	Cotton Branch Sta.			x	x	x
Miller County, Ark.	Fruit & Truck Br. Station			x	x	x
Stuttgart, Ark.	Rice Branch Sta.		x	x	x	x
Winchester, Ark.	J. A. Newton			x	x	
Experiment, Ga.	Ga. Agr. Exp. Sta.				x	x
Richmond Hill, Ga.	Ford Farms				x	x
Tifton, Ga.	Ga. Coastal Plain Exp. Sta.				(2)	(2)
Watkinsville, Ga.	So. Piedmont Conserv. Exp. Sta.		x	x		
Baton Rouge, La.	La. Agr. Exp. Sta.		x	x	x	x
Crowley, La.	J. M. Jenkins					x
Hamburg, La.	W. T. Nolan			x	x	
Melrose, La.	J. H. Henry			x	x	
Opelousas, La.	J. C. Dimmick		x			x
Anchorage, Miss.	L. S. Stoner			x	x	
Dunleith, Miss.	F. C. Wagoner		x	x	x	
Onward, Miss.	James Hand, Jr.					
State College, Miss.	Miss. Agr. Exp. Sta				x	x
Stoneville, Miss.	Delta Br. Exp. Sta.		(3)	(3)	(3)	(3)
Tunica, Miss.	R. W. Owens		x	x	x	
West Point, Miss.	Miss. Agr. Exp. Sta.				x	x
Sikeston, Mo.	Mo. Agr. Exp. Sta.		x	x		
McCullers, N. C.	N. C. Agr. Exp. Sta.			x	(2)	x
Plymouth, N. C.	Tidewater Agr. Exp. Sta.			x	x	
Willard, N. C.	Lower Coastal Plain Agr. Exp. Sta				x	
Coweta, Okla.	G. A. Childress		x	x		
Heavener, Okla.	Okla. Agr. Exp. Sta.			(2)		
Muskogee, Okla.	Ray Osborn		x	x		
Nowata, Okla.	J. O. Schultz, Jr.		x			
Stillwater, Okla.	Okla. Agr. Exp. Sta.		(2)	(2)		
Vinita, Okla.	Elmer Whitesell		x			
Wagoner, Okla.	Lonnie E. Blair					

LOCATION OF COOPERATIVE NURSERIES (Cont'd)

Location	Cooperator	III	IV-S	VI	VII	VIII
Blackville, S. C.	Edisto Agr. Exp. Sta				(2)	
Clemson, S. C.	S. C. Agr. Exp. Sta.				(3)	
Hartsville, S. C.	Coker Pedigreed Seed Co.			x	x	x
Florence, S. C.	Pee Dee Agr. Exp. Sta.				(2)	x
Monetta, S. C.	Miss Bessie Johnson			x	x	x
Crossville, Tenn.	Plateau Agr. Exp. Sta.		x	x		
Knoxville, Tenn.	Tenn. Agr. Exp. Sta.		x	x		
Jackson, Tenn.	West Tenn. Agr. Exp. Sta.		x	x		
Chillicothe, Texas	Texas Substa. #12		x	x	x	x
College Station, Texas	Texas Agr. Exp. Sta.					
Denton, Texas	Texas Substa. #6	x	x			
Lubbock, Texas	Texas Substa. #8		x	x		
Blacksburg, Va.	Va. Agr. Exp. Sta.	x	x			
Bowling Green, Va.	Caroline County Exp. Sta.			x		
Charlotte, Va.	Charlotte County Southside Va. Field Sta.		x			
Holland, Va.	Tidewater Field Station				x	
Orange, Va.	Orange County Agr. Exp. Sta.				x	
Petersburg, Va.	Va. State College Field Sta.				x	
Williamsburg, Va.	James Co. Agr. Exp. Sta.				x	

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES, 1946



WEATHER CONDITIONS AND GENERAL GROWTH RESPONSES AT MOST OF THE NURSERY LOCATIONS DURING THE 1946 SEASON

The following general notes compiled from information supplied by the cooperators may be helpful in interpreting performance of the nurseries at individual locations.

Temperature and rainfall at most of the nursery locations for the 1946 season are presented in graphs at the end of this section of the report. The daily mean temperatures and rainfall are taken from "Climatological Data" published by the Weather Bureau. The arc is the normal mean monthly temperature for the location.

Belle Mina, Alabama Rainfall during the growing period was almost double the normal amount. Since the beans were planted in a rather low area, they were rather seriously injured by too much moisture. On September 9, 6.5 inches of rain fell in just a few minutes; after this, the leaves on all varieties showed signs of fungus diseases. About mid-October all varieties were defoliated by one of the fall worms that feed largely on legumes.

Crossville, Alabama The soybean variety test was located on a fertile Hartselle sandy loam, which had been built up in fertility with winter legumes. Above normal rainfall for all months, except August and October, made the season a favorable one for soybeans. Ogden of Group VI, N44-92 of Group VII, and Nanda of Group VIII, produced 44.6, 39.3, and 42.1 bushels per acre, respectively. Diseases were not prevalent at any time.

Clarkedale, Arkansas The tests at this location were the best in the state. The planting date, May 10, is near the optimum. Stands were uniformly good and rainfall was sufficient to sustain a good growth throughout the season. Diseases did not cause any serious damage. There was some injury by the spotted bean leaf beetle, but it was not serious.

Fayetteville, Arkansas Planting was delayed until May 29 because of rain during the first part of that month. The stands were good, there were very few weeds, and the growth was vigorous during the early part of the season. The dry weather of August and September reduced yields. In mid-summer, many of the strains looked as though they would produce 18 - 20 bushels per acre. However, Dortchsoy No. 2 gave the highest yield, 13.6 bushels.

Marianna, Arkansas Rainfall at this location was heavy during May-- resulting in thin stands in wet areas in the test. The wet spring was followed by very dry weather during late August and early September. As a result, these plots with thick stands suffered severely from the drought and made lower yields than plots having thin stands. Sclerotium rolfsii apparently killed quite a few plants at flowering time, or before seed was fully mature. This disease was a factor in reducing yields of some rows and also contributed to the variability of the tests. The blighted plants were found only in the better drained part of the area where stands were thick.

Miller County, Arkansas The test at this location was conducted under adverse conditions. Planting was delayed until June 13 because of rains. The land was infested with Johnson grass which reduced stands and caused serious competition with surviving plants. Diseases did not cause damage. There was some damage to border rows in September by leaf worm. Injury was checked by dusting with an insecticide.

Stuttgart, Arkansas Stands were good on all plots except those planted June 3. There was no weed or grass competition as all plots were cultivated at frequent intervals and most of the plots were hoed twice during the season. Growth was satisfactory early in the season, but the dry weather in late summer reduced the yields seriously. There were traces of all leaf diseases usually occurring here, but no serious damage from any.

The yields of strains in Group IV-S were fairly good, considering the drought. S100 made the highest yield, comparing favorably with many strains in the later groups. The strains of Group VI made lower than normal yields. Strains of Group VII were the highest yielding of the groups tested. Volstate led the varieties of Group VII maturity.

Desha County (Winchester) Arkansas The tests in Desha County were good. Good stands were secured and diseases did not cause serious damage. Excessive rains for about a month after planting prevented cultivation in the early stages of growth. The tests were finally cultivated and hoed in June. A period of drought in mid-summer injured some varieties, however, the better varieties made satisfactory yields.

Experiment, Georgia Climatic conditions were highly favorable for soybeans during 1946. Rainfall was adequate and well distributed. Temperatures were mild with a maximum of 93° on very few days. The soil in this test was good sandy loam of medium and high fertility. The legume caterpillar did minor damage and was controlled with DDT dust.

Bacterial pustule and blight were present in about the usual amount, but it is doubtful if they did any appreciable amount of damage. Wildfire was more abundant than usual, especially on certain varieties, and probably caused severe loss. Aside from these, there was little disease and no damage.

Richmond Hill, Georgia Weather conditions for growth of soybeans were favorable at Richmond Hill in 1946. No periods of drought between planting and harvesting occurred. 5.34 inches of rain fell during the hurricane of October 8, but no damage resulted. Disease infection was very light and probably not a factor in yield. Some injury was caused by the velvet bean caterpillar, but the insects were controlled by dusting.

Tifton, Georgia Last year was considered about average as far as soybean production was concerned. There was practically no nematode damage last year, however, the caterpillars arrived a little earlier than common, so that most soybeans were stripped of leaves by the latter part of September. Diseases were not serious in 1946.

Watkinsville, Georgia Summer temperatures were lower than usual. The highest temperature was about 95° F. Total monthly rainfall ranged from 8.99 inches for January to 5.58 for May. Rainfall was light during the growing season with 3.67 inches for June, 3.32 for July, 1.48 for August, and 2.91 in September. The August drought was severe.

No unusual disease or insect damage was noticed.

Anchorage, Mississippi Seasonal conditions were favorable for soybean production at this location. The frequent rains on the light-textured Yazoo fine sandy loam were favorable for maximum growth and good seed production. The average yield of Ogden on over 1000 acres on Mr. Stoner's farm was between 30 and 35 bushels. Diseases were equally as severe as at Stoneville. Wildfire and bacterial blight were quite prevalent over the variety tests. The yield of the more susceptible varieties was undoubtedly reduced by one, or both of these diseases.

Dunleith, Mississippi The above normal rainfall retarded growth on the Yazoo silty clay soil at Dunleith. The soybean stands were not particularly good, resulting in low yields of all strains. Diseases were not as prevalent as at Stoneville.

State College, Mississippi After planting in late April, germination was reasonably prompt and resulted in fair stands. Because of cool weather early growth was slow. During late May and all of June, rainfall was excessive but the soil was a well drained sandy loam and the temperatures were favorable. On the appearance of open weather in July, flowering proceeded rapidly and a good crop of seed was set. Leaf worm damage was too late to be serious. Some diseases were present, but produced only slight injury.

Stoneville, Mississippi Seasonal conditions at Stoneville were particularly favorable for early-maturing varieties of soybeans. Frequent rains and showers from early April to August and lower temperatures were favorable for maximum growth and production of varieties of Group IV and earlier maturity. Dry weather beginning in mid-August reduced yields and oil content of varieties of Group VII maturity. An unseasonably cool fall delayed combine-maturity of such varieties as Ogden, Roanoke, and Volstate. Maturity was more variable than for previous years.

The diseases, bacterial pustule and blight, were not particularly serious. However, Wildfire was quite prevalent early in the season and undoubtedly reduced yields of a number of the early varieties. Frogeye and Downy Mildew were more in evidence, but of no serious consequence. Sclerotium rolfsii made its appearance early in the season, killing a few plants throughout the test area.

Tunica, Mississippi Heavy flood rains shortly after planting resulted in thin stands which necessitated replanting. The yields from the tests, replanted on June 11, were low. Excessive rains through July, followed by dry weather coupled with late planting, were the factors responsible for the lower yields. Diseases were not particularly prevalent at this location.

West Point, Mississippi Excessive rains followed planting early in May and continued until early in July. Since the soil was a heavy clay, the excessive soil moisture retarded growth considerably. Later growth conditions were favorable and neither disease nor insect damage was serious.

Sikeston, Missouri There was very little precipitation throughout June; however, the moisture supply in the soil was sufficient to prevent any detrimental effects upon the crop. There was also a drought period between the middle of September and the middle of October. This may have resulted in a slight reduction in the yields of the full season varieties. The earlier maturing varieties were past their critical stage before the drought occurred. This was one of the few seasons in which the earlier-maturing varieties yielded as much or more than the full season varieties. There was plenty of moisture and no hot periods during the time the earlier maturing varieties were setting and developing seed.

McCullers, North Carolina Moisture was plentiful until late August and early September when a period of 18 days without a good rain occurred. During the latter part of this period, many of the varieties and selections wilted quite severely and a considerable number of young pods dropped. A good rain fell on September 12, ending the stress period.

Plymouth, North Carolina The July, August, and September rainfall was excessive. This, together with the fact that the 1945 season was extremely wet and the drainage ditches were not functioning properly, made the soil saturated with moisture for the better half of the growing season. Maturity of the early October maturing strains appeared to be delayed somewhat later than normal. Practically all leaves were dropped by October 20.

Willard, North Carolina The weather conditions at Willard were quite similar to those at Plymouth. Ogden and Roanoke did quite poorly under the conditions existing at Willard, but selection N44-92 and related material did extremely well under these conditions.

Coweta, Oklahoma This nursery was planted on excellent river bottom land and made a good crop of beans although it was very dry in July and August. The soil held the moisture and the beans did not suffer from the very severe drought. The varieties grew tall and lodged badly.

Heavener, Oklahoma The weather chart shows considerable rain for July, August, and September, but actually the amount of rainfall any one time was not sufficient for best bean production. The dry period in July and August caused the beans to drop the leaves and the plants did not recover.

In general, the entire eastern half of Oklahoma was very dry in July and August, and all crops as well as pastures practically burned up. The quality of beans, oil percentage, and production was much below normal. The dry weather caused more leaf shedding and more diseases, perhaps due to limited moisture. No insect or rodent damage was experienced at any of these tests.

Muskogee, Oklahoma The drought at Muskogee was very similar to Coweta. The soybeans failed to produce a good bean crop because of a poor seedbed and lack of care after planting. The June, July, and August drought, however, was the principal cause of the low yields.

Nowata, Oklahoma This test was on heavy river bottom soil and made a good bean crop, although this area was the driest part of the state in 1946. Very little rain in June, no rain in July, and a few showers in August, was not very favorable to soybean or corn production. Corn in the same kind of soil did not make as much grain as the soybeans. The very dry summer and low corn yields have caused farmers to plan to plant more soybeans this year (1947). This test planting has demonstrated that soybeans will stand more dry weather than corn, especially if the drought occurs in the early summer.

Stillwater, Oklahoma Normal weather prevailed through the spring months up to and including June. July was very dry and was the critical growing period for soybeans. August continued dry until the latter part of the month. Late August, September and October was favorable for the growth of soybeans, especially the later planting dates. The early-planted soybeans suffered most from the July and August drought. This was the time of the year when diseases caused the greatest damage. The early-planted varieties bloomed and tried to set a bean crop in the dry season.

Vinita, Oklahoma This test was planted on silty upland soil which was low in fertility. The soil was not a good one for summer crops. The drought in June, July, and August, prevented many beans setting seed. The fall rains caused a second growth of vegetation and the beans were slow in maturing.

Clemson, South Carolina The seasonal rainfall was very favorable and well distributed throughout the growing period. There were no diseases nor any unusual conditions noted.

Florence, South Carolina The soil at Florence, S.C., shows a definite need for limestone. It is expected that the application of one ton of dolomitic limestone would increase yields at least 50 per cent. A considerable amount of defoliation was caused in early September by the feeding of velvet bean caterpillars. This was perhaps an additional contributing factor to the low yields.

Tennessee In general the amount and distribution of rainfall was good. Yields at Knoxville and Jackson were similar to those obtained in previous years, while yields at Crossville were somewhat lower than usual. Frost occurred at Crossville on October 1, thus the later varieties such as Rose Non-Pop did not reach maturity. No diseases were of sufficient prevalence or severity to materially reduce yields at any location.

Chillicothe, Texas The growing season at Chillicothe in 1946 was favorable during the latter part of July and throughout August. Favorable conditions existed during September and October. The unfavorable conditions during July and August were the result of drought and high temperatures. The favorable conditions during September and October consisted of ample soil moisture and warm weather during October. Early maturing varieties bloomed over several weeks and matured the same way. The late maturing varieties with a low critical photoperiod did not begin to bloom until well into September and then bloomed from bottom to top during a very short period. This short blooming season resulted in maturity of all beans at one time, and there was no seed shattering. It appears that a combination of a June planting date and late maturing varieties may cause soybeans to become a commercial crop in this area.

Denton, Texas The 1946 soybean variety tests were planted under almost ideal conditions during the first week in May, and emerged to uniformly good stands about eight days later. Moisture and temperatures were very favorable and exceptionally good growth was made until mid-July when high temperatures (100 to 107 degrees) caused some wilting and shedding of leaves and appeared to retard blooming and seed set. This unfavorable weather prevailed until August 26. Since blooming of most varieties started the first week in July and matured seed by September 1, it is believed that the high temperatures in July and August were largely responsible for the low yields.

No damage resulted from insects, unless a light infestation of very small, unidentified leaf hopper may have had something to do with pollination and failure of blooms to set seed.

Cotton root-rot made its appearance about July 15 and developed rather rapidly until about August 15. However, it was possible to avoid diseased plants in taking the yield samples. On the blacklands of Central and North Texas, cotton root-rot likely will always be a limiting factor in commercial soybean production. Plant breeders may some time develop a soybean variety that will produce well under our climatic conditions, but there is little hope that the average farmer can ever control the cotton-rot fungus to the extent that he would not be hurt in growing such a susceptible crop as soybeans.

Lubbock, Texas Climatic conditions were generally very adverse during the growing season of 1946. The soybeans were grown in irrigated plots, which allowed us to control soil moisture, and thus maintain a more or less uniform or optimum condition in the soil itself. Dry, hot winds, blowing from the south and southwest during June, caused some wilting; but because of ample soil moisture, the plants did not suffer unduly.

Blacksburg, Virginia There was ample rain throughout July with cool temperatures. After July, low rainfall with poor drying conditions prevailed. No unusual insects or diseases were noted.

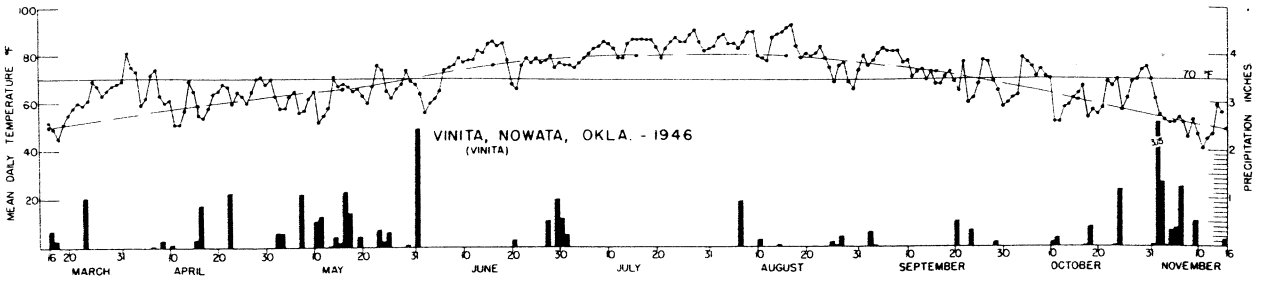
Charlotte Courthouse, Virginia Wet weather during the planting period and immediately after planting did considerable damage. Grasshoppers later in the season ate some of the foliage.

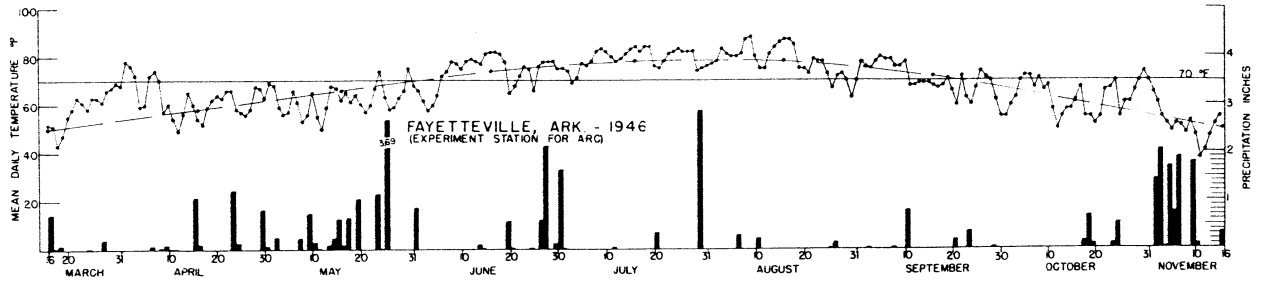
Holland, Virginia Ideal weather conditions, but considerable wildfire damage noted.

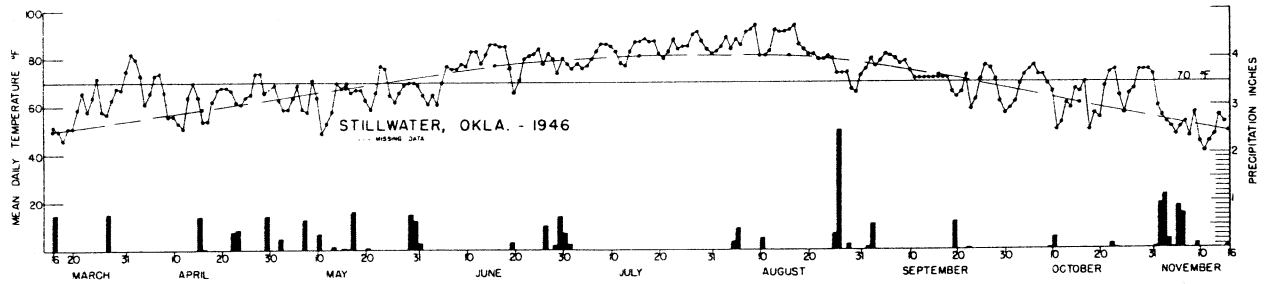
Orange, Virginia Excellent growing season throughout the year.

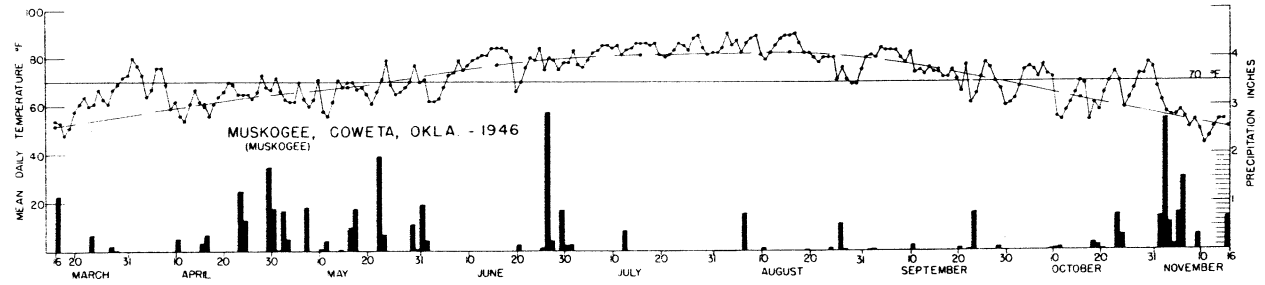
Petersburg, Virginia Severe rain following planting resulted in poor germination. Once the beans became established, growth was very vigorous. All beans were relatively free of insect and disease infestation.

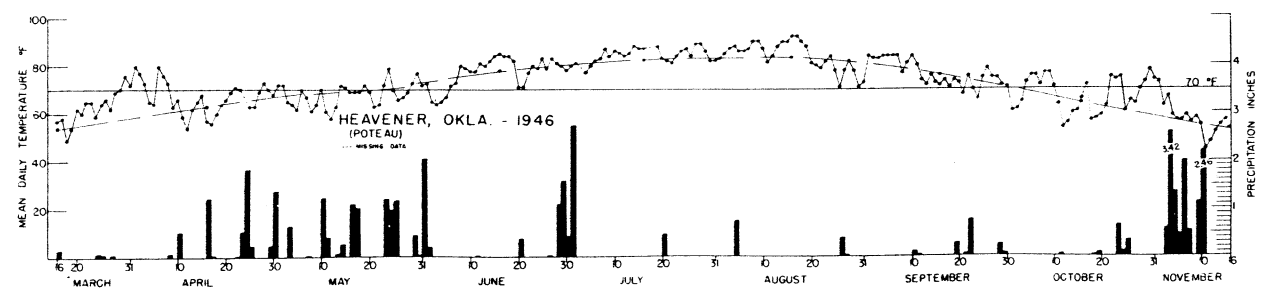
Williamsburg, Virginia Tests were planted late, but favorable weather resulted in good yields.

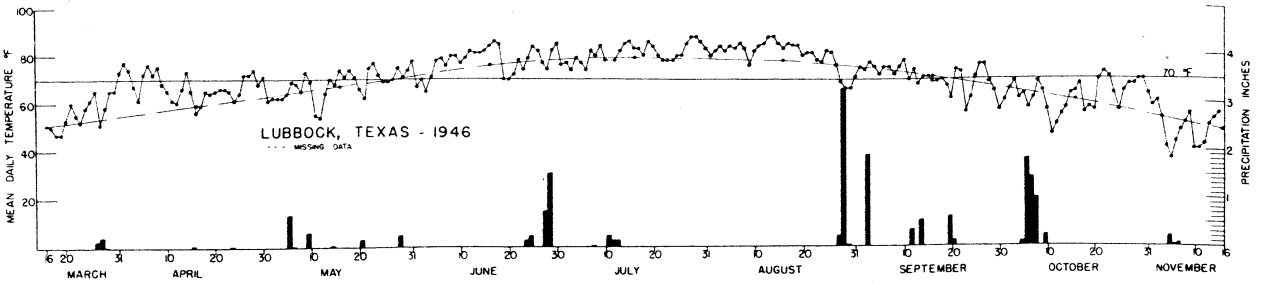

VINITA, NOWATA, OKLA. - 1946
(VINITA)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
3.15
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

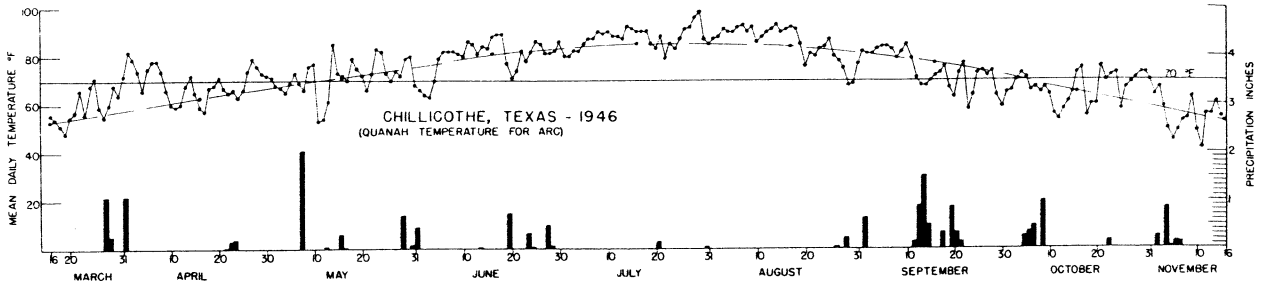

FAYETTEVILLE, ARK. - 1946
(EXPERIMENT STATION FOR ARC)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
3.69
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

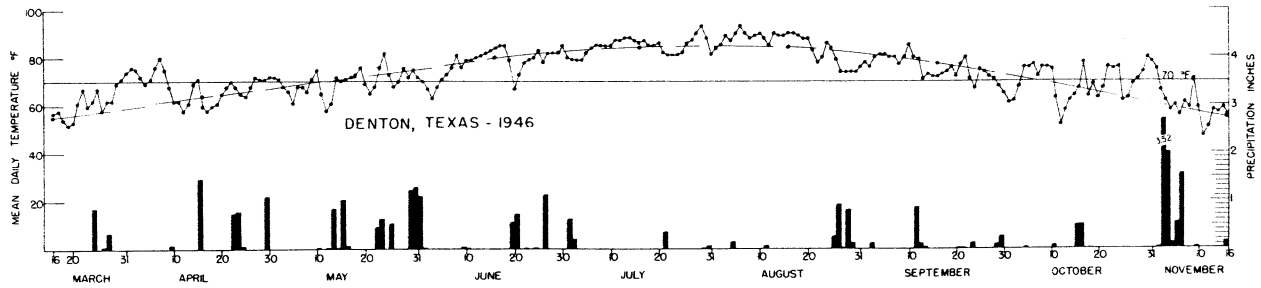

STILLWATER, OKLA. - 1946
MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

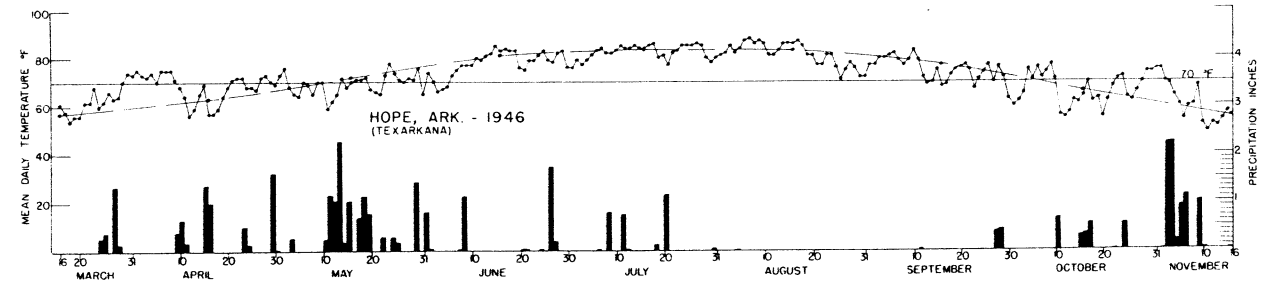

MUSKOGEE, COWETA, OKLA. - 1946
(MUSKOGEE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

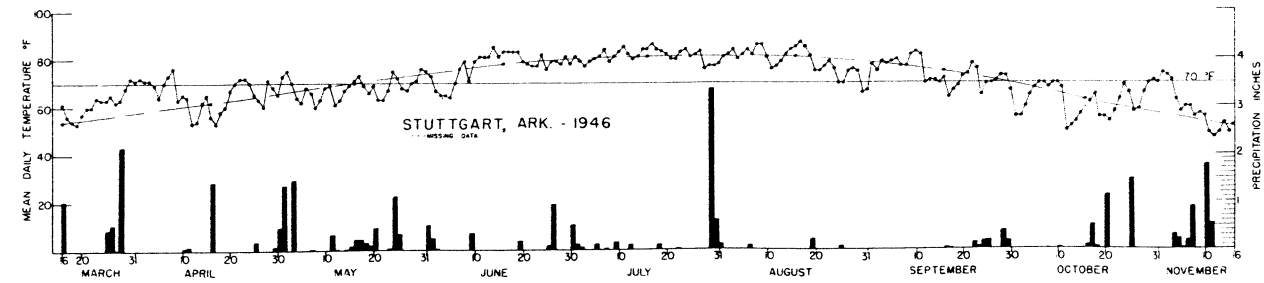

HEAVENER, OKLA. - 1946
(POTEAU)
MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
3.42
2.60
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

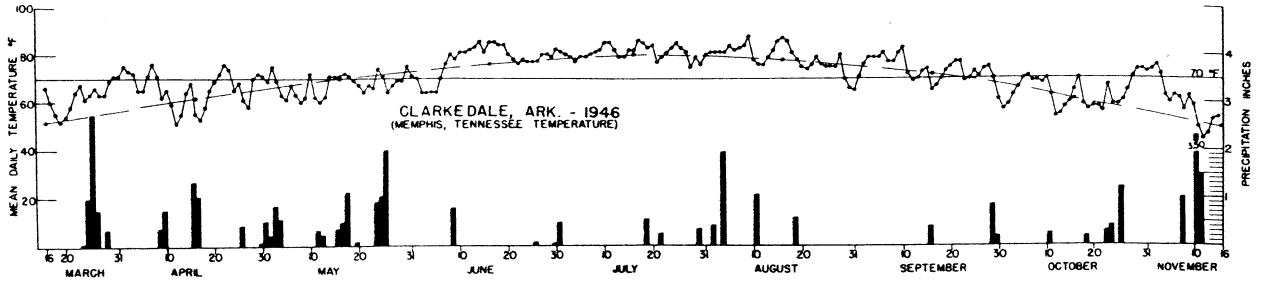

LUBBOCK, TEXAS - 1946
MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

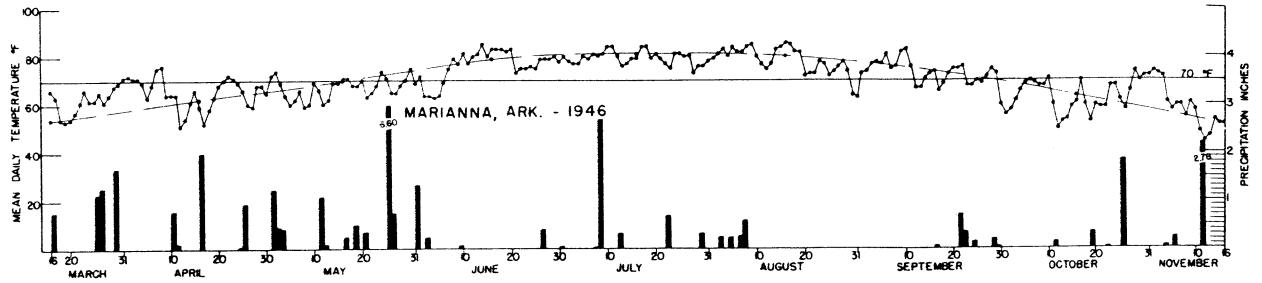

CHILLICOTHE, TEXAS - 1946
(QUANAH TEMPERATURE FOR ARC)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

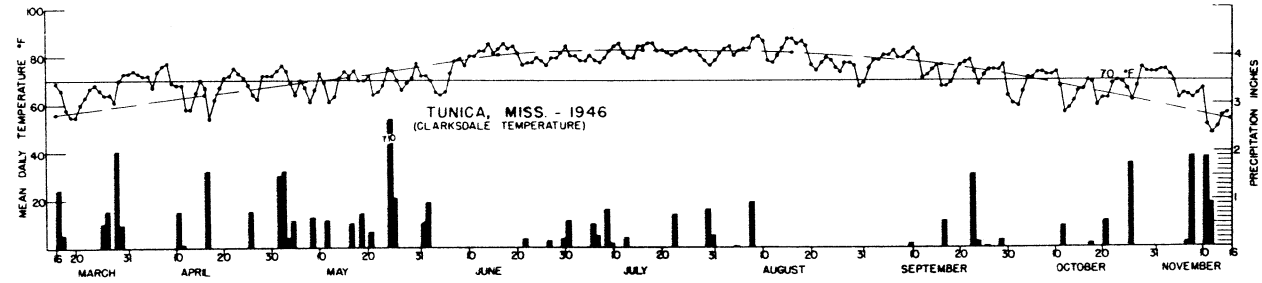

DENTON, TEXAS - 1946
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
3.52
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

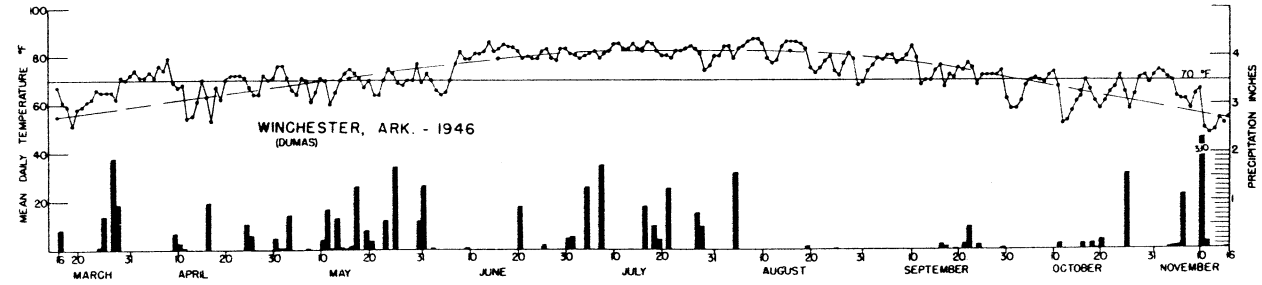

HOPE, ARK. - 1946
(TEXARKANA)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

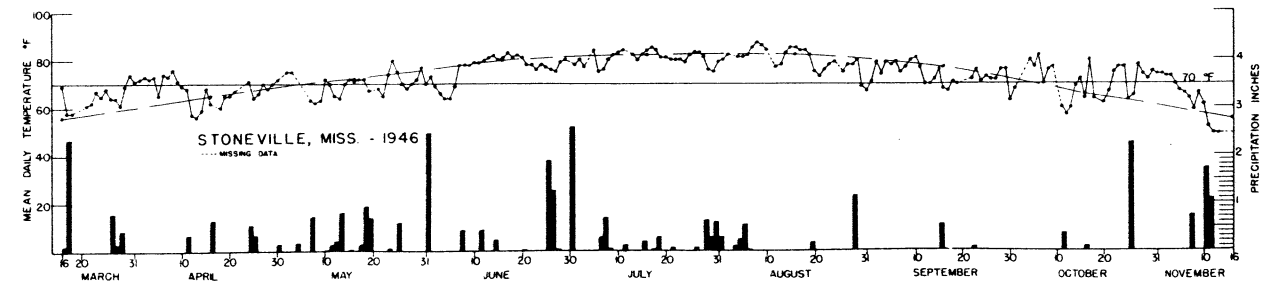

STUTTGART, ARK. - 1946
MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

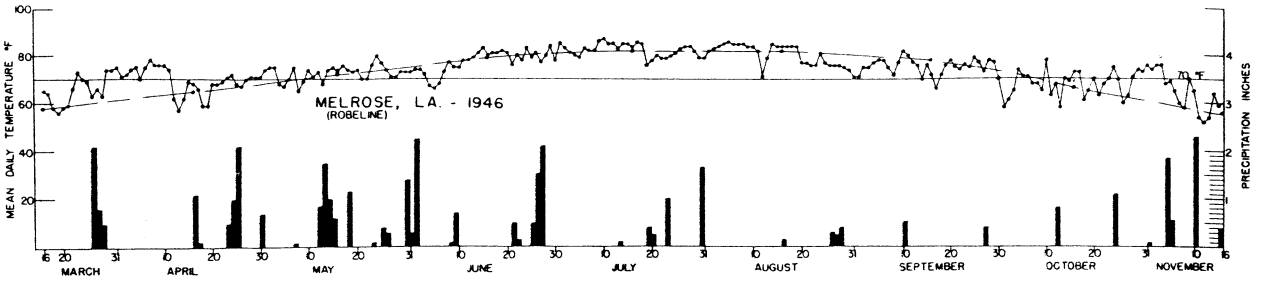

CLARKEDALE, ARK. - 1946
(MEMPHIS, TENNESSEE TEMPERATURE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
3.50
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

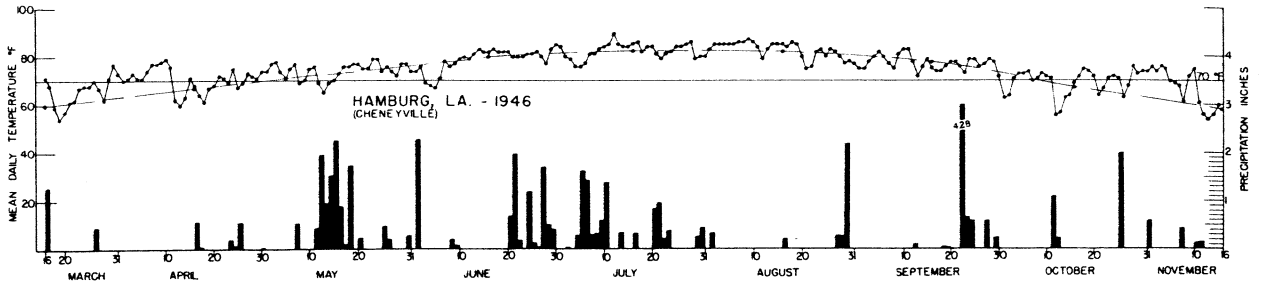

MARIANNA, ARK. - 1946
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
5.60
2.78
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

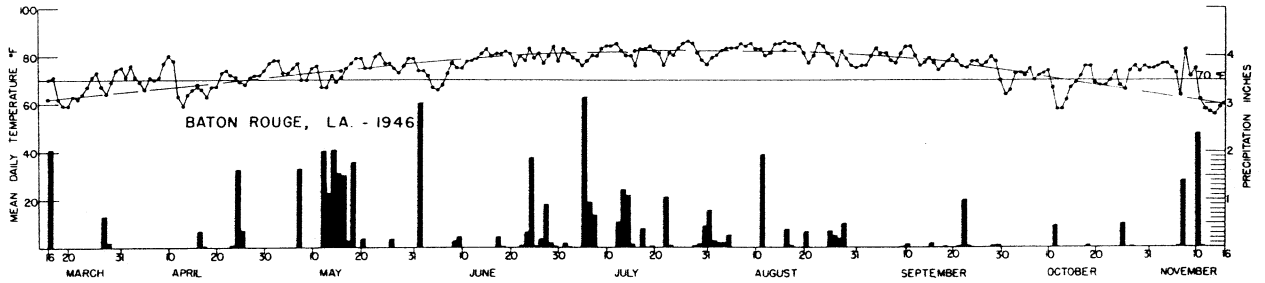

TUNICA, MISS. - 1946
(CLARKSDALE TEMPERATURE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
7.10
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

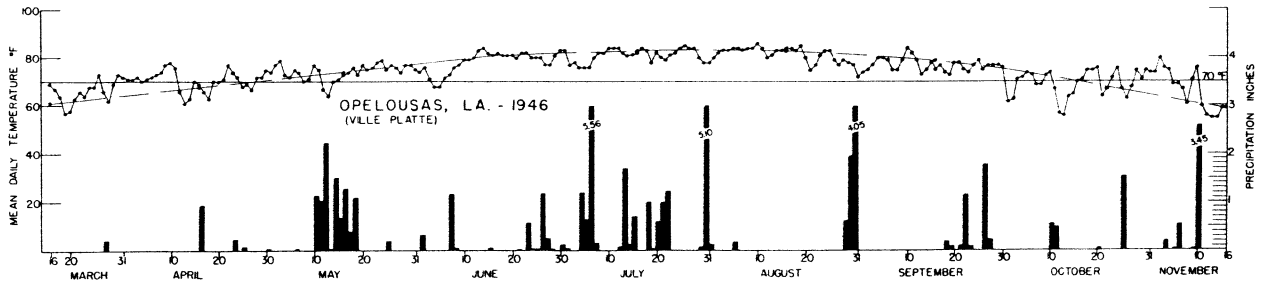

WINCHESTER, ARK. - 1946
(DUMAS)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
3.90
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

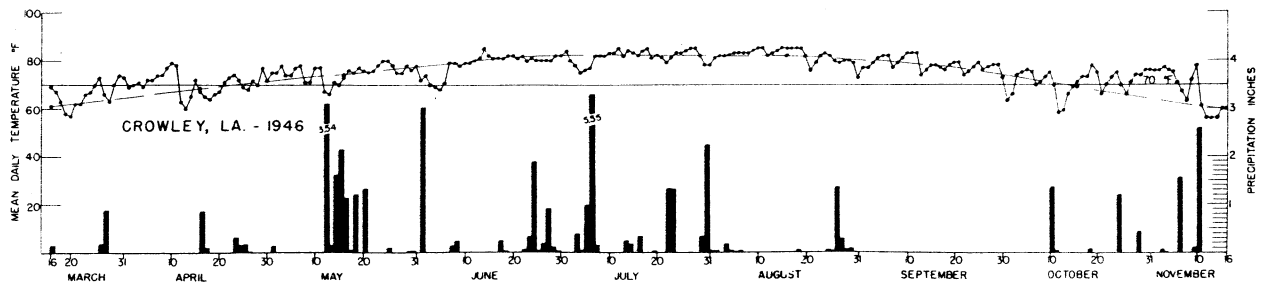

STONEVILLE, MISS. - 1946
MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

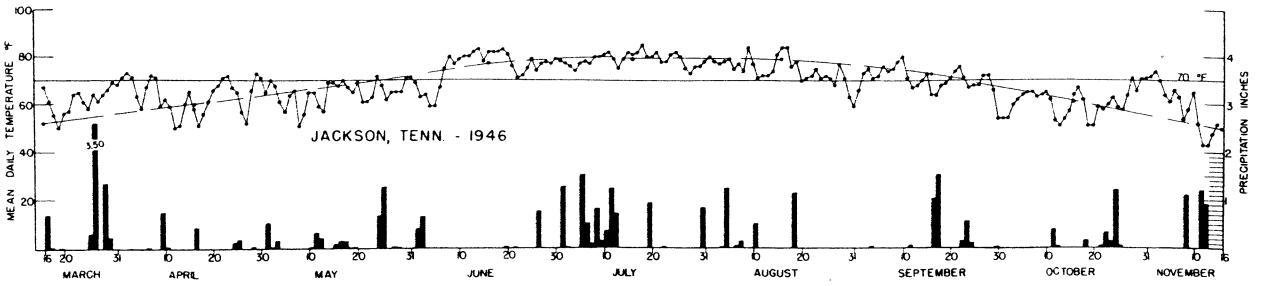

MELROSE, LA. - 1946
(ROBELINE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

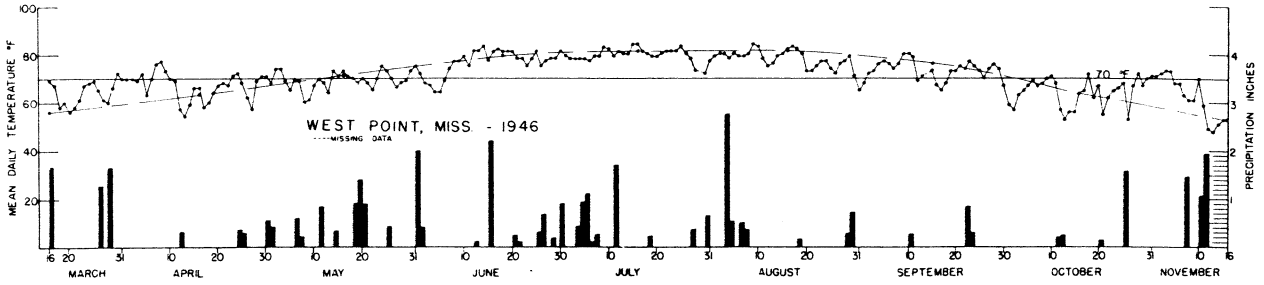

HAMBURG, LA. - 1946
(CHENEYVILLE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
4.28
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

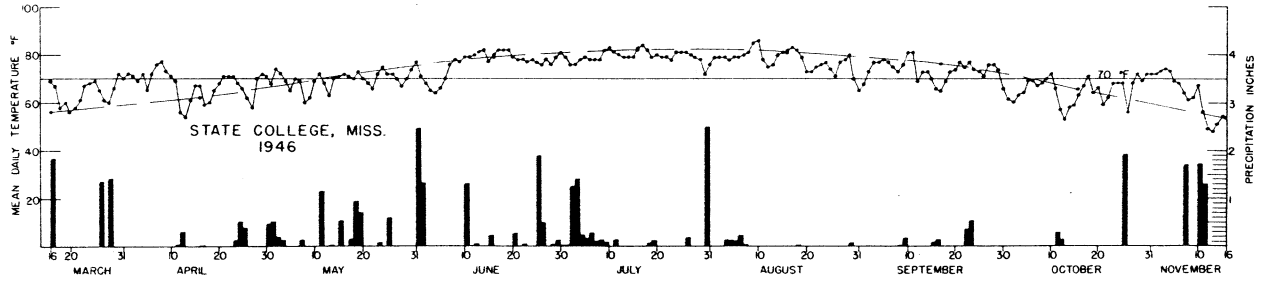

BATON ROUGE, LA. - 1946
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

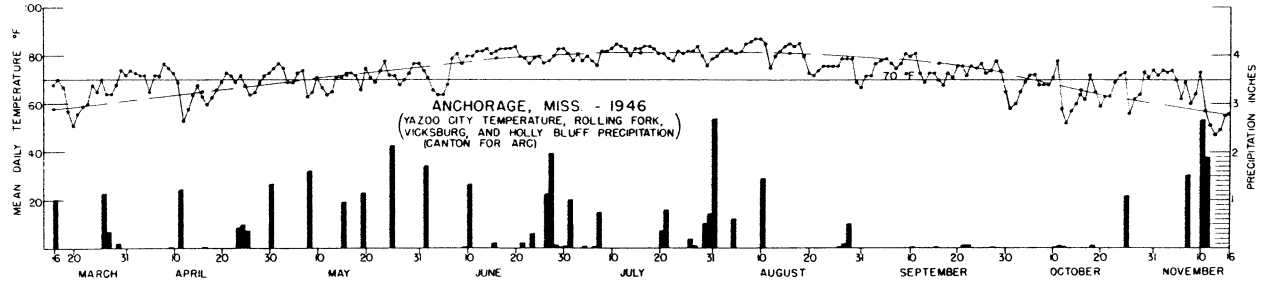

OPELOUSAS, LA. - 1946
(VILLE PLATTE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
5.56
5.10
4.05
3.45
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

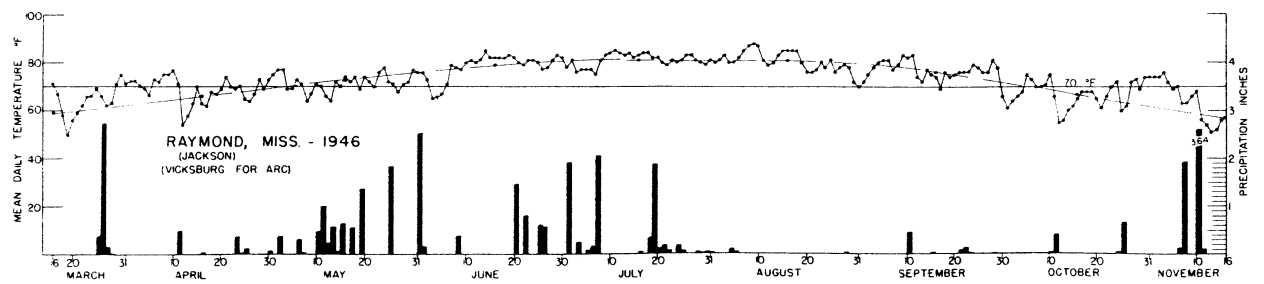

CROWLEY, LA. - 1946
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
5.54
5.55
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

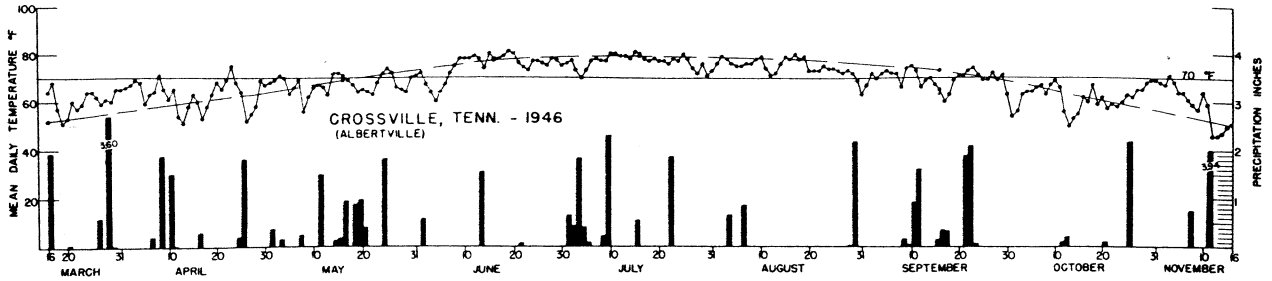

JACKSON, TENN. - 1946
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
3.50
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

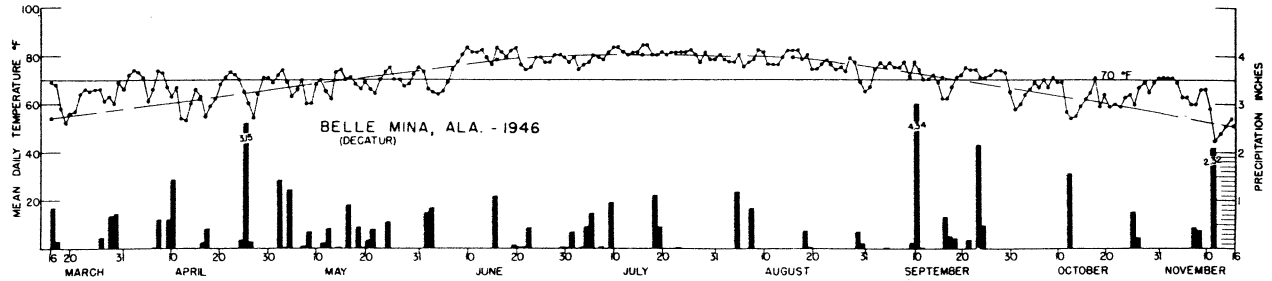

WEST POINT, MISS. - 1946
---MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

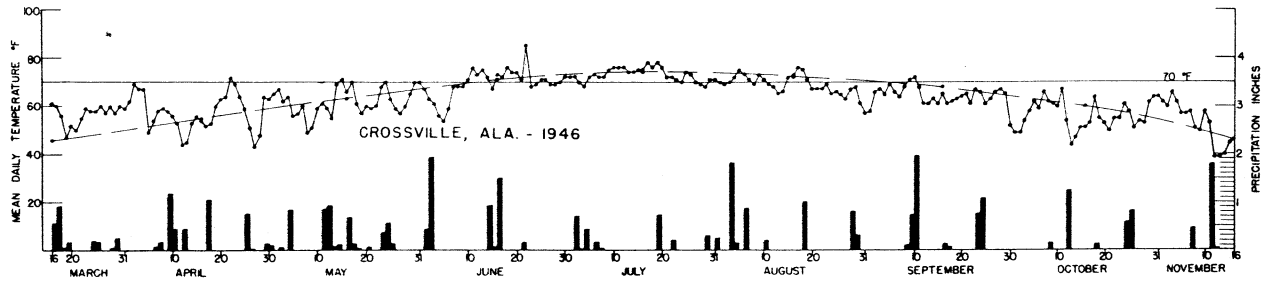

STATE COLLEGE, MISS.
1946
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

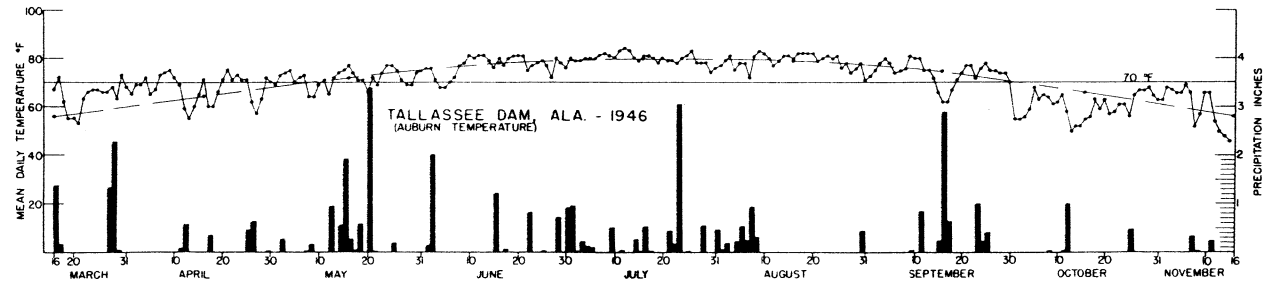

ANCHORAGE, MISS. - 1946
(YAZOO CITY TEMPERATURE, ROLLING FORK,
VICKSBURG, AND HOLLY BLUFF PRECIPITATION)
(CANTON FOR ARC)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

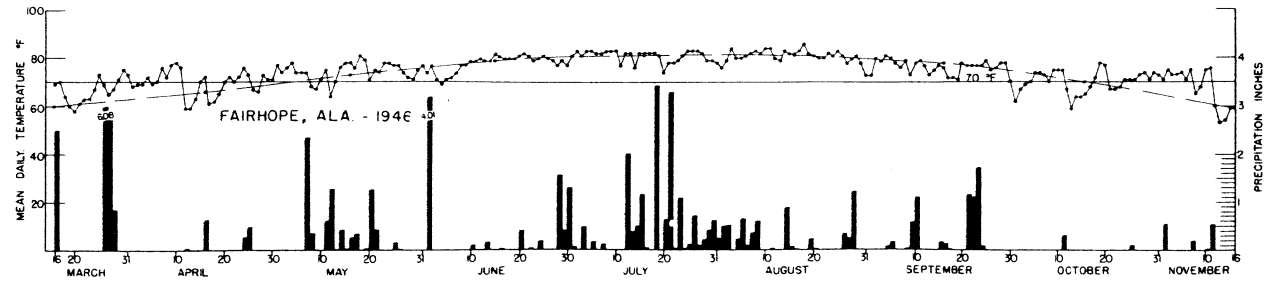

RAYMOND, MISS. - 1946
(JACKSON)
(VICKSBURG FOR ARC)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
3.64
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

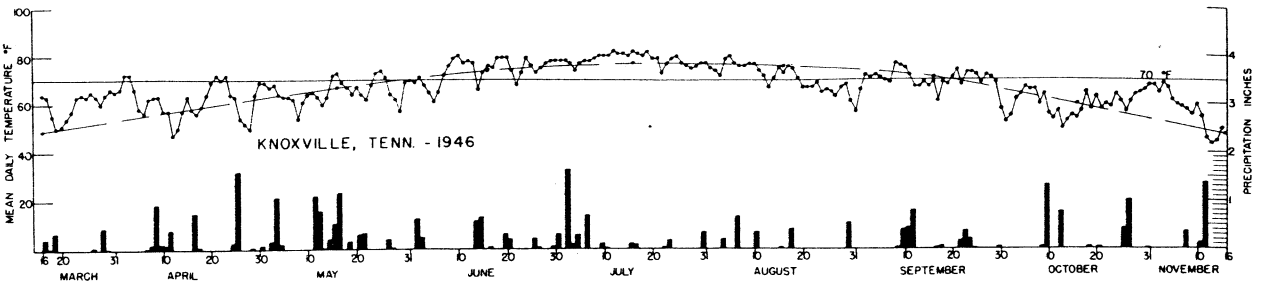

MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
CROSSVILLE, TENN. - 1946
(ALBERTVILLE)
70 °F
3.60
3.54
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

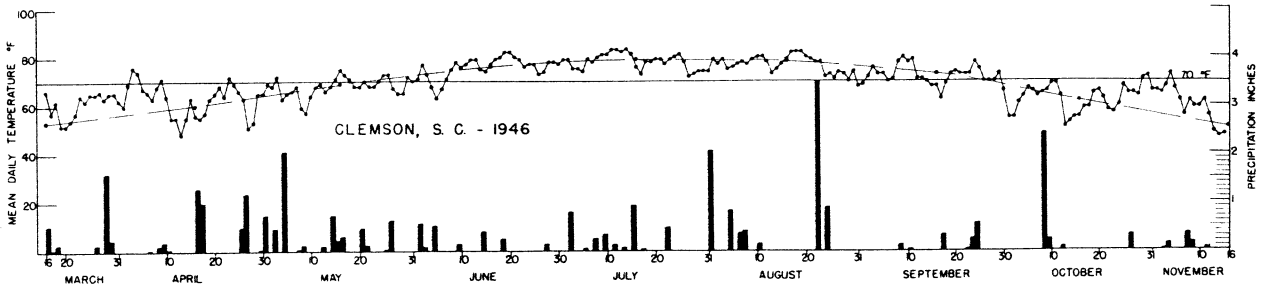

MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
BELLE MINA, ALA. - 1946
(DECATUR)
70 °F
3.15
4.34
2.92
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

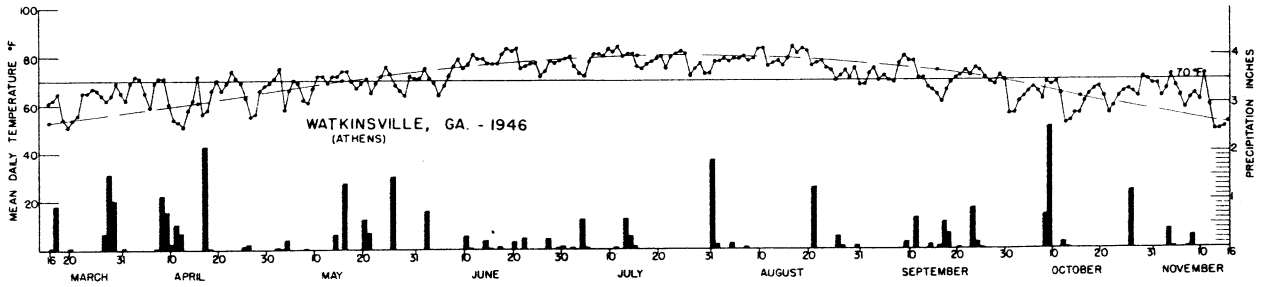

MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
CROSSVILLE, ALA. - 1946
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

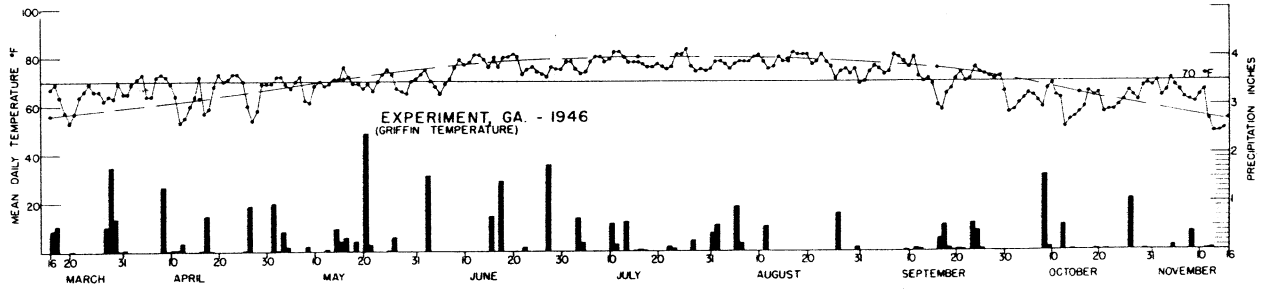

MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
TALLASSEE DAM, ALA. - 1946
(AUBURN TEMPERATURE)
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

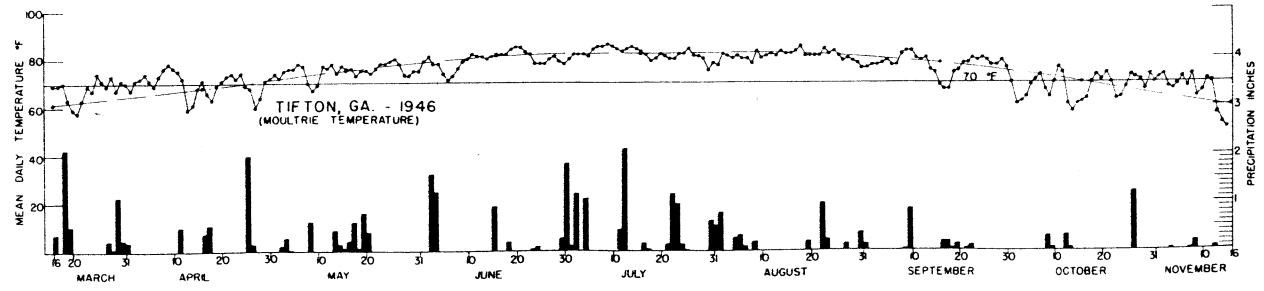

MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
FAIRHOPE, ALA. - 1946
70 °F
6.08
4.01
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

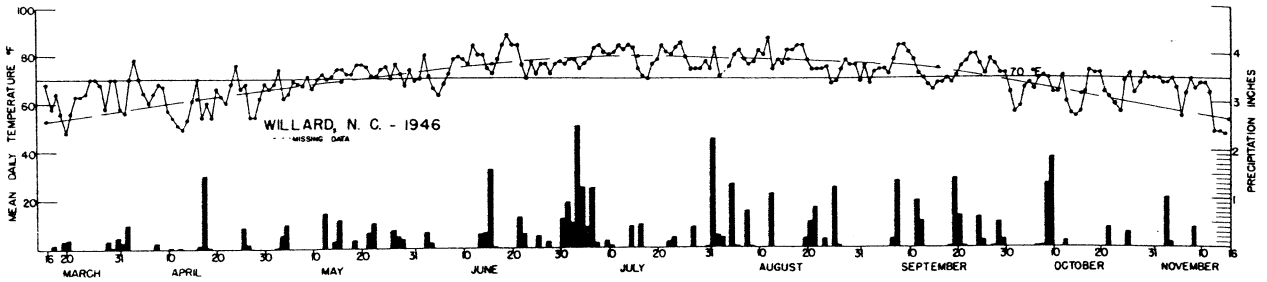

KNOXVILLE, TENN. - 1946
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

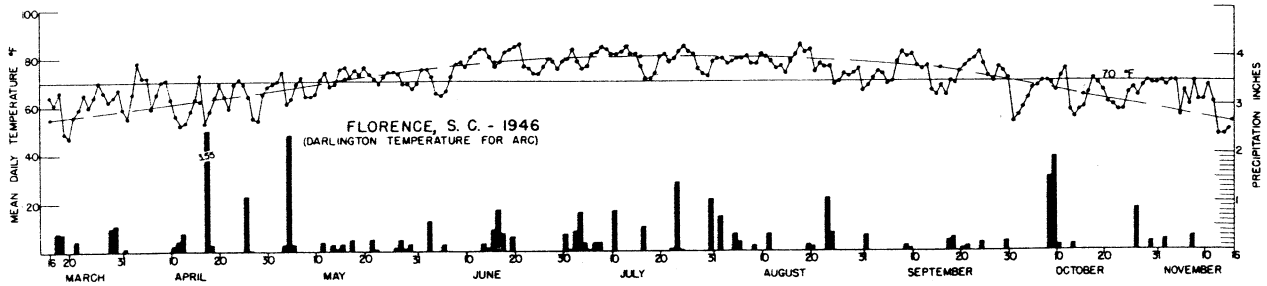

CLEMSON, S. C. - 1946
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

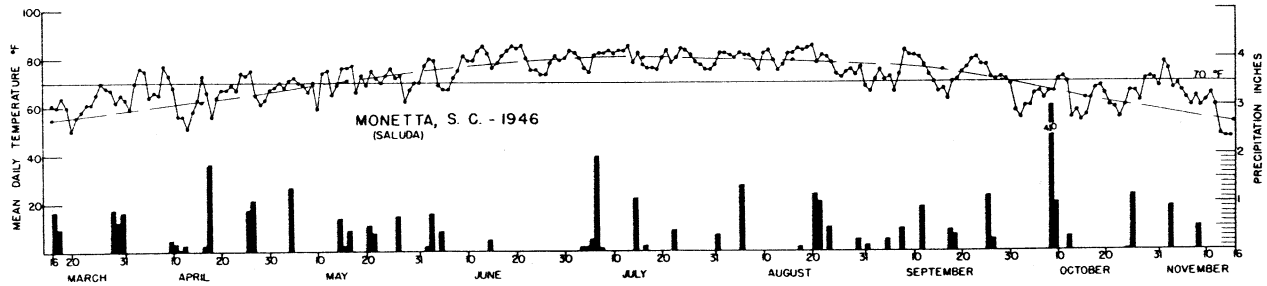

WATKINSVILLE, GA. - 1946
(ATHENS)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

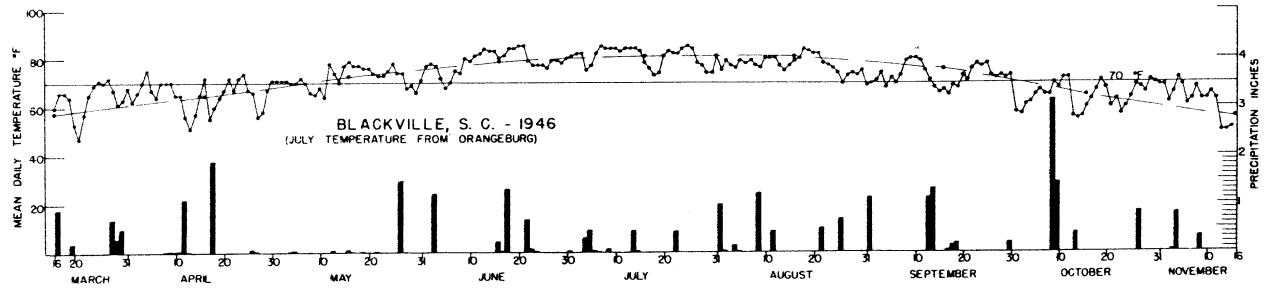

EXPERIMENT, GA. - 1946
(GRIFFIN TEMPERATURE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

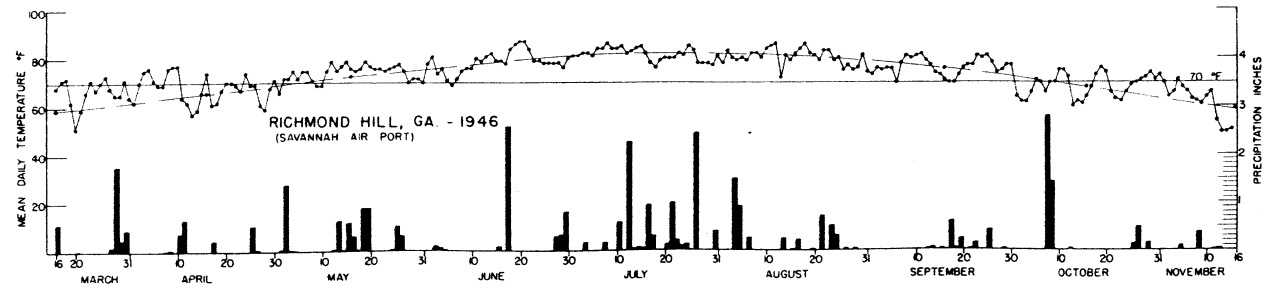

TIFTON, GA. - 1946
(MOULTRIE TEMPERATURE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

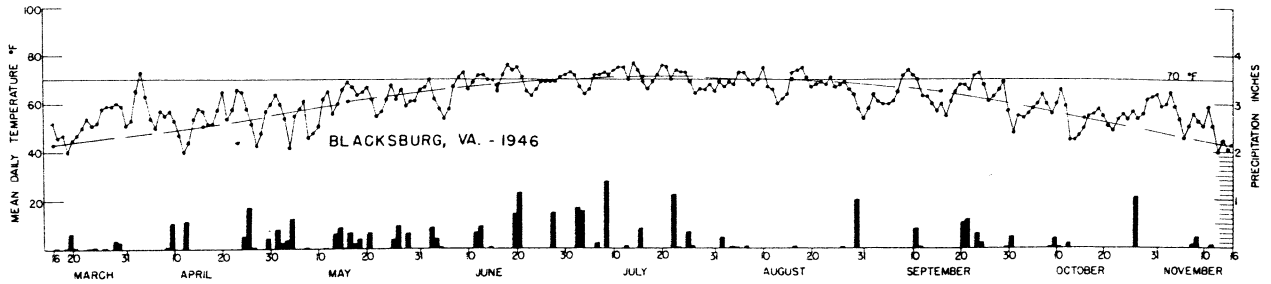

WILLARD, N. C. - 1946
MISSING DATA
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

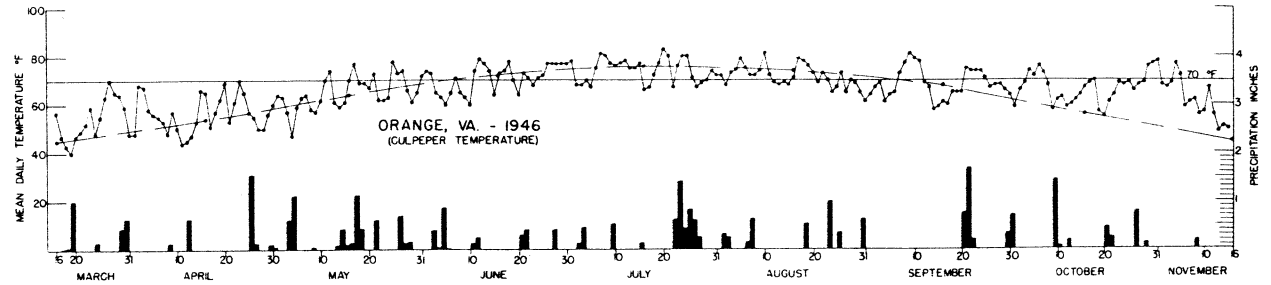

FLORENCE, S. C. - 1946
(DARLINGTON TEMPERATURE FOR ARC)
1.55
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

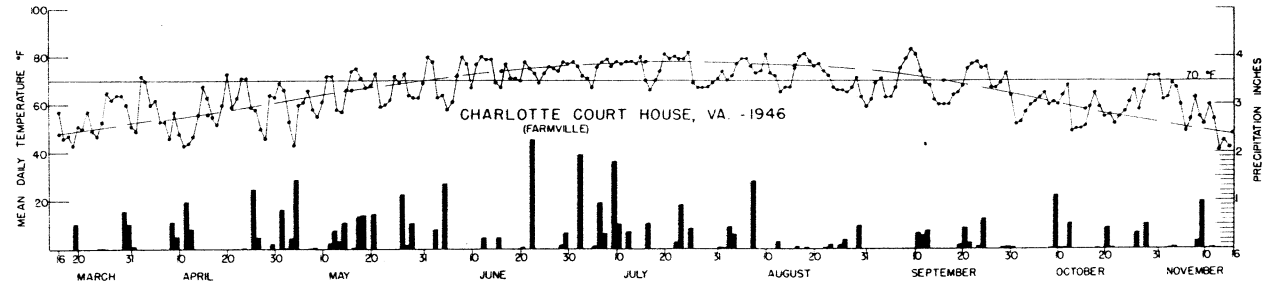

MONETTA, S. C. - 1946
(SALUDA)
4.65
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

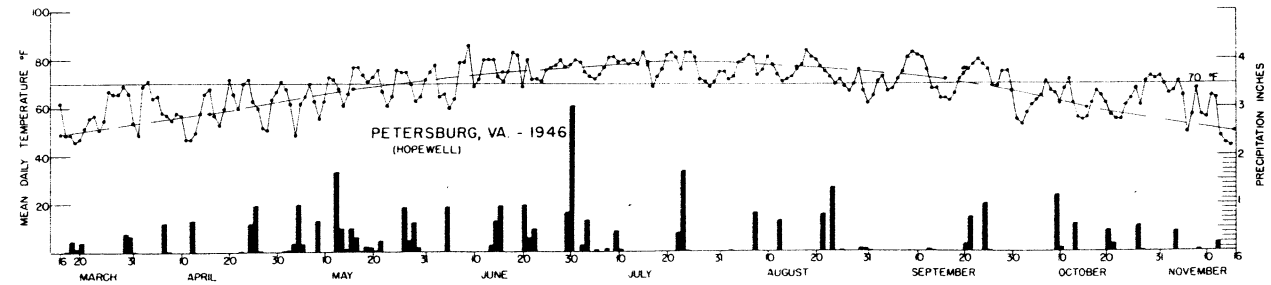

BLACKVILLE, S. C. - 1946
(JULY TEMPERATURE FROM ORANGEBURG)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

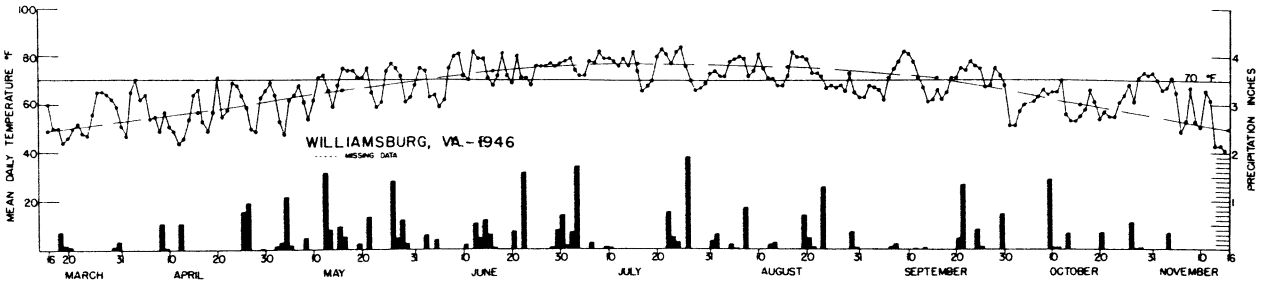

RICHMOND HILL, GA. - 1946
(SAVANNAH AIR PORT)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


BLACKSBURG, VA. - 1946
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


ORANGE, VA. - 1946
(CULPEPER TEMPERATURE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


CHARLOTTE COURT HOUSE, VA. - 1946
(FARMVILLE)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


PETERSBURG, VA. - 1946
(HOPEWELL)
MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER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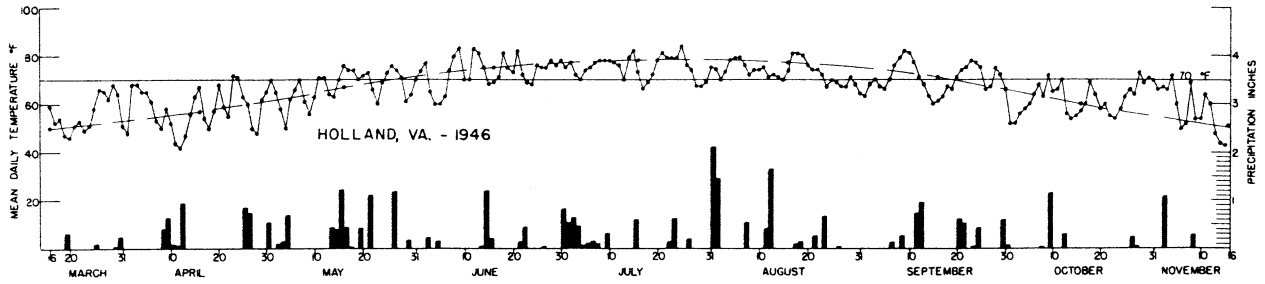
PRECIPITATION INCHES
WILLIAMSBURG, VA. - 1946
MISSING DATA
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER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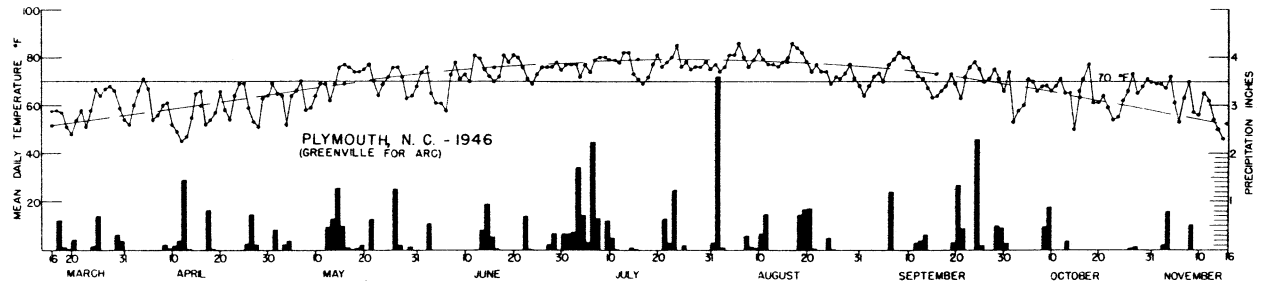
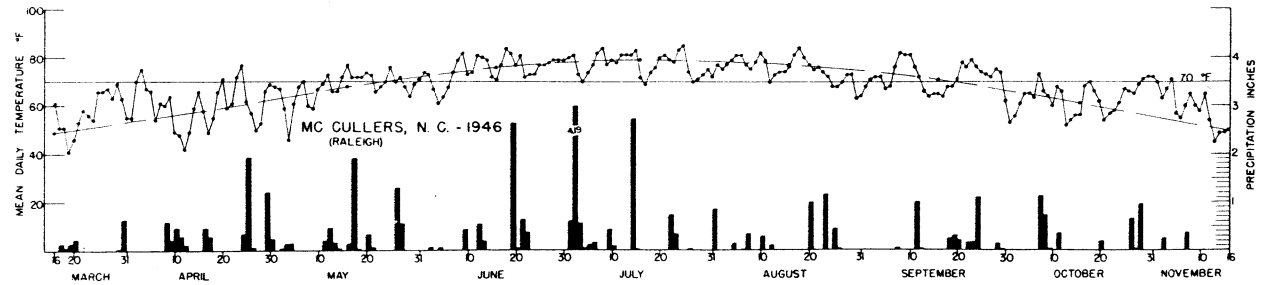
PRECIPITATION INCHES
HOLLAND, VA. - 1946
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
PLYMOUTH, N. C. - 1946
(GREENVILLE FOR ARC)
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER


MEAN DAILY TEMPERATURE °F
PRECIPITATION INCHES
MC CULLERS, N. C. - 1946
(RALEIGH)
4.13
70 °F
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

METHODS

All uniform tests have been planted in replicated rod-row plots, using a randomized block design with four replications. Row widths used at the different test locations have varied from 36 to 42 inches, depending upon the width in common use or the equipment available for handling the crop. Seedings have been made at the rate of 200 viable seeds per row. Satisfactory stands are usually obtained under normal soil and weather conditions at planting time at this rate of seeding.

Yields were taken on individual replications after the seed had been dried to a uniform moisture content basis.

Chemical composition was determined on each strain at each location with certain exceptions. Where tests have been conducted several years at the same locations, chemical composition was determined from composites prepared by combining equal weights of seed from each location. The location composites were prepared by combining equal weights of seed of each strain in a Group Test at an individual location. Percentage composition of the seed is expressed on a dry basis (moisture free). Seed weight from each strain was determined on the variety composite or by individual locations and was recorded as weight (in grams) of 100 seed.

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 III, Illini; Group IV-S, Gibson; Group VI, Ogden; Group VII, Volstate; and Group VIII, Woods Yellow.

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

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

The factors considered in estimating seed quality were development of seed, wrinkling, damage, and color for the variety.

Statistical analyses - all completed yield tests were analyzed by analyses of variance to determine differences required for significance. The coefficients of variability were high in many cases. While the differences required for significance are listed in the tables, some caution should be exercised in their use.

SUMMARY OF RESULTS

A wide range of soil types and climatic conditions occur in the Southern Region. Under such conditions, the mean response of a variety over the region as a whole, as measured by agronomic and chemical data, may be of little value. The region has been subdivided into five areas based on the major soil divisions and to a certain extent on climatic variation. The areas as outlined, Figure 2, are: (1) the East Coast, consisting of the coastal plain of Virginia, North Carolina and the upper half of South Carolina; (2) the Southeast area, containing the coastal plain soils of lower South Carolina, Georgia, Florida, Alabama, and Mississippi; (3) the Upper and Central South extending from the Mississippi Delta area north and east to the Coastal Plain; (4) the Delta area, composed of the alluvial soils from the Mississippi River in the states of Tennessee, Arkansas, Mississippi, and Louisiana; (5) the West, or Southwest, section, consisting of Texas, Oklahoma, and the western half of Arkansas and Louisiana. It is realized that these somewhat arbitrary divisions are not all that can be desired, however, it is believed that a much better concept of the adaptation of the varieties can be obtained from the agronomic and chemical means from within the respective areas than from an average of all locations.

UNIFORM TEST, GROUP III

The Group III Test consisted of five named varieties and five selections from hybrids. The origin of these strains and varieties is as follows:

Variety or Strain	Source or Originating Agency	Origin
Chief	Illinois Agr. Exp. Sta.	Sel. from Illini x Manchu
Dunfield	Purdue Agr. Exp. Station	P.I. 36846
Illini	Illinois Agr. Exp. Station	Selection from A.K.
Lincoln	Ill. A.E.S. & U.S.R.S.L.	L6-685 (Mandarin x Manchu)
Pennsoy	Penn. Agr. Exp. Station	Natural cross from Manchuria 13-177
A3-176	Iowa A.E.S. & U.S.R.S.L.	Sel. from Illini x Dunfield
C461	Purdue Agr. Exp. Sta. & USRSL	Sel. from Dunfield x Mansoy
L3-2010	Ill. Agr. Exp. Sta. & USRSL	Sel. from C167 x L7-1355
L3-2692	Ill. Agr. Exp. Sta. & USRSL	Sel. from Dunfield x (Dun. x T117)
L3-3392	Ill. Agr. Exp. Sta. & USRSL	Sel. from Dun. x Manchuria 13-177

The Group III test was grown at two locations in 1946, Blacksburg, Virginia, and Denton, Texas. The 1946 agronomic and chemical data, and summary of results for the three years, 1944-46, inclusive, are given in tables 1 and 2, respectively. The yield at Blacksburg was uniformly good for all three years, 1944-46. Variations in chemical composition were not unusually wide, indicating that the better varieties were adapted.

In contrast, the mean yields for the group at Denton were 7.8, 16.6, and 5.6, bushels per acre for the three years, 1944, 1945, and 1946, respectively. The oil content of the varieties varied as much as 5% between years and the protein content over 8 percent for some varieties. The iodine number of the oil of the strains of this group was very low, varying from 105.5 for Dunfield to 121.9 for Lincoln. The erratic yields and the variation in composition indicate a lack of adaptation of these varieties to environmental conditions at Denton, Texas.

Table 1: Summary of the agronomic and chemical data for the strains of the Uniform Test, Group III, 1946

Location	L3-2010	C461	Lincoln	Chief	A3-176	Illini	L3-2692	Pennsoy	L3-3392	Dunfield	Mean
					Yield						
Blacksburg, Va.	19.0	16.9	17.0	18.3	12.3	13.0	15.5	13.4	14.4	11.8	15.2
Denton, Texas	6.2	6.6	5.5	3.4	9.3	7.1	4.5	5.7	3.7	3.7	5.6
					Lodging						
Blacksburg, Va.	2.0	4.0	2.5	2.7	2.5	2.0	2.0	2.0	2.5	3.0	2.5
					Height						
Blacksburg, Va.	42	38	36	50	36	33	40	32	38	37	38.2
					Maturity 1/						
Blacksburg, Va.	4	4	-1	4	1	0	3	3	0	6	
Denton, Texas	8	0	0	0	0	0	0	0	8	0	
					Seed Quality						
Blacksburg, Va.	2.0	2.0	2.0	2.0	2.0	1.0	1.0	3.0	1.0	1.0	1.7
Denton, Texas	5.0	4.0	4.0	3.0	4.0	3.0	5.0	4.0	4.0	4.0	4.0
					Weight of Beans						
Blacksburg, Va.	13.7	14.1	14.2	12.3	12.4	11.7	16.7	14.6	13.6	15.5	13.9
Denton, Texas	8.6	8.5	8.1	8.3	8.3	8.0	8.8	9.6	8.4	9.3	8.6
					% Protein						
Blacksburg, Va.	38.5	41.9	40.1	39.8	39.2	40.7	38.4	40.2	37.7	39.5	39.6
Denton, Texas	39.7	42.5	42.9	43.0	42.0	43.6	45.0	43.4	43.8	43.6	43.0
					% Oil						
Blacksburg, Va.	20.6	19.5	21.4	20.9	21.9	20.3	20.8	21.1	22.0	20.9	20.9
Denton, Texas	19.8	20.4	19.4	20.4	21.4	20.0	19.3	18.7	18.7	19.7	19.8
					Iodine No. of Oil						
Blacksburg, Va.	134.3	131.1	135.1	134.6	132.1	133.6	130.6	131.3	130.4	131.5	132.5
Denton, Texas	107.0	104.1	118.8	113.8	113.9	115.2	100.2	105.3	103.5	104.1	108.6

Bu. Req. for Sig. (5% level): Blacksburg, Va. 3.2 Denton, Texas Not Sig.
Coef. of Variance (%): 14.6 63.4

1/ Illini Planted - Blacksburg, Va. May 29 - Denton, Texas April 6
Illini Matured - Blacksburg, Va. Oct. 2 - Denton, Texas August 15
Days to Maturity-Blacksburg, Va. 126 days - Denton, Texas 131 days

Table 2: Summary of two-year and three-year average chemical and agronomic data for the strains of the Uniform Test, Group III.

Location	C461	Lincoln	Chief	A3-176	Illini	Dunfield	Mean
			YIELDS				
			(1945-46 Yields)				
Blacksburg, Va.	22.4	19.6	22.0	18.2	15.7	17.0	19.2
Denton, Texas	11.5	13.1	10.0	11.1	12.7	10.3	11.5
			(1944-46 Yields)				
Blacksburg, Va.		19.8	21.9	19.2	16.5	17.7	19.0
Denton, Texas		11.7	8.8	10.9	10.7	8.2	10.1
			WEIGHT OF BEANS				
			(1945-46 Av.)				
Blacksburg, Va	13.7	14.7	13.5	14.0	13.3	15.3	14.1
Denton, Texas	9.1	9.6	9.2	9.8	9.6	10.5	9.6
			(1944-46 Av.)				
Blacksburg, Va.		14.1	13.4	14.1	12.8	15.2	13.9
Denton, Texas		10.2	9.4	10.3	9.3	9.8	9.8
			% PROTEIN				
			(1945-46 Av.)				
Blacksburg, Va.	40.1	40.0	39.4	39.6	40.3	38.8	39.7
Denton, Texas	38.9	39.2	38.6	38.3	40.0	40.6	39.3
			(1944-46 Av.)				
Blacksburg, Va.		42.0	41.1	41.1	42.0	40.4	41.3
Denton, Texas		40.1	-	39.0	40.9	41.6	40.4
			% OIL				
			(1945-46 Av.)				
Blacksburg, Va.	20.3	21.5	20.9	21.7	20.3	21.3	21.0
Denton, Texas	21.8	21.4	22.2	23.4	21.4	21.5	22.0
			(1944-46 Av.)				
Blacksburg, Va.		21.3	20.4	21.6	20.3	21.2	21.0
Denton, Texas		20.9	-	23.0	20.7	20.4	21.3
			IODINE NO. OF OIL				
			(1945-46 Av.)				
Blacksburg, Va.	130.6	133.8	133.7	132.1	133.5	129.2	132.2
Denton, Texas	108.8	122.0	117.3	118.4	117.3	106.3	115.0
			(1944-46 Av.)				
Blacksburg, Va.		133.4	133.0	130.3	132.5	128.7	131.6
Denton, Texas		121.9	-	117.8	118.0	105.5	115.8

UNIFORM TEST, GROUP IV-S

The Group IV-S test consists of three named varieties and three selections from hybrids. The origin of these strains and varieties is as follows:

Variety or Strain	Source or Originating Agency	Origin
Gibson	Purdue Agr. Exp. Sta.	Sel. from Midwest x Dunfield
Hongkong	U. S. Dept. of Agr.	Intr. 22406, Hongkong, China, 1908
Patoka	Purdue Agr. Exp. Sta.	Sel. from P. I. 70218-2 1/
C101	Purdue Agr. Exp. Sta.	Sel. from Dunfield x Manchu
S55-19	Missouri Agr. Exp. Sta.	Sel. from Virginia x P.I. 37062
S100	Missouri Agr. Exp. Sta.	Rogue from Illini

1/Division of Plant Exploration and Introduction, Bureau of Plant Industry, Soils, and Agricultural Engineering, U.S.D.A.

Southern farmers through the mid-South are greatly interested in varieties of IV-S maturity. In those areas where cotton is the major crop, varieties of this maturity can be combined before all available labor is required for picking cotton. Such varieties would also allow more time for seed-bed preparation and planting of winter oats after the soybeans are combined. Low yields of poor quality seed have resulted, too often, from attempts to grow such early varieties as Macoupin, Chief, and Illini in the South.

Twenty-five Uniform Tests, Groups IV-S were grown at 22 locations in the South in 1946. Complete tests were planted at two dates at Stillwater, Oklahoma, and at three dates at Stoneville, Mississippi. The agronomic and chemical data for the varieties and strains of Group IV-S are given in tables 3 to 11, inclusive.

Eleven Group IV-S tests were grown in the West and Southwest, six in the Upper South and eight in the Delta area in 1946. S100 continues to be the leading variety of this maturity. Hongkong ranked second to S100 in the West in 1946 and first for the two years, 1945-46. Hongkong, in other areas, was the lowest yielding of all varieties.

There was little, if any, difference in yield of S100, C101, and Patoka in the Upper South in 1946, however, S100 is high in this area for the three years, 1944-46. S100 and C101 are the leading strains in tests in the Delta area. S100 continues to be the lowest in percent oil of this group.

Serious shattering was not reported on any varieties or strains of the Uniform Test, Group IV-S in 1946.

Table 3: Summary of the agronomic and chemical data for the strains of the Uniform Test, Group IV-S, 1946

Location	No. of tests in mean	S100	C101	Patoka	S55-19	Gibson	Hong-kong	Mean
				1946 Yields				
West	11	14.5	12.8	10.4	10.7	12.5	13.7	12.4
Delta	8	25.2	24.2	22.6	20.7	19.7	16.8	21.7
Upper South	6	24.2	24.7	24.8	23.3	22.5	18.3	23.0
Mean	25	21.3	20.6	19.3	18.2	18.2	16.3	19.0
				Yield Rank - 1946				
West		1	3	6	5	4	2	
Delta		1	2	3	4	5	6	
Upper South		3	2	1	4	5	6	
				1945-46 Yields				
West	3	18.0	20.4	16.6	18.2	18.4	20.7	18.7
Delta	5	27.3	25.4	24.0	23.0	21.5	20.9	23.7
Upper South	5	26.3	24.7	25.6	-	23.3	-	-
Mean	13	23.9	23.5	22.1	-	21.1	-	-
				1944-46 Yields				
West	3	20.1	20.8	17.1		19.0		19.4
Delta	5	25.6	23.5	22.1		20.7		23.0
Upper South	5	25.3	23.7	23.0		22.2		23.6
Mean	13	23.7	22.7	20.7		20.6		22.0
				Lodging				
West	8	1.5	1.8	1.3	1.9	1.8	2.3	1.7
Delta	8	2.2	2.6	2.1	2.5	2.6	2.7	2.4
Upper South	6	2.9	2.6	1.6	2.9	2.5	3.8	2.7
Mean	22	2.2	2.3	1.7	2.4	2.3	2.9	2.3
				Maturity1/				
West	10	12	9	0	0	0	5	
Delta	7	10	2	-1	0	0	8	
Upper South	6	3	5	2	2	0	5	
Mean	23	8	5	0	1	0	6	
				Height				
West	9	33.1	28.4	22.9	29.6	26.9	28.8	28.3
Delta	8	39.6	31.4	26.3	30.4	29.6	28.6	31.0
Upper South	6	41.7	36.8	32.2	37.3	36.3	36.5	36.8
Mean	23	38.1	32.2	27.1	32.4	30.9	31.3	32.0

1/Days matured earlier (-) or later than Gibson.

Table 3: (Continued)

Location	No. of tests in mean	S100	C101	Patoka	S55-19	Gibson	Hong-kong	Mean
			Seed Quality					
West	11	2.8	3.3	3.1	3.0	3.0	2.5	3.0
Delta	8	2.5	2.4	2.8	2.3	2.1	2.4	2.4
Upper South	6	1.8	2.3	2.0	2.3	1.8	1.7	2.0
Mean	25	2.4	2.7	2.6	2.5	2.3	2.2	2.5
			Seed Weight					
West	10	14.9	16.2	16.1	14.7	13.7	13.4	14.9
Delta	6	11.3	12.4	13.4	11.4	11.2	9.8	11.6
Upper South	6	13.7	16.6	17.0	15.0	13.6	12.5	14.7
Mean	22	13.6	15.3	15.6	13.9	13.0	12.2	13.9
			Per cent Protein					
West	9	45.8	44.2	45.7	45.7	43.9	42.9	44.7
Delta	8	43.8	41.9	43.4	42.8	40.6	41.3	42.3
Upper South	6	40.5	40.2	42.8	42.3	40.1	38.9	40.8
Mean	23	43.7	42.4	44.1	43.8	41.8	41.3	42.8
			Per cent Oil					
West	9	18.6	19.4	19.6	19.0	19.7	19.9	19.4
Delta	8	19.4	20.6	20.6	20.7	21.2	20.1	20.4
Upper South	6	20.5	21.4	20.8	20.8	21.1	21.6	21.0
Mean	23	19.4	20.3	20.3	20.1	20.6	20.4	20.2
			Iodine Number of Oil					
West	9	129.7	128.0	128.8	131.0	128.4	133.2	129.8
Delta	8	131.9	133.1	133.9	134.2	133.5	136.5	133.8
Upper South	6	134.1	134.4	132.8	134.8	134.4	137.4	134.6
Mean	23	131.6	131.4	131.6	133.1	131.7	135.4	132.4

Table 4: Summary of yields in bushels per acre for the strains in the Uniform Test, Group IV-S, 1946

Location [3]	S100	C101	Patoka	S55-19	Gibson	Hongkong	Mean	Bu.Nec. Sig. 5%	Coef. Var.(%)
West									
Coweta, Okla.	28.0	30.7	19.8	21.3	24.9	29.7	25.7	6.6	12.3
Stillwater, Okla. (5/1)	12.7	6.3	6.2	7.1	7.0	10.1	8.2	2.9	23.6
Stillwater, Okla. (6/1)	27.3	28.1	19.1	22.7	26.7	23.5	24.6	5.7	15.5
Nowata, Okla.	18.0	15.3	16.9	14.7	15.5	18.7	16.5	N.S.	16.7
Lubbock, Texas	16.3	13.0	15.1	14.8	14.5	19.8	15.6	-	-
Stuttgart, Ark.	13.8	11.9	11.9	10.4	11.0	11.4	11.7	N.S.	13.8
Muskogee, Okla.	9.6	10.4	3.7	2.5	10.5	9.5	7.7	2.4	21.3
Chillicothe, Texas	9.9	7.8	5.7	6.8	7.3	8.3	7.6	1.8	15.8
Fayetteville, Ark.	9.1	5.8	6.4	6.9	7.3	8.3	7.3	N.S.	26.9
Denton, Texas [1]	9.8	6.2	4.2	5.0	7.9	6.2	6.6	N.S.	29.0
Vinita, Okla.	4.6	5.0	5.7	5.4	5.4	5.4	5.3	N.S.	28.6
Mean	14.5	12.8	10.4	10.7	12.5	13.7	12.4		
Upper and Central South									
Jackson, Tenn.	35.0	36.8	34.3	35.1	30.7	25.5	32.9	5.7	11.6
Orange, Va.	29.4	28.7	30.3	27.9	27.1	23.2	27.8	2.9	6.9
Charlotte, Va.	28.5	28.6	29.9	23.9	23.1	18.9	25.5	5.0	10.8
Knoxville, Tenn.	20.8	21.1	23.6	21.1	23.4	17.0	21.2	3.3	10.3
Blacksburg, Va.	17.9	19.4	19.5	19.7	16.4	16.8	18.3	N.S.	12.9
Crossville, Tenn.	13.6	13.8	11.3	11.8	14.0	8.5	12.2	2.4	13.1
Mean	24.2	24.7	24.8	23.3	22.5	18.3	23.0		
Delta									
Sikeston, Mo.	41.3	43.3	39.0	37.7	38.1	37.9	39.6	3.9	6.9
Stoneville, Miss. (4/19)	36.3	31.7	30.0	29.7	26.1	22.9	29.5	6.3	14.2
Stoneville, Miss. (5/29)	27.8	26.4	25.1	23.4	18.5	-	24.2	4.2	11.2
Stoneville, Miss. (6/17) [2]	16.8	15.9	14.8	15.1	12.4	13.4	14.7	2.7	12.3
Tunica, Miss.	20.3	20.2	21.3	18.4	18.0	11.7	18.3	N.S.	23.3
Dunleith, Miss.	17.7	22.5	17.8	13.3	19.9	8.4	16.6	4.8	19.1
Opelousas, La.	18.6	19.0	18.5	11.6	13.2	12.6	15.6	3.7	15.7
Baton Rouge, La.	22.5	14.9	14.3	16.4	11.7	10.9	15.1	5.8	9.3
Mean	25.2	24.2	22.6	20.7	19.7	16.8	21.7		

[1] Average of 2 replications.
[2] Planted after oats.
[3] Date of planting is given where two or more tests were planted at one location.

Table 5: Summary of lodging data for the strains of the Uniform Test, Group IV-S, 1946

Location	S100	C101	Patoka	S55-19	Gibson	Hong-kong	Mean
			West				
Coweta, Okla.	3.0	3.0	2.0	3.0	3.0	4.0	3.0
Stillwater, Okla. (May 1)	1.0	2.0	1.0	2.0	2.0	3.0	1.8
Stillwater, Okla. (June 1)	1.0	2.0	1.0	2.0	2.0	2.0	1.7
Nowata, Okla	1.0	2.0	1.0	2.0	1.0	2.0	1.5
Lubbock, Texas.	2.0	1.0	1.0	1.0	1.0	1.0	1.2
Muskogee, Okla.	2.0	2.0	1.0	2.0	2.0	3.0	2.0
Chillicothe, Texas	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Vinita, Okla.	1.0	1.0	2.0	2.0	2.0	2.0	1.7
Mean	1.5	1.8	1.3	1.9	1.8	2.3	1.7
			Upper and Central South				
Jackson, Tenn.	4.0	4.0	2.0	3.0	4.0	5.0	3.7
Orange, Va.	4.0	2.0	1.0	3.0	3.0	5.0	3.0
Charlotte, Va.	2.0	2.0	2.0	4.0	2.0	2.0	2.3
Knoxville, Tenn.	3.0	3.0	2.0	3.0	3.0	5.0	3.2
Blacksburg, Va.	3.5	3.5	1.5	3.5	2.0	4.5	3.1
Crossville, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Mean	2.9	2.6	1.6	2.9	2.5	3.8	2.7
			Delta				
Sikeston, Mo.	3.3	3.0	2.3	2.8	3.0	3.8	3.0
Stoneville, Miss. (April 19)	2.5	3.2	3.0	2.8	3.0	3.8	3.1
Stoneville, Miss. (May 29)	2.3	2.3	2.0	2.3	2.5	3.0	2.4
Stoneville, Miss. (June 17)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Tunica, Miss.	3.3	3.3	3.0	3.0	3.0	3.3	3.2
Dunleith, Miss.	3.0	3.7	3.7	4.0	4.0	4.5	3.8
Opelousas, La.	1.0	2.0	1.0	2.0	2.0	1.0	1.5
Baton Rouge, La.	1.0	2.0	1.0	2.0	2.0	1.0	1.5
Mean	2.2	2.6	2.1	2.5	2.6	2.7	2.4

Table 6: Summary of the maturity data, days earlier (-) or later (+) than Gibson, for the strains of the Uniform Test, Group IV-S, 1946

	S100	C101	Patoka	S55-19	Gibson	Hong kong	Gibson Planted	Gibson Matured	Days to Maturity
			West						
Coweta, Okla.	-10	-3	-10	-10	0	-3	6-3	10-15	134
Stillwater, Okla. (May 1)	24	12	0	4	0	7	5-1	9-6	127
Stillwater, Okla. (June 1)	20	9	5	3	0	8	6-1	9-25	116
Nowata, Okla.	11	14	-6	4	0	4	5-22	10-1	132
Lubbock, Texas	15	6	-7	6	0	4	5-22	9-23	124
Stuttgart, Ark.	7	1	4	-1	0	11	5-30	9-11	104
Muskogee, Okla.	10	5	-15	-15	0	5	6-3	10-10	129
Chillicothe, Texas	29	29	14	14	0	14	6-18	9-26	100
Denton, Texas	0	0	0	-8	0	-8	4-6	8-23	139
Vinita, Okla.	15	15	3	5	0	10	5-22	9-25	126
Mean	12	9	0	0	0	5			
			Upper and Central South						
Jackson, Tenn.	-16	0	-2	0	0	-16	4-22	9-5	137
Orange, Va.	8	8	13	13	0	8	5-7	9-17	133
Charlotte, Va.	7	2	-2	-2	0	9	6-8	10-1	115
Knoxville, Tenn.	19	7	0	0	0	7	5-8	9-5	120
Blacksburg, Va.	7	5	-8	0	0	15	5-29	10-10	134
Crossville, Tenn.	-9	10	9	0	0	9	5-22	9-30	131
Mean	3	5	2	2	0	5			
			Delta						
Sikeston, Mo.	9	2	-2	0	0	11	6-5	9-24	111
Stoneville, Miss. (April 19)	25	1	-4	0	0	6	4-19	8-21	113
Stoneville, Miss. (May 29)	10	2	-2	1	0	2	5-29	9-10	104
Stoneville, Miss. (June 17)	0	0	0	0	0	3	6-17	9-20	95
Tunica, Miss.	12	0	-1	1	0	9	6-11	9-11	92
Opelousas, La.	-5	7	-3	0	0	11	4-30	8-25	118
Baton Rouge, La.	19	0	5	0	0	16	4-22	8-20	120
Mean	10	2	-1	0	0	8			

Table 7: Summary of the height data for the strains of the Uniform Test, Group IV-S, 1946

Location	S100	C101	Patoka	S55-19	Gibson	Hong-kong	Mean
			West				
Coweta, Okla.	44	42	32	40	38	36	38.7
Stillwater, Okla. (May 1)	34	33	24	35	25	36	31.2
Stillwater, Okla. (June 1)	36	30	22	32	31	30	30.2
Nowata, Okla.	40	33	28	35	35	39	35.0
Lubbock, Texas	28	22	16	20	17	21	20.7
Stuttgart, Ark.	28	21	22	26	22	27	24.3
Muskogee, Okla.	40	37	27	34	36	32	34.3
Chillicothe, Texas	20	14	15	18	15	14	16.0
Vinita, Okla.	28	24	20	26	23	24	24.2
Mean	33.1	28.4	23.9	29.6	26.9	28.8	28.3
			Upper and Central South				
Jackson, Tenn.	48	36	29	34	40	38	37.5
Orange, Va.	47	40	34	46	41	40	41.3
Charlotte, Va.	35	35	30	32	32	35	33.2
Knoxville, Tenn.	44	40	35	43	39	39	40.0
Blacksburg, Va.	45	43	41	47	41	41	43.0
Crossville, Tenn.	31	27	24	22	25	26	25.8
Mean	41.7	36.8	32.2	37.3	36.3	36.5	36.8
			Delta				
Sikeston, Mo.	50	41	35	45	41	42	42.3
Stoneville, Miss. (Apr. 19)	47	36	33	36	37	35	37.3
Stoneville, Miss. (May 29)	48	40	31	37	35	33	37.3
Stoneville, Miss. (June 17)	31	26	22	26	24	21	24.8
Tunica, Miss.	42	38	29	39	33	29	34.2
Dunleith, Miss.	37	35	29	31	31	33	32.7
Opelousas, La.	30	20	15	14	18	18	19.2
Baton Rouge, La.	32	21	16	15	18	18	20.0
Mean	39.6	31.4	26.3	30.4	29.6	28.6	31.0

Table 8: Summary of the seed quality data for the strains of the Uniform Test, Group IV-S, 1946.

Location	S100	C101	Patoka	S55-19	Gibson	Hong-kong	Mean
			West				
Coweta, Okla.	2.0	1.0	2.0	2.0	2.0	1.0	1.7
Stillwater, Okla. (May 1)	3.0	4.0	4.0	3.0	4.0	2.0	3.3
Stillwater, Okla. (June 1)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Nowata, Okla.	2.0	4.0	3.0	4.0	3.0	3.0	3.2
Lubbock, Texas	3.0	3.0	3.0	3.0	3.0	2.0	2.8
Stuttgart, Ark.	2.0	2.8	3.0	3.0	3.0	2.3	2.7
Muskogee, Okla.	2.0	2.0	2.0	3.0	2.0	2.0	2.2
Chillicothe, Texas	4.0	4.0	3.0	2.0	4.0	3.0	3.3
Fayetteville, Ark.	3.5	4.3	3.0	3.5	3.3	2.8	3.4
Denton, Texas	3.0	5.0	5.0	5.0	3.0	4.0	4.2
Vinita, Okla.	4.0	4.0	4.0	3.0	4.0	3.0	3.7
Mean	2.8	3.3	3.1	3.0	3.0	2.5	3.0
			Upper and Central South				
Jackson, Tenn.	2.0	2.0	2.0	2.0	1.0	2.0	1.8
Orange, Va.	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Charlotte, Va.	3.0	3.0	3.0	3.0	3.0	2.0	2.8
Knoxville, Tenn.	3.0	3.0	3.0	3.0	2.0	2.0	2.7
Blacksburg, Va.	1.0	2.5	1.0	2.5	1.5	2.0	1.8
Crossville, Tenn.	1.0	2.0	2.0	2.0	2.0	1.0	1.7
Mean	1.8	2.3	2.0	2.3	1.8	1.7	2.0
			Delta				
Sikeston, Mo.	1.3	1.5	2.0	1.5	1.3	1.3	1.5
Stoneville, Miss. (April 19)	2.5	2.0	2.3	2.0	2.0	1.8	2.1
Stoneville, Miss. (May 29)	2.0	2.5	2.5	1.0	1.5	2.3	2.0
Stoneville, Miss. (June 17)	2.0	2.3	3.0	2.5	2.8	2.3	2.5
Tunica, Miss.	2.3	3.0	3.3	3.3	2.3	3.5	3.0
Dunleith, Miss.	1.5	2.0	1.0	1.0	1.0	1.3	1.3
Opelousas, La.	4.0	3.0	4.0	3.0	3.0	4.0	3.5
Baton Rouge, La.	4.0	3.0	4.0	4.0	3.0	3.0	3.5
Mean	2.5	2.4	2.8	2.3	2.1	2.4	2.4

Table 9: Summary of seed weight in grams per 100 seed for the strains of the Uniform Test, Group IV-S, 1946

Location	S100	C101	Patoka	S55-19	Gibson	Hong-kong	Mean
			West				
Coweta, Okla.	16.5	18.3	18.2	17.8	16.2	17.4	17.4
Stillwater, Okla. 5/1	15.6	14.5	14.6	12.6	11.8	12.9	13.7
Stillwater, Okla. 6/1	16.7	18.2	18.8	17.5	15.4	15.9	17.1
Nowata, Okla.	15.0	18.4	18.6	17.4	16.2	14.0	16.6
Lubbock, Texas	18.0	16.0	17.0	14.0	16.0	15.0	16.0
Stuttgart, Ark.	10.7	12.7	13.6	11.0	11.3	10.3	11.6
Muskogee, Okla.	12.8	14.0	12.2	11.2	11.2	10.8	12.0
Chillicothe, Texas	15.3	15.8	16.0	14.3	13.0	12.5	14.5
Fayetteville, Ark.	15.9	17.2	15.9	16.6	13.8	12.9	15.4
Vinita, Okla.	12.8	17.2	16.4	14.6	12.2	12.8	14.3
Mean	14.9	16.2	16.1	14.7	13.7	13.4	14.9
			Upper and Central South				
Jackson, Tenn.	13.8	16.6	17.2	15.3	14.1	13.0	15.0
Orange, Va.	14.0	17.0	18.0	16.7	14.2	13.0	15.5
Charlotte, Va.	14.5	17.5	16.0	12.5	12.0	13.0	14.3
Knoxville, Tenn.	12.7	13.6	15.2	13.9	12.7	10.4	13.1
Blacksburg, Va.	13.5	17.5	17.5	16.5	14.1	13.4	15.4
Crossville, Tenn.	13.9	17.5	18.3	15.0	14.3	12.4	15.2
Mean	13.7	16.6	17.0	15.0	13.6	12.5	14.7
			Delta				
Sikeston, Mo.	15.7	18.2	19.4	16.3	15.5	15.8	16.8
Stoneville, Miss. 4/19	12.1	13.1	14.7	11.7	12.1	9.7	12.2
Stoneville, Miss. 5/29	11.2	11.4	12.7	10.9	10.4	8.6	10.9
Stoneville, Miss. 6/17	9.1	9.9	9.7	9.4	8.9	9.7	9.5
Tunica, Miss.	9.7	10.8	11.7	9.8	9.2	7.3	9.8
Dunleith, Miss.	9.7	11.2	12.0	10.3	11.1	7.9	10.4
Mean	11.3	12.4	13.4	11.4	11.2	9.8	11.6

Table 10: Summary of two-year average yields for the strains of the Uniform Test, Group IV-S, 1945-46.

Location	S100	C101	Patoka	Gibson	Hong-kong	S55-19	Mean
			West				
Coweta, Okla.	28.9	31.8	23.6	24.7	29.1	26.2	27.4
Lubbock, Texas	12.7	15.0	14.0	15.6	17.0	17.1	15.2
Stillwater, Okla.	16.1	14.5	12.2	14.8	16.1	11.4	14.2
Mean	19.2	20.4	16.6	18.4	20.7	18.2	18.9
			Upper and Central South				
Orange, Va.	33.1	31.7	35.8	28.9	29.3	29.2	31.3
Jackson, Tenn.	34.6	30.5	30.1	27.2	-	-	30.6
Knoxville, Tenn.	21.6	21.3	23.0	22.3	-	-	22.1
Crossville, Tenn.	22.2	19.9	18.8	19.9	-	-	20.2
Blacksburg, Va.	19.9	20.1	20.3	18.2	17.8	17.2	18.9
Mean	26.3	24.7	25.6	23.3	-	-	-
			Delta				
Sikeston, Mo.	36.4	35.8	31.8	30.0	32.6	33.1	33.3
Stoneville, Miss.	29.8	29.3	30.1	24.3	23.4	27.9	27.5
Opelousas, La.	24.7	25.1	20.2	20.1	17.5	18.3	21.0
Tunica, Miss.	27.3	24.3	24.6	22.7	18.6	22.8	23.4
Baton Rouge, La.	18.4	12.4	13.5	10.4	12.5	12.9	13.4
Mean	27.3	25.4	24.0	21.5	20.9	23.0	23.7

Table 11: Summary of three-year average yields for the strains of the Uniform Test, Group IV-S, 1944-46.

Location	S100	C101	Patoka	Gibson	Mean
		West			
Coweta, Okla.	30.5	32.0	23.2	27.0	28.2
Lubbock, Texas	16.1	17.8	16.4	17.5	17.0
Stillwater, Okla.	15.4	12.6	11.7	12.6	13.1
Mean	20.7	20.8	17.1	19.0	19.4
		Upper and Central South			
Orange, Va.	35.1	32.5	33.6	31.2	33.1
Crossville, Tenn.	23.2	22.0	18.5	19.8	20.9
Blacksburg, Va.	21.0	20.1	20.4	19.2	20.2
Knoxville, Tenn.	20.7	19.5	19.5	19.5	19.8
Jackson, Tenn.	26.6	24.2	23.1	21.2	23.8
Mean	25.3	23.7	23.0	22.2	23.6
		Delta			
Stoneville, Miss.	33.2	33.6	27.2	27.0	30.3
Sikeston, Mo.	31.2	29.2	25.2	25.1	27.7
Tunica, Miss.	27.0	26.0	24.5	24.0	25.4
Opelousas, La.	23.8	25.3	20.9	20.3	22.6
Baton Rouge, La.	18.3	15.2	15.6	11.4	15.1
Mean	26.7	25.9	22.7	21.6	24.2

UNIFORM TEST, GROUP VI

The Uniform Test Group VI was composed of eight varieties and one strain. The origin of these varieties and strains is as follows:

Variety or Strain	Originating Agency	Origin
Arksoy 2913	Ark. Agr. Exp. Sta.	Selection from Arksoy
Burdette #13	Burdette Planting Co.	Selection from Arksoy
Burdette #19	Burdette Planting Co.	Selection from Arksoy
Burdette #20	Burdette Planting Co.	Selection from Arksoy
Dortchsoy #2	Robert L. Dortch Seed Co.	Selection from Ogden
Dortchsoy #7	Robert L. Dortch Seed Co.	Selection from Arksoy
Ogden	Tenn. Agr. Exp. Sta.	Sel. from a cross (Tokyo x P.I. 54610)
Rose Non-Pop	W. P. Rose, N. Car.	Origin unknown
2-40A	Paul B. Hutchens	Selection from Arksoy

Thirty-seven Uniform Group VI tests were grown at 33 locations in 1946. Complete tests were planted at two dates at Stillwater and Heavener, Oklahoma and three dates at Stoneville, Mississippi. The better varieties of this group are well adapted across the Upper South and are the principal ones being grown for oil in the area. The data from the Group VI tests are summarized in tables 13 to 20, inclusive.

The strain Dortchsoy #2, the first year in Uniform Tests, made an excellent record. These results indicate that this strain is an improvement over Ogden, although it is indistinguishable from Ogden in the field. Dortchsoy #2 ranked above Ogden in 26 tests, yielding significantly more than Ogden in six of these tests. Ogden yielded significantly more than Dortchsoy #2 in one test. The two varieties appear to be identical in chemical composition.

The Arksoy selections, Burdette #20 and #19, Dortchsoy #7, 2-40A and Burdette #13 have not been outstanding. Burdette #20, a tall-growing, late-maturing strain, yielded relatively better in the Lower South and Southeast. This strain is very similar to M42-26, a tall Arksoy selection entered in Group VII in 1946. Since the maturity of Burdette #20 was more nearly that of the Group VII varieties, it was shifted to Group VII in the 1947 tests. The 1946 data do not indicate any great differences in the yielding ability or adaptation of Burdette #19 and #13, 2-40A, Dortchsoy #7, and Rose Non-pop.

Table 12: Summary of the agronomic and chemical data for the strains of the Uniform Test, Group VI, 1946

Location	No. Tests in Mean	Dortch. #2	Ogden	Burd. #20	Burd. #19	2-40A	Rose N.P.	Dortch. #7	Burd. #13	Arksoy 2913	Mean
					Yields - 1946						
West	11	17.2	16.7	14.4	12.7	14.5	13.3	14.1	12.4	14.0	14.4
Cen. & Upper South	7	24.7	23.1	19.3	21.2	19.9	17.8	21.2	19.4	19.5	20.7
Delta	13	26.1	22.8	21.3	20.5	20.4	20.9	18.4	19.9	17.8	20.9
East Coast	3	42.9	42.3	29.1	28.8	24.4	29.8	27.3	27.1	29.0	31.2
Southeast	3	19.4	15.8	17.5	14.1	12.9	15.4	13.0	11.1	11.8	14.6
Mean	37	24.0	22.1	19.2	18.5	18.3	18.3	17.9	17.4	17.4	19.3
					Yield Rank - 1946						
West		1	2	4	8	3	7	5	9	6	
Cen. & Upper South		1	2	8	3	5	9	3	7	6	
Delta		1	2	3	4	6	5	8	7	9	
East Coast		1	2	4	6	9	3	7	8	5	
Southeast		1	3	2	5	7	4	6	9	8	
					Lodging						
West	8	1.4	1.3	2.1	1.9	1.6	1.9	1.8	2.2	1.6	1.8
Cen. & Upper South	5	1.7	1.5	2.5	2.2	2.2	2.3	2.0	2.1	2.6	2.1
Delta	11	1.6	1.7	2.8	2.0	1.9	1.7	1.8	2.1	2.1	2.0
East Coast	2	2.0	2.0	4.3	3.0	2.8	3.5	2.5	3.0	2.8	2.9
Mean	26	1.6	1.6	2.6	2.1	1.9	2.0	1.9	2.2	2.1	2.0
		Maturity (Days earlier (-) or later than Ogden)									
West	9	0.5	0	3.1	-2.9	-3.4	-1.1	-1.6	1.0	-4.1	
Cen. & Upper South	6	2.2	0	6.3	-0.2	-3.0	4.5	1.2	3.3	-0.8	
Delta	10	3.7	0	9.9	3.5	3.0	5.4	5.2	5.9	1.6	
East Coast	2	0	0	5.0	-2.0	-2.0	2.0	0	2.0	-2.0	
Mean	27	2.0	0	6.5	0.1	-0.8	2.8	1.7	3.4	-1.1	
					Height						
West	9	28.3	26.7	34.1	30.9	27.9	30.9	29.0	33.0	26.3	29.7
Cen. & Upper South	5	37.4	38.0	39.4	37.2	37.6	38.6	39.4	39.4	36.6	38.2
Delta	11	31.7	29.8	40.1	30.5	30.5	31.6	31.9	37.0	29.7	32.5
East Coast	2	37.5	37.0	42.0	35.5	34.0	35.0	35.5	37.5	34.0	36.4
Mean	27	32.1	30.8	38.1	32.2	31.2	32.9	32.6	36.1	30.2	32.9
					Seed Quality						
West	9	1.8	1.9	2.2	2.1	2.1	2.1	1.9	2.1	1.9	2.0
Cen. & Upper South	6	1.9	1.9	1.8	1.7	1.5	-	1.6	2.0	1.6	1.8
Delta	11	2.0	2.2	1.9	2.0	2.0	2.1	1.7	2.1	2.0	2.0
East Coast	2	1.8	1.8	2.0	1.5	2.0	3.0	2.0	1.5	2.0	1.8
Mean	28	1.9	2.0	2.0	1.9	1.9	-	1.8	2.0	1.9	2.0

Table 12: (Continued)

Location	No. Tests in Mean	Dortch. #2	Ogden	Burd. #20	Burd. #19	2-40A	Rose N.P.	Dortch. #7	Burd. #13	Arksoy 2913	Mean
					Weight of Beans						
West	11	15.9	16.4	13.1	13.8	14.9	14.5	13.7	13.5	14.0	14.4
Cen. & Upper South	7	14.1	14.6	13.1	13.4	13.4	12.8	13.0	13.4	13.2	13.4
Delta	13	13.1	14.2	12.2	11.9	13.6	12.2	12.5	12.2	12.3	12.7
East Coast	2	16.5	17.0	14.3	15.1	15.9	15.7	15.6	14.8	15.0	15.5
Mean		14.5	15.2	12.8	13.0	14.1	13.3	13.2	13.0	13.2	13.6
					% Protein						
West	11	41.4	41.9	44.4	46.2	43.2	42.0	42.6	45.3	44.1	43.5
Cen. & Upper South	7	39.2	39.1	42.9	43.6	41.0	39.9	41.5	43.8	42.2	41.5
Delta	13	39.8	40.9	41.3	43.6	41.8	40.1	42.0	43.6	43.0	41.8
East Coast	2	41.8	42.3	44.1	45.3	44.8	43.4	44.0	45.9	44.7	44.0
Mean		40.3	40.9	42.8	44.6	42.3	40.9	42.2	44.3	43.3	42.4
					% Oil						
West	11	21.0	20.7	19.7	19.1	20.6	19.8	20.1	18.9	19.8	20.0
Cen. & Upper South	7	21.9	21.8	20.2	19.8	21.3	20.5	20.4	19.9	20.6	20.7
Delta	13	20.6	21.0	20.6	19.5	21.1	20.4	20.1	19.7	20.2	20.4
East Coast	2	21.3	20.9	20.1	19.7	20.2	20.0	19.8	19.0	19.8	20.1
Mean		21.1	21.1	20.2	19.4	20.9	20.2	20.1	19.4	20.1	20.3
					Iodine Number of Oil						
West	11	132.9	132.8	132.7	130.2	129.9	130.1	131.8	131.5	130.8	131.4
Cen. & Upper South	7	138.0	137.4	137.9	134.7	134.2	135.5	135.1	135.4	135.0	135.9
Delta	13	136.8	137.0	136.3	134.1	133.6	132.7	134.4	134.6	134.3	134.9
East Coast	2	140.1	139.9	138.6	136.0	136.1	136.2	136.1	136.6	136.2	137.3
Mean		136.0	135.9	135.6	133.0	132.6	132.6	133.8	133.9	133.4	134.1

Table 13: Summary of yields in bushels per acre for the strains in the Uniform Test, Group VI, 1946

Location 1/	Dortchsoy #2	Ogden	Burdette #20	2-40A	Burdette #19	Dortchsoy #7
West						
Coweta, Okla.	35.2	33.9	23.0	33.3	27.9	31.6
Lubbock, Texas	35.3	30.0	33.0	22.3	19.5	23.0
Stillwater, Okla. 5/1	19.3	17.7	15.8	13.6	15.7	13.8
Stillwater, Okla. 6/1	26.2	31.7	21.3	24.2	22.1	27.3
Stuttgart, Ark.	13.1	10.8	18.1	14.4	14.1	12.2
Fayetteville, Ark.	13.6	11.5	8.7	11.4	7.4	9.4
Muskogee, Okla.	11.2	12.7	9.0	12.1	7.1	11.5
Heavener, Okla. 5/1	7.2	7.2	6.0	6.4	5.8	6.6
Heavener, Okla. 6/17	10.6	11.6	8.9	9.4	7.9	9.4
Chillicothe, Texas	10.0	11.3	8.1	6.7	7.0	5.9
Miller County, Ark.	7.6	5.6	6.4	5.7	5.7	4.7
Mean	17.2	16.7	14.4	14.5	12.7	14.1
Upper and Central South						
Crossville, Ala.	43.2	44.6	30.7	28.4	34.0	27.7
Jackson, Tenn.	35.8	33.6	22.1	30.5	31.5	30.6
Bowling Green, Va.	27.6	26.7	22.4	20.3	20.0	23.0
Knoxville, Tenn.	22.9	23.5	19.9	18.2	15.3	18.0
Belle Mina, Ala.	17.6	15.2	18.4	17.3	20.9	17.5
Crossville, Tenn.	12.6	10.0	9.9	12.4	14.8	15.4
Watkinsville, Ga.	13.0	7.9	11.5	11.9	11.8	16.4
Mean	24.7	23.1	19.3	19.9	21.2	21.2
Delta						
Clarkedale, Ark.	32.9	26.0	25.3	25.0	24.6	22.8
Marianna, Ark.	23.6	20.1	24.6	21.5	22.3	18.9
Sikeston, Mo.	40.3	39.8	24.6	36.0	33.7	33.2
Anchorage, Miss.	34.8	31.5	27.2	25.6	30.7	27.4
Stoneville, Miss. 4/19	30.7	31.7	32.6	28.5	28.8	22.9
Stoneville, Miss. 5/29	28.2	27.2	29.2	27.6	31.2	27.6
Stoneville, Miss. 6/17	13.5	16.3	18.9	16.8	14.7	17.2
Dunleith, Miss.	27.9	20.7	18.6	23.0	15.8	15.4
Winchester, Ark.	23.1	19.9	19.0	18.1	18.4	16.8
Tunica, Miss.	22.9	22.7	12.8	13.5	15.6	13.3
Hamburg, La.	23.9	18.6	10.9	10.1	13.3	8.6
Baton Rouge, La.	27.9	12.9	22.5	12.7	9.9	8.2
Melrose, La.	9.6	8.8	10.6	7.0	7.7	7.1
Mean	26.1	22.8	21.3	20.4	20.5	18.4
East Coast						
McCullers, N. C.	47.6	45.3	33.6	25.6	29.1	29.5
Plymouth, N. C.	52.0	51.6	26.9	28.3	31.6	29.2
Hartsville, S. C.	29.0	29.9	26.7	19.4	25.7	23.1
Mean	42.9	42.3	29.1	24.4	28.8	27.3
Southeast						
Tallassee, Ala.	22.5	13.4	22.1	14.9	15.5	14.5
Fairhope, Ala.	15.0	11.8	9.5	6.1	7.0	5.3
Monetta, S. C.	20.8	22.2	21.0	17.8	20.8	19.2
Mean	19.4	15.8	17.5	12.9	14.1	13.0

1/ Date of planting is given where two or more tests were planted at one location.

Table 13: (Continued)

Location	Rose Non-Pop	Burdette #13	Arksoy 2913	Mean	Bu. Nec. for Sig(5%)	Coef. of Var.(%)
			West			
Coweta, Okla.	27.9	25.4	27.9	29.6	6.5	15.1
Lubbock, Texas	27.0	28.0	21.8	26.7	6.3	16.3
Stillwater, Okla. 5/1	9.5	11.8	15.6	14.8	4.4	20.5
Stillwater, Okla. 6/1	18.4	13.3	23.7	23.1	4.1	12.2
Stuttgart, Ark.	12.6	13.4	11.8	13.4	4.8	13.6
Fayetteville, Ark.	11.0	9.0	11.4	10.4	2.3	15.4
Muskogee, Okla.	10.8	5.5	9.4	9.9	N.S.	34.0
Heavener, Okla. 5/1	6.3	5.8	6.1	6.4	N.S.	25.6
Heavener, Okla. 6/1	8.7	9.4	10.4	9.6	4.5	12.8
Chillicothe, Texas	8.5	7.6	7.6	8.1	N.S.	30.2
Miller County, Ark.	5.7	7.0	8.1	6.3	N.S.	35.3
Mean	13.3	12.4	14.0	14.4		
			Upper and Central South			
Crossville, Ala.	31.6	26.3	28.0	32.7	5.9	12.4
Jackson, Tenn.	24.0	26.6	30.3	29.4	4.8	11.2
Bowling Green, Va.	20.9	21.1	19.5	22.4	4.2	12.9
Knoxville, Tenn.	17.3	19.6	16.1	19.0	2.7	9.7
Belle Mina, Ala.	14.4	15.9	16.4	17.1	N.S.	17.6
Crossville, Tenn.	6.6	15.1	13.5	12.3	3.3	18.5
Watkinsville, Ga.	9.9	11.0	13.0	11.8	2.5	14.4
Mean	17.8	19.4	19.5	20.7		
			Delta			
Clarkedale, Ark.	22.4	18.5	21.3	24.3	3.7	10.6
Marianna, Ark.	19.6	21.4	23.1	21.7	N.S.	15.9
Sikeston, Mo.	36.0	25.7	33.3	33.6	7.3	14.8
Anchorage, Miss.	28.7	33.0	25.4	29.4	5.5	13.0
Stoneville, Miss. 4/19	25.6	23.7	23.5	27.6	5.9	14.6
Stoneville, Miss. 5/29	35.1	27.1	23.9	28.6	N.S.	19.1
Stoneville, Miss. 6/17	17.5	16.3	15.7	16.3	N.S.	15.8
Dunleith, Miss.	18.6	19.2	15.8	19.4	6.2	22.0
Winchester, Ark.	18.8	21.6	18.1	19.3	3.0	10.8
Tunica, Miss.	12.4	13.1	9.6	15.1	5.0	22.4
Hamburg, La.	14.9	9.9	8.9	13.3	4.8	24.7
Baton Rouge, La.	13.7	18.3	6.0	14.7	4.2	19.5
Melrose, La.	8.7	10.9	7.0	8.6	N.S.	48.7
Mean	20.9	19.9	17.8	20.9		
			East Coast			
McCullers, N. C.	36.8	36.3	29.6	34.8	4.4	9.0
Plymouth, N. C.	25.4	23.6	30.4	33.2	7.9	16.0
Hartsville, S. C.	27.3	21.4	27.0	25.5	4.7	12.8
Mean	29.8	27.1	29.0	31.2		
			Southeast			
Tallassee, Ala.	15.7	15.5	14.8	16.5	5.1	21.3
Fairhope, Ala.	13.4	2.4	5.2	8.4		
Monette, S. C.	17.2	15.4	15.3	18.8	2.0	7.3
Mean	15.4	11.1	11.8	14.6		

Table 14: Summary of lodging data for the strains in the Uniform Test, Group VI, 1946

Location	Dortchsoy #2	Ogden	Burdette #20	2-40A	Burdette #19
		West			
Coweta, Okla.	3.0	3.0	3.0	3.0	4.0
Lubbock, Texas	2.0	1.0	3.0	1.0	1.0
Stillwater, Okla. 5/1	1.0	1.0	2.0	2.0	2.0
Stillwater, Okla. 6/1	1.0	1.0	3.0	2.0	2.0
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0
Muskogee, Okla.	2.0	2.0	2.0	3.0	3.0
Heavener, Okla. 5/1	1.0	1.0	3.0	1.0	2.0
Heavener, Okla. 6/1	1.0	1.0	2.0	1.0	2.0
Chillicothe, Texas	1.0	1.0	1.0	1.0	1.0
Miller County, Ark.	1.0	1.0	1.0	1.0	1.0
Mean	1.4	1.3	2.1	1.6	1.9
		Upper and Central South			
Jackson, Tenn.	2.5	1.5	3.5	2.0	3.0
Bowling Green, Va.	2.0	3.0	4.0	4.0	3.0
Knoxville, Tenn.	2.0	1.0	3.0	3.0	3.0
Crossville, Tenn.	1.0	1.0	1.0	1.0	1.0
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0
Mean	1.7	1.5	2.5	2.2	2.2
		Delta			
Clarkedale, Ark.	1.5	1.3	2.0	2.0	1.8
Marianna, Ark.	1.0	1.0	-	1.0	1.0
Sikeston, Mo.	2.0	1.8	3.0	2.8	3.0
Anchorage, Miss.	1.8	2.3	2.3	2.9	2.3
Stoneville, Miss. 4/19	2.3	2.5	3.5	2.5	3.3
Stoneville, Miss. 5/29	1.8	2.5	3.2	2.3	2.0
Stoneville, Miss. 6/17	2.0	1.8	3.0	2.0	2.3
Dunleith, Miss.	2.3	2.5	4.0	2.0	3.3
Winchester, Ark.	1.0	1.0	1.0	1.0	1.0
Tunica, Miss.	2.0	3.0	4.0	3.0	3.0
Hamburg, La.	1.0	1.0	3.0	1.0	1.0
Baton Rouge, La.	1.0	1.0	2.0	1.0	1.0
Melrose, La.	1.0	1.0	3.0	1.0	1.0
Mean	1.6	1.7	2.8	1.9	2.0
		East Coast			
McCullers, N.C.	2.0	2.0	4.5	2.5	3.0
Plymouth, N.C.	2.0	2.0	4.0	3.0	3.0
Mean	2.0	2.0	4.3	2.8	3.0

Table 14: (Continued)

Location	Dortchsoy #7	Rose Non-Pop	Burdette #13	Arksoy 2913	Mean
		West			
Coweta, Okla.	3.0	3.0	4.0	3.0	3.2
Lubbock, Texas	1.0	2.0	2.0	1.0	1.6
Stillwater, Okla. 5/1	2.0	2.0	3.0	3.0	2.0
Stillwater, Okla. 6/1	2.0	2.0	2.0	2.0	1.9
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0
Muskogee, Okla.	2.0	3.0	3.0	2.0	2.4
Heavener, Okla. 5/1	2.0	2.0	2.0	1.0	1.7
Heavener, Okla. 6/1	3.0	2.0	3.0	1.0	1.8
Chillicothe, Texas	1.0	1.0	1.0	1.0	1.0
Miller County, Ark.	1.0	1.0	1.0	1.0	1.0
Mean	1.8	1.9	2.2	1.6	1.8
		Upper and Central South			
Jackson, Tenn.	2.0	1.5	2.5	3.0	2.4
Bowling Green, Va.	3.0	5.0	3.0	4.0	3.4
Knoxville, Tenn.	3.0	3.0	3.0	4.0	2.8
Crossville, Tenn.	1.0	1.0	1.0	1.0	1.0
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0
Mean	2.0	2.3	2.1	2.6	2.1
		Delta			
Clarkedale, Ark.	1.3	1.8	2.3	1.8	1.8
Marianna, Ark.	1.0	1.0	1.0	1.0	1.0
Sikeston, Mo.	3.0	2.0	3.0	3.0	2.6
Anchorage, Miss.	2.0	1.8	2.0	2.3	2.2
Stoneville, Miss.4/19	2.5	2.0	3.5	2.8	2.8
Stoneville, Miss.5/29	2.5	1.8	2.0	2.8	2.3
Stoneville, Miss.6/17	2.0	1.8	2.0	2.0	2.1
Dunleith, Miss.	2.5	3.0	3.0	3.3	2.9
Winchester, Ark.	1.0	1.0	1.0	1.0	1.0
Tunica, Miss.	3.0	2.0	2.0	3.7	2.9
Hamburg, La.	1.0	1.0	2.0	1.0	1.3
Baton Rouge, La.	1.0	2.0	2.0	1.0	1.3
Melrose, La.	1.0	1.0	1.0	1.0	1.2
Mean	1.8	1.7	2.1	2.1	2.0
		East Coast			
McCullers, N.C.	2.0	3.0	3.0	2.5	2.7
Plymouth, N.C.	3.0	4.0	3.0	3.0	3.0
Mean	2.5	3.5	3.0	2.8	2.9

Table 15: Summary of the maturity data, days earlier (-) or later than Ogden for the strains of the Uniform Test, Group VI, 1946

Location	Strains					
	Dortchsoy #2	Ogden	Burdette #20	2-40A	Burdette #19	Dortchsoy #7
		West				
Coweta, Okla.	2	0	2	-6	-11	-8
Lubbock, Texas	4	0	8	-6	6	5
Stillwater, Okla. 5/1	0	0	1	-2	-6	-5
Stillwater, Okla. 6/1	0	0	3	-13	-13	-10
Stuttgart, Ark.	0	0	10	0	-1	0
Fayetteville, Ark.	0	0	0	0	0	0
Muskogee, Okla.	0	0	0	-5	-2	0
Heavener, Okla. 5/1	0	0	-2	-2	-2	0
Heavener, Okla. 6/1	0	0	-3	-3	-2	0
Chillicothe, Texas	0	0	15	0	0	0
Miller County, Ark.	0	0	0	0	0	0
Mean	0.5	0	3.1	-3.4	-2.8	-1.6
		Upper and Central South				
Jackson, Tenn.	0	0	12	-4	0	0
Bowling Green, Va.	0	0	7	-7	-7	-7
Knoxville, Tenn.	13	0	13	0	13	13
Belle Mina, Ala.	0	0	6	0	0	0
Crossville, Tenn.	0	0	0	-7	-12	-4
Watkinsville, Ga.	0	0	0	0	5	5
Mean	2.2	0	6.3	-3.0	-0.2	1.2
		Delta				
Clarkedale, Ark.	5	0	5	5	5	15
Marianna, Ark.	0	0	15	0	0	0
Sikeston, Mo.	1	0	6	0	2	-1
Anchorage, Miss.	0	0	11	4	4	5
Stoneville, Miss. 4/19	-1	0	6	5	4	5
Stoneville, Miss. 5/29	1	0	9	3	2	2
Stoneville, Miss. 6/17	0	0	6	3	-1	1
Winchester, Ark.	0	0	0	0	0	0
Tunica, Miss.	6	0	11	7	5	7
Hamburg, La.	20	0	20	13	15	15
Baton Rouge, La.	-5	0	6	-5	-5	0
Melrose, La.	17	0	24	1	11	13
Mean	3.7	0	9.9	3.0	3.5	5.2
		East Coast				
McCullers, N.C.	0	0	6	-4	-4	0
Plymouth, N.C.	0	0	4	0	0	0
Mean	0	0	5.0	-2.0	-2.0	0

Table 15: (Continued)

Location	Strains: Rose Non-Pop	Strains: Burdette #13	Strains: Arksoy 2913	Date Planted	Ogden Matured	Days to Maturity
			West			
Coweta, Okla.	-6	2	-11	6-3	10-26	145
Lubbock, Texas	-4	7	-6	5-22	10-15	146
Stillwater, Okla. 5/1	0	6	-4	5-1	10-14	166
Stillwater, Okla. 6/1	-1	0	-11	6-1	10-25	146
Stuttgart, Ark.	0	0	-1	5-30	10-10	133
Fayetteville, Ark.	0	0	0	5-29	10-12	136
Muskogee, Okla.	4	0	-5	6-3	10-20	139
Heavener, Okla. 5/1	-2	-2	-4	5-1	10-9	161
Heavener, Okla. 6/1	-3	-2	-3	6-1	10-9	130
Chillicothe, Texas	0	0	0	6-18	10-25	129
Miller County, Ark.	0	0	0	6-13	10-23	132
Mean	-1.1	1.0	-4.1	5-28	10-17	142
			Upper and Central South			
Jackson, Tenn.	7	7	-4	4-22	10-12	173
Bowling Green, Va.	7	-7	-7	6-18	10-31	135
Knoxville, Tenn.	13	13	13	5-8	10-15	160
Belle Mina, Ala.	0	0	0	5-10	10-17	160
Crossville, Tenn.	0	0	-7	5-22	10-21	152
Watkinsville, Ga.	0	0	0	4-19	10-10	174
Mean	4.5	2.2	-0.8	5-12	10-18	159
			Delta			
Clarkedale, Ark.	5	5	5	5-10	10-10	153
Marianna, Ark.	15	0	0	4-27	10-11	167
Sikeston, Mo.	2	3	-1	6-5	10-23	141
Anchorage, Miss.	1	4	3	5-10	10-4	147
Stoneville, Miss. 4-19	6	5	4	4-19	10-10	174
Stoneville, Miss. 5-29	3	2	2	5-29	10-13	137
Stoneville, Miss. 6-17	2	0	0	6-17	10-15	120
Winchester, Ark.	0	0	0	5-7	10-2	148
Tunica, Miss.	9	11	4	6-11	10-13	124
Hamburg, La.	2	17	10	4-29	9-25	149
Baton Rouge, La.	6	15	-10	4-22	9-25	156
Melrose, La.	14	9	2	5-1	10-1	153
Mean	5.4	5.9	1.6	5-13	10-8	148
			East Coast			
McCullers, N.C.	2	2	-4	5-11	10-18	160
Plymouth, N.C.	2	2	0	5-7	10-18	164
Mean	2.0	2.0	-2.0	5-9	10-18	162

Table 16: Summary of the height data for the strains of the Uniform Test, Group VI, 1946

Location	Dortchsoy #2	Ogden	Burdette #20	2-40A	Burdette #19
		West			
Coweta, Okla.	34	34	38	36	41
Lubbock, Texas	24	18	28	17	21
Stillwater, Okla. 5/1	38	38	40	40	39
Stillwater, Okla. 6/1	26	24	32	24	24
Stuttgart, Ark.	22	22	32	23	27
Fayetteville, Ark.	25	23	32	24	27
Muskogee, Okla.	36	36	41	38	39
Heavener, Okla. 5/1	35	33	40	34	39
Heavener, Okla. 6/1	30	27	31	26	32
Chillicothe, Texas	17	15	25	19	22
Miller County, Ark.	24	24	36	26	29
Mean	28.3	26.7	34.1	27.9	30.9
		Upper and Central South			
Jackson, Tenn.	44	43	41	43	39
Bowling Green, Va.	40	43	44	41	41
Knoxville, Tenn.	42	44	43	41	41
Crossville, Tenn.	31	33	37	31	33
Watkinsville, Ga.	30	27	32	32	32
Mean	37.4	38.0	39.4	37.6	37.2
		Delta			
Clarkedale, Ark.	39	35	48	35	40
Marianna, Ark.	20	20	37	20	23
Sikeston, Mo.	43	40	46	41	37
Anchorage, Miss.	35	35	44	35	38
Stoneville, Miss. 4/19	36	36	40	36	31
Stoneville, Miss. 5/29	37	34	43	32	34
Stoneville, Miss. 6/17	24	25	36	25	28
Dunleith, Miss.	33	31	35	36	32
Winchester, Ark.	40	35	50	42	40
Tunica, Miss.	34	36	42	32	40
Hamburg, La.	30	20	36	27	18
Baton Rouge, La.	27	20	40	20	18
Melrose, La.	14	20	24	15	18
Mean	31.7	29.8	40.1	30.5	30.5
		East Coast			
McCullers, N.C.	35	34	40	32	33
Plymouth, N.C.	40	40	44	36	38
Mean	37.5	37.0	42.0	34.0	35.5

Table 16: (Continued)

Location	Dortchsoy #7	Rose Non-Pop	Burdette #13	Arksoy 2913	Mean
		West			
Coweta, Okla.	36	42	42	38	37.7
Lubbock, Texas	13	21	27	10	19.9
Stillwater, Okla. 5/1	40	40	42	34	39.0
Stillwater, Okla. 6/1	26	31	30	24	26.8
Stuttgart, Ark.	24	24	26	23	24.8
Fayetteveille, Ark.	25	26	27	23	25.8
Muskogee, Okla.	36	40	37	34	37.4
Heavener, Okla. 5/1	38	38	42	33	36.9
Heavener, Okla. 6/1	34	30	36	27	30.3
Chillicothe, Texas	21	20	23	19	20.1
Miller County, Ark.	26	28	31	26	27.8
Mean	29.0	30.9	33.0	26.3	29.7
		Upper and Central South			
Jackson, Tenn	43	46	44	40	42.6
Bowling Green, Va.	42	40	42	40	41.4
Knoxville, Tenn.	43	39	44	41	42.0
Crossville, Tenn.	35	35	35	32	33.6
Watkinsville, Ga.	34	33	32	30	31.3
Mean	39.4	38.6	39.4	36.6	38.2
		Delta			
Clarkedale, Ark.	32	39	47	37	39.1
Marianna, Ark.	22	24	30	21	24.1
Sikeston, Mo.	41	42	45	38	41.4
Anchorage, Miss.	39	36	45	36	38.1
Stoneville, Miss. 4/19	34	35	36	33	35.2
Stoneville, Miss. 5/29	33	34	38	34	35.4
Stoneville, Miss. 6/17	30	27	33	24	28.0
Dunleith, Miss.	33	33	40	30	33.7
Winchester, Ark.	45	41	46	43	42.4
Tunica, Miss.	36	32	42	32	36.2
Hamburg, La.	28	20	28	24	25.7
Baton Rouge, La.	22	30	36	16	25.4
Melrose, La.	20	18	15	18	18.0
Mean	31.9	31.6	37.0	29.7	32.5
		East Coast			
McCullers, N.C.	35	36	35	32	34.7
Plymouth, N.C.	36	34	40	36	38.2
Mean	35.5	35.0	37.5	34.0	36.5

Table 17: Summary of the seed quality data for the strains of the Uniform Test, Group VI, 1946

Location	Strains					
	Dortchsoy #2	Ogden	Burdette #20	2-40A	Burdette #19	Dortchsoy #7
			West			
Coweta, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Lubbock, Texas	2.0	2.0	1.0	3.0	2.0	2.0
Stillwater, Okla. 5/1	1.0	1.0	2.0	1.0	2.0	1.0
Stillwater, Okla. 6/1	1.0	1.0	2.0	1.0	1.0	1.0
Stuttgart, Ark.	2.0	2.0	2.0	2.0	2.0	1.8
Fayetteville, Ark.	3.0	2.8	3.5	2.5	2.5	2.5
Muskogee, Okla.	1.0	2.0	2.0	1.0	2.0	1.0
Heavener, Okla. 5/1	2.0	2.0	3.0	3.0	3.0	3.0
Heavener, Okla. 6/1	3.0	3.0	3.0	3.0	3.0	2.0
Chillicothe, Texas	2.0	2.0	2.0	3.0	2.0	3.0
Miller County, Ark.	2.0	1.8	2.3	2.3	2.3	2.5
Mean	1.8	1.9	2.2	2.1	2.1	1.9
			Upper and Central South			
Jackson, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
Bowling Green, Va.	2.5	3.0	4.0	1.0	1.0	2.0
Knoxville, Tenn.	3.0	2.0	2.0	2.0	2.5	2.0
Belle Mina, Ala.	2.0	1.5	2.0	1.0	1.5	2.5
Crossville, Tenn.	1.0	1.0	1.0	2.0	2.0	1.0
Watkinsville, Ga.	2.0	3.0	1.0	2.0	2.0	1.0
Mean	1.9	1.9	1.8	1.5	1.7	1.6
			Delta			
Clarkedale, Ark.	2.8	2.5	2.0	2.8	2.3	2.3
Marianna, Ark.	2.3	2.5	2.3	2.0	2.3	1.5
Sikeston, Mo.	1.0	1.0	1.0	1.0	1.0	1.0
Anchorage, Miss.	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, Miss. 4/19	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, Miss. 5/29	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, Miss. 6/17	1.0	1.0	2.0	1.0	1.0	1.0
Dunleith, Miss.	1.0	1.0	1.0	1.5	1.0	1.0
Winchester, Ark.	2.3	2.0	2.8	2.5	2.0	2.0
Tunica, Miss.	1.0	1.3	1.0	1.5	-	1.0
Hamburg, La.	5.0	5.0	3.0	4.0	5.0	3.0
Baton Rouge, La.	2.0	4.0	2.0	3.0	2.0	2.0
Melrose, La.	5.0	5.0	5.0	4.0	4.0	4.0
Mean	2.0	2.2	1.9	2.0	2.0	1.7
			East Coast			
McCullers, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, N.C.	2.5	2.5	3.0	3.0	2.0	3.0
Mean	1.8	1.8	2.0	2.0	1.5	2.0

Table 17: (Continued)

Location	Strains: Rose Non-Pop	Burdette #13	Arksoy 2913	Mean
		West		
Coweta, Okla.	1.0	1.0	1.0	1.0
Lubbock, Texas	3.0	2.0	2.0	2.1
Stillwater, Okla. 5/1	2.0	2.0	1.0	1.4
Stillwater, Okla. 6/1	2.0	2.0	1.0	1.3
Stuttgart, Ark.	1.8	2.0	2.0	2.0
Fayetteville, Ark.	2.8	2.5	2.3	2.7
Muskogee, Okla.	2.0	2.0	1.0	1.6
Heavener, Okla. 5/1	3.0	2.0	3.0	2.7
Heavener, Okla. 6/1	2.0	2.0	3.0	2.7
Chillicothe, Texas	2.0	3.0	2.0	2.3
Miller County, Ark.	2.0	2.3	2.3	2.2
Mean	2.1	2.1	1.9	2.0
		Upper and Central South		
Jackson, Tenn.	2.0	1.0	1.0	1.1
Bowling Green, Va.	4.0	3.0	1.0	2.4
Knoxville, Tenn.	2.0	2.0	3.0	2.3
Belle Mina, Ala.	-	2.0	1.5	1.8
Crossville, Tenn.	4.0	1.0	1.0	1.6
Watkinsville, Ga.	1.0	2.0	2.0	1.8
Mean	2.6	1.8	1.6	1.8
		Delta		
Clarkedale, Ark.	2.3	2.3	2.0	2.4
Marianna, Ark.	2.3	2.8	1.8	2.2
Sikeston, Mo.	1.0	1.0	1.0	1.0
Anchorage, Miss.	1.0	1.0	1.0	1.0
Stoneville, Miss. 4/19	1.3	1.0	1.0	1.0
Stoneville, Miss. 5/29	1.3	1.0	1.0	1.0
Stoneville, Miss. 6/17	1.0	1.0	1.0	1.1
Dunleith, Miss.	1.5	1.5	1.0	1.2
Winchester, Ark.	2.0	2.8	2.3	2.3
Tunica, Miss.	1.5	1.0	1.5	1.2
Hamburg, La.	5.0	4.0	4.0	4.2
Baton Rouge, La.	3.0	4.0	4.0	2.9
Melrose, La.	4.0	4.0	4.0	4.3
Mean	2.1	2.1	2.0	2.0
		East Coast		
McCullers, N.C.	2.0	1.0	1.0	1.1
Plymouth, N.C.	4.0	2.0	3.0	2.8
Mean	3.0	1.5	2.0	2.0

Table 18: Summary of seed weight, in grams per 100 seeds, for the strains of the Uniform Test, Group VI, 1946

Location	Dortchsoy #2	Ogden	Burdette #20	2-40A	Burdette #19
		West			
Coweta, Okla.	17.8	18.0	13.4	18.2	14.4
Lubbock, Texas	17.0	18.0	14.0	17.0	15.0
Stillwater, Okla. 5/1	17.9	17.7	14.1	16.4	14.3
Stillwater, Okla. 6/1	18.2	18.0	14.2	16.7	14.9
Stuttgart, Ark.	13.3	13.4	13.2	13.1	12.5
Fayetteville, Ark.	18.4	18.1	14.1	15.7	14.4
Muskogee, Okla.	15.6	16.0	12.2	13.6	13.6
Heavener, Okla. 5/1	15.4	16.4	12.4	13.5	13.2
Heavener, Okla. 6/1	16.2	16.6	14.1	14.6	14.0
Miller County, Ark.	9.5	10.7	10.1	10.3	9.6
Mean	15.9	16.3	13.2	14.9	13.6
		Upper and Central South			
Jackson, Tenn.	14.2	13.9	14.1	15.0	13.9
Bowling Green, Va.	15.0	16.0	13.5	12.5	13.0
Knoxville, Tenn.	17.3	17.7	13.7	16.0	15.4
Belle Mina, Ala.	12.5	12.8	11.6	12.3	12.1
Crossville, Tenn.	12.7	12.5	10.3	12.4	12.9
Mean	14.3	14.6	12.6	13.6	13.5
		Delta			
Clarkedale, Ark.	14.1	14.5	12.4	14.1	13.2
Marianna, Ark.	12.8	12.5	12.3	13.7	11.7
Sikeston, Mo.	14.8	15.8	14.4	14.6	15.5
Anchorage, Miss.	13.8	14.5	12.6	15.7	12.6
Stoneville, Miss. 4/19	13.8	14.3	12.4	13.9	11.8
Stoneville, Miss. 5/29	13.8	13.9	12.1	13.7	12.0
Stoneville, Miss. 6/17	12.4	13.2	11.3	12.5	11.3
Dunleith, Miss.	12.6	13.9	11.2	13.9	11.7
Winchester, Ark.	11.8	12.3	11.8	13.0	11.5
Tunica, Miss.	13.7	14.3	12.4	12.4	10.8
Mean	13.4	13.9	12.3	13.8	12.2
		East Coast			
McCullers, N.C.	17.2	17.9	15.9	17.4	15.8
Plymouth, N.C.	15.8	16.0	12.6	14.4	14.3
Mean	16.5	17.0	14.3	15.9	15.1

Table 13: (Continued)

Location	Dortchsoy #7	Rose Non-Pop	Burdette #13	Arksoy 2913	Mean
		West			
Coweta, Okla.	15.3	16.6	14.4	16.4	16.1
Lubbock, Texas	16.0	15.0	15.0	16.0	15.9
Stillwater, Okla. 5/1	14.9	15.6	14.5	16.3	15.7
Stillwater, Okla. 6/1	15.4	15.8	14.8	16.8	16.1
Stuttgart, Ark.	12.3	12.4	13.4	11.8	12.8
Fayetteville, Ark.	15.0	16.7	15.8	14.9	15.9
Muskogee, Okla.	12.8	14.4	12.8	12.6	13.7
Heavener, Okla. 5/1	12.4	13.9	13.8	13.1	13.8
Heavener, Okla. 6/1	13.5	14.4	14.1	12.6	14.5
Miller County, Ark.	9.3	9.9	9.7	9.2	9.8
Mean	13.7	14.5	13.8	14.0	14.4
		Upper and Central South			
Jackson, Tenn.	14.6	13.6	14.5	13.7	14.2
Bowling Green, Va.	12.5	13.7	12.5	12.0	13.4
Knoxville, Tenn.	15.7	15.2	15.6	14.5	15.7
Belle Mina, Ala.	11.5	12.1	12.1	11.5	12.1
Crossville, Tenn.	11.8	8.1	11.0	12.1	11.5
Mean	13.2	12.5	13.1	12.8	13.4
		Delta			
Clarkedale, Ark.	13.4	12.5	12.6	13.0	13.3
Marianna, Ark.	12.3	11.9	12.3	12.1	12.4
Sikeston, Mo.	14.4	14.1	14.4	15.6	14.8
Anchorage, Miss.	14.1	11.7	12.1	13.1	13.4
Stoneville, Miss. 4/19	12.5	12.6	11.7	12.5	12.8
Stoneville, Miss. 5/29	13.3	12.4	12.7	12.2	12.9
Stoneville, Miss. 6/17	12.1	12.1	10.9	11.5	11.9
Dunleith, Miss.	12.8	10.6	11.2	12.0	12.2
Winchester, Ark.	11.5	11.0	11.9	10.8	11.7
Tunica, Miss.	11.6	12.6	12.8	12.2	12.5
Mean	12.8	12.2	12.3	12.5	12.8
		East Coast			
McCullers, N.C.	17.1	16.8	16.6	16.1	16.8
Plymouth, N.C.	14.1	14.5	12.9	13.8	14.3
Mean	15.6	15.7	14.8	15.0	15.5

Table 19: Summary of the two-year average yields for the strains of the Uniform Test, Group VI, 1945-46

Location	Strains				
	Ogden	2-40A	Rose Non-Pop	Arksoy 2913	Mean
		West			
Coweta, Okla.	35.7	30.8	28.6	26.0	30.3
Miller County, Ark.	21.7	15.3	16.9	14.3	17.1
Lubbock, Texas	20.6	16.0	16.3	15.5	17.1
Stuttgart, Ark.	16.8	16.8	15.2	14.2	15.8
Stillwater, Okla.	18.4	15.1	13.5	13.9	15.2
Fayetteville, Ark.	18.8	7.9	14.8	12.7	13.6
Heavener, Okla.	13.9	11.1	10.8	12.8	12.2
Mean	20.8	16.1	16.6	15.6	17.3
		Upper and Central South			
Crossville, Tenn.	20.8	19.7	14.3	22.4	19.3
Knoxville, Tenn.	22.7	17.8	17.3	15.8	18.4
Watkinsville, Ga.	10.8	12.2	10.8	12.9	11.7
Jackson, Tenn.	31.9	-	24.9	28.8	-
Mean	21.6	-	16.8	20.0	16.5
		Delta			
Clarkedale, Ark.	36.4	25.5	28.5	25.4	28.9
Sikeston, Mo.	35.8	33.1	33.3	33.1	33.8
Marianna, Ark.	23.2	22.4	20.5	23.2	22.3
Anchorage, Miss.	34.4	20.8	27.8	21.0	26.0
Winchester, Ark.	26.6	23.5	23.0	22.8	24.0
Stoneville, Miss.	25.9	22.3	25.0	18.5	22.9
Tunica, Miss.	29.8	17.5	21.1	17.9	21.6
Baton Rouge, La.	15.8	13.9	14.6	9.9	13.6
Mean	28.5	22.4	24.2	21.5	24.1
		East Coast			
McCullers, N. C.	47.2	29.8	35.2	31.4	35.9
Plymouth, N. C.	45.9	23.2	27.1	25.4	30.4
Hartsville, S. C.	27.2	21.7	24.9	26.2	25.0
Mean	40.1	24.9	29.1	27.7	30.5
		Southeast			
Monetta, S. C.	23.5	21.0	20.3	19.4	21.1
Fairhope, Ala.	22.2	14.6	18.0	13.7	17.1
Tallassee, Ala. 1/	10.6	14.2	14.8	13.0	13.2
Mean	18.8	16.6	17.7	15.4	17.1

1/Auburn data, 1945; Tallassee data, 1946.

Table 20: Summary of the three-year and four-year average yields of the strains in the Uniform Test, Group VI

Location	3 year Av. Yield, 1944-46					4 yr. Av. Yield 1943-46	
	Ogden	2-40A	Rose Non-Pop	Arksoy 2913	Mean	Ogden	Arksoy
			West				
Coweta, Okla	38.2	31.6	-	28.5	32.7	-	-
Lubbock, Texas	24.0	19.5	-	18.0	20.2	-	-
Stillwater, Okla.	19.4	16.8	-	15.2	17.2	16.6	13.2
Miller County, Ark.	19.3	12.9	16.5	12.2	15.2	17.3	11.7
Stuttgart, Ark.	17.0	17.6	16.0	13.6	15.1	16.5	13.6
Fayetteville, Ark.	17.5	9.4	13.0	12.6	13.1	15.1	10.7
Heavener, Okla.	12.4	10.6	-	11.7	11.6	11.4	10.7
Mean	21.1	16.8	-	15.9	-	15.4	12.0
			Upper and Central South				
Crossville, Tenn.	23.0	20.3	-	22.4	21.9	-	-
Knoxville, Tenn.	24.2	20.9	-	18.7	21.3	28.1	19.5
Watkinsville, Ga.	13.2	13.0	11.0	13.5	13.2	16.7	15.7
Jackson, Tenn. 1/	26.6	-	-	24.6	-	25.5	22.0
Mean	20.1	18.1	-	18.2	-	23.4	19.1
			Delta				
Clarkedale, Ark.	39.3	28.7	29.1	25.4	30.6	34.0	22.7
Marianna, Ark.	30.4	28.0	24.4	28.1	27.7	25.0	22.6
Stoneville, Miss.	34.1	25.9	25.7	20.9	26.7	35.6	23.2
Anchorage, Miss.	32.9	20.9	25.9	21.2	25.2	-	-
Winchester, Ark.	23.0	20.6	19.6	21.2	21.1	20.9	18.4
Baton Rouge, La.	19.1	16.5	13.2	11.9	15.2	20.4	10.9
Tunica, Miss. 1/	28.3	19.9	-	21.3	-	-	-
Mean	29.8	23.4	23.0	21.4	24.4	27.2	19.6
			East Coast				
Plymouth, N. C.	40.8	24.2	26.8	24.6	29.1	37.0	23.9
McCullers, N. C.	37.1	24.9	28.6	25.0	28.9	36.1	24.8
Mean	38.9	24.5	27.7	24.8	29.0	36.5	24.3
			Southeast				
Monetta, S. C. 1/	20.0	-	17.7	18.1	-	16.5	16.6
Fairhope, Ala. 1/	20.9	-	16.0	13.1	-	-	-

1/Not included in the mean.

UNIFORM TEST GROUP VII

Uniform Variety Test Group VII consists of seven named varieties and three selections from hybrids. The origin of these varieties and strains is as follows:

Variety or Strain	Originating Agency	Origin
CNS	J. E. Wannamaker	Selection from Clemson
Ogden	Tenn. Agr. Exp. Sta.	Sel. from a cross (Tokyo x P.I. 54610)
Palmetto	U. S. D. A.	P.I. 71587 from Nanking, China, 1927
Tanner	Jacob Hartz	Sel. from Otootan by Tom Tanner, Decatur, Ala.
Roanoke	N.C. Agr. Exp. Sta. & USRSL	Sel. from a mixed seed lot
Volstate	Tenn. Agr. Exp. Sta.	Sel. from a cross (Tokyo x P.I. 54610)
Woods Yellow	T. W. Woods & Son	Sel. from Mammoth Yellow
N42-26	N.C. Agr. Exp. Sta., & USRSL	Sel. from Arksoy
N44-92	N.C. Agr. Exp. Sta., & USRSL	Sel. from a cross (Haberlandt x Ogden)
N44-774	N.C. Agr. Exp. Sta., & USRSL	Sel. from a cross (Ogden x Missoy)

Forty-five Group VII tests were planted at 37 locations in 1946. Complete tests were planted at two dates at Blackville and Florence, South Carolina; McCullers, North Carolina; Tifton, Georgia; and at three dates at Clemson, South Carolina; and Stoneville, Mississippi. Tests were incomplete at Anchorage, Tunica, Dunleith, Mississippi; Florence, South Carolina; Opelousas, Louisiana; and in Miller County, Arkansas. The agronomic and chemical data for the strains of Group VII are summarized in tables 21 to 29, inclusive.

Three new strains, N44-92, N44-774, and N42-26, were entered in the Group VII test in 1946. N44-92, a selection from the cross Haberlandt x Ogden, yielded exceptionally well through the East Coast area and at a number of locations in the Delta and Upper South areas. N44-774, from the cross Ogden x Missoy, appeared very promising at a number of locations in the Southeast and the Delta areas. The tall selection from Arksoy, N42-26, yielded well in the Southeast and at a number of locations through the mid-South.

Roanoke and Volstate continue to be the leading varieties of this maturity in all but the Southeastern area, according to the two and three-year average yields. The yield and oil content of Roanoke is slightly, but consistently higher than that of Volstate. CNS and Palmetto are the highest yielding varieties in the Southeast, however, the 1946 data indicate that the strain N44-774 is superior to these varieties in yield and percent oil in this area.

Table 21: Summary of the agronomic and chemical data for the strains of the Uniform Test, Group VII, 1946

Location	No. tests in mean	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow	Volstate	CNS	Palmetto	Tanner	Mean
					Yields - 1946							
West	4	11.2	12.0	13.4	11.4	12.3	12.5	12.9	12.0	10.7	11.8	12.0
Cen. & Upper South	9	24.4	26.1	23.1	26.3	22.9	24.9	25.8	16.6	16.7	17.1	22.4
Delta	10	21.0	21.0	21.6	21.1	20.8	17.8	19.4	15.6	11.5	12.1	18.1
Southeast	8	16.6	15.1	19.7	14.1	18.6	16.3	12.9	18.7	18.3	11.9	16.2
East Coast	8	42.1	40.9	33.7	34.0	32.4	35.6	33.8	24.2	26.4	21.1	32.4
Mean	39	24.2	24.1	23.2	22.5	22.3	22.2	21.8	17.9	17.1	15.0	21.0
					Yield Rank - 1946							
West		9	6	1	3	8	4	2	5	10	7	
Cen. & Upper South		5	2	6	1	7	4	3	10	9	8	
Delta		4	3	2	7	1	5	6	8	10	9	
Southeast		5	7	1	8	3	6	9	2	4	10	
East Coast		1	2	5	4	7	3	6	9	8	10	
					Lodging							
West	3	1.2	1.1	1.0	1.3	1.2	1.0	1.0	2.2	1.7	1.8	1.4
Cen. & Upper South	6	1.8	1.2	2.0	1.5	2.3	1.7	2.0	3.0	3.0	3.3	2.2
Delta	13	1.6	1.5	2.4	2.1	2.6	1.8	2.0	3.3	3.7	4.0	2.5
Southeast	2	1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	1.5	2.0	1.3
East Coast	9	1.6	1.4	2.3	2.1	2.3	1.4	2.2	3.6	3.0	3.7	2.4
Mean		1.4	1.2	1.7	1.6	2.0	1.5	1.6	2.7	2.6	3.0	2.0
					Maturity (Days earlier (-) or later than Volstate)							
West	3	-11.3	-11.7	-1.3	1.3	-6.0	7.0	0.0	-0.3	-1.3	-1.3	
Cen. & Upper South	5	-2.8	-9.0	1.0	1.0	-6.0	6.4	0.0	0.6	2.0	0.2	
Delta	11	-11.0	-18.5	3.7	0.6	-5.5	4.4	0.0	-0.1	1.0	-3.5	
Southeast	3	-3.0	-3.0	4.7	-0.3	0.0	8.7	0.0	2.0	0.7	-1.3	
East Coast	9	-3.0	-8.4	3.2	0.6	-0.7	5.7	0.0	4.4	3.2	3.0	
Mean		-6.2	-10.1	2.3	0.6	-3.6	6.4	0.0	1.3	1.1	-0.6	
					Height							
West	4	28.5	22.3	29.3	28.3	30.0	27.3	27.3	28.5	35.8	31.8	28.9
Cen. & Upper South	6	38.8	26.7	32.7	33.5	38.0	33.2	33.3	27.6	43.7	36.5	34.4
Delta	10	42.0	26.9	37.1	29.7	42.2	37.6	29.5	33.0	49.5	42.3	37.0
Southeast	3	25.3	16.0	22.3	15.3	28.7	20.7	15.0	22.3	37.7	27.0	23.0
East Coast	8	43.6	34.0	40.9	38.4	43.2	36.5	35.9	33.6	53.9	47.0	40.7
Mean		35.6	25.2	32.5	29.0	36.4	31.1	28.2	29.0	44.1	36.9	32.8

Table 21: (Continued)

Location	No. Tests in Mean	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow	Vol-state	CNS	Pal-metto	Tanner	Mean
					Seed Quality							
West	4	2.3	2.0	2.8	1.9	2.0	2.5	1.9	2.6	2.4	2.6	2.3
Cen. & Upper South	6	2.2	2.7	2.2	1.9	2.3	2.6	1.8	1.6	1.9	2.3	2.2
Delta	11	2.9	2.4	2.4	2.0	2.2	2.4	2.1	2.0	2.4	2.6	2.3
Southeast	3	2.3	2.7	2.7	3.0	2.3	2.3	3.0	2.7	2.7	2.3	2.6
East Coast	7	2.1	3.0	1.9	1.5	1.9	2.0	1.6	2.0	1.9	2.2	1.9
Mean		2.4	2.5	2.4	2.1	2.1	2.4	2.1	2.2	2.3	2.4	2.3
					Seed Weight							
West	4	14.2	14.6	13.0	14.2	12.6	22.2	13.7	13.7	11.5	10.6	14.0
Cen. & Upper South	7	15.2	15.0	13.0	16.1	13.0	21.7	15.3	12.4	10.3	10.2	14.2
Delta	10	13.9	13.4	12.6	14.2	12.1	21.3	14.3	13.0	10.4	9.7	13.5
Southeast	5	15.1	15.7	12.8	13.8	12.6	22.6	13.3	13.7	12.3	9.3	14.1
East Coast	8	16.4	15.5	13.9	15.4	13.9	23.8	15.2	13.0	11.3	10.8	14.9
Mean		15.0	14.7	13.1	14.8	12.8	22.3	14.5	13.1	11.0	10.1	14.1
					% Protein							
West	4	40.8	40.7	40.8	39.0	41.9	41.0	39.0	45.5	43.9	44.4	41.7
Cen. & Upper South	7	40.5	40.6	41.4	40.2	42.1	40.2	39.9	43.6	43.2	43.4	41.5
Delta	10	40.8	41.1	40.7	38.8	41.0	42.4	39.4	45.5	45.1	44.6	41.9
Southeast	5	41.0	41.9	42.1	38.9	43.0	41.7	39.4	46.0	45.3	46.0	42.5
East Coast	8	42.2	42.5	44.7	41.9	44.1	43.7	42.2	47.0	46.9	45.7	44.1
Mean		41.1	41.4	42.0	39.9	42.4	42.0	40.1	45.5	45.0	44.8	42.4
					% Oil							
West	4	20.9	21.2	20.4	21.7	20.5	19.9	22.0	18.4	18.3	18.2	20.2
Cen. & Upper South	7	21.1	21.1	19.7	22.0	20.5	19.7	21.6	18.1	18.0	18.3	20.0
Delta	10	20.9	20.9	19.9	22.0	20.6	18.9	21.6	18.2	17.5	17.7	19.8
Southeast	5	21.6	21.5	20.6	22.3	20.7	20.8	22.1	19.3	18.5	17.2	20.5
East Coast	8	20.2	20.4	18.8	21.0	19.7	19.0	20.8	17.5	17.3	17.0	19.2
Mean		20.9	20.9	19.8	21.8	20.4	19.5	21.5	18.2	17.8	17.6	19.8
					Iodine No. of Oil							
West	4	134.5	135.9	135.7	136.2	136.0	133.5	137.3	133.7	136.2	139.9	135.9
Cen. & Upper South	7	135.5	135.5	135.3	136.1	136.9	134.0	136.4	135.3	136.4	139.5	136.1
Delta	10	135.7	137.2	134.0	136.7	135.8	133.5	137.6	132.4	133.0	139.0	135.5
Southeast	5	135.9	136.6	134.8	136.8	136.3	132.3	138.0	132.2	132.6	140.4	135.8
East Coast	8	137.2	139.3	135.4	137.6	137.0	133.4	138.6	135.2	137.2	140.9	137.2
Mean		135.9	137.1	134.9	136.7	136.4	133.4	137.6	133.8	135.0	139.9	136.1

Table 22: Summary of yields in bushels per acre for the strains of the Uniform Test, Group VII, 1946

Location[1]	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow	Volstate	CNS	Palmetto	Tanner	Mean	Bu. Nec. Sig. (5%)	Coef. Var. (%)
						West							
Stuttgart, Ark.	11.8	11.5	15.7	15.5	16.5	15.0	17.6	15.5	14.3	15.6	14.9	3.2	15.0
Chillicothe, Texas	11.2	11.9	15.0	10.3	9.4	13.1	11.9	12.5	11.3	10.9	11.7	N.S.	18.9
Fayettoville, Ark.	10.5	12.5	9.6	8.5	11.1	9.3	9.1	8.1	6.4	8.8	9.4	2.6	18.7
Miller County, Ark.[2]	-	-	8.9	-	10.0	6.2	10.6	14.3	-	6.9	-	4.3	39.4
Mean	11.2	12.0	13.4	11.4	12.3	12.5	12.9	12.0	10.7	11.8	12.0		
						Upper and Central South							
Clemson, S. C. 6/11	38.8	38.5	32.6	38.7	31.7	40.2	34.0	25.4	28.4	26.2	33.5	3.4	6.9
West Point, Miss.	33.8	36.4	32.7	39.2	39.9	35.1	36.7	22.2	20.4	27.9	32.4	5.8	12.2
Crossville, Ala.	39.3	43.9	30.2	36.5	25.0	38.1	34.5	16.2	27.6	16.9	30.8	8.3	18.6
State College, Miss.	30.4	37.8	35.9	42.1	30.4	30.4	36.8	20.0	18.9	19.1	30.2	5.9	13.5
Experiment, Ga.	17.5	20.8	16.9	20.9	20.3	20.7	20.1	15.9	15.2	16.2	18.5	3.1	11.7
Clemson, S.C. 6/7[3]	20.6	17.7	17.6	19.5	17.0	19.9	19.2	14.3	12.8	14.8	17.3	5.2	20.7
Clemson, S.C. 7/5[3]	12.8	14.1	13.2	14.4	14.2	10.7	17.6	10.3	10.1	12.1	13.0	4.7	25.0
Belle Mina, Ala.	14.3	14.1	12.9	15.7	16.6	17.9	21.3	13.1	10.9	12.1	14.9	3.8	17.1
Watkinsville, Ga.	12.2	11.3	15.6	9.7	11.1	11.1	11.8	11.8	5.6	8.5	10.9	2.4	14.9
Mean	24.4	26.1	23.1	26.3	22.9	24.9	25.8	16.6	16.7	17.1	22.4		
						Delta							
Stoneville, Miss. 4/19	36.3	32.2	29.3	22.5	35.2	25.7	23.1	18.3	13.7	14.8	25.1	5.0	13.7
Stoneville, Miss. 5/29	29.4	28.6	22.5	31.3	24.3	24.3	26.7	14.7	17.3	15.2	23.4	6.7	19.6
Stoneville, Miss. 6/17	18.1	16.4	17.3	20.8	22.6	21.9	20.1	20.0	13.2	17.1	18.7	2.8	10.4
Clarkedale, Ark.	24.0	36.0	24.5	36.3	24.2	30.0	32.2	14.8	11.8	11.8	23.8	5.6	16.4
Raymond, Miss.	31.0	22.3	24.5	27.5	29.0	20.5	21.6	19.3	11.6	19.2	22.7	3.7	37.8
Winchester, Ark.	19.0	22.3	23.3	22.5	18.4	19.2	22.1	12.7	9.0	11.5	18.0	3.9	14.8
Baton Rouge, La.	20.5	15.3	31.7	7.2	20.4	7.7	6.6	24.1	20.4	8.7	16.3	6.7	28.1
Marianna, Ark.	12.2	16.1	16.0	22.7	13.1	16.6	17.2	11.3	6.5	7.6	13.9	5.8	28.7
Hamburg, La.	12.2	11.0	21.7	13.6	10.6	3.3	13.9	8.6	7.6	4.7	10.7	5.8	37.4
Melrose, La.	6.9	10.3	5.5	7.0	9.8	8.3	10.6	11.9	3.8	10.5	8.5	3.9	31.8
Anchorage, Miss.[2]	-	31.1	30.9	-	31.2	31.4	27.8	18.0	19.8	15.3	25.7	4.1	10.8
Tunica, Miss.[2]	-	22.2	16.2	21.4	18.7	-	24.6	10.3	11.8	12.0	17.2	6.5	27.3
Dunleith, Miss.[2]	-	21.9	16.0	18.0	22.0	14.8	18.5	9.6	6.8	10.3	15.3	7.5	33.5
Mean	21.0	21.0	21.6	21.1	20.8	17.8	19.4	15.6	11.5	12.1	18.1		

Table 22: (Continued)

Location	N-44-92	Ogdon	N-44-774	Roanoke	N-42-26	Woods Yellow	Volstato	CNS	Palmetto	Tannor	Mean	Bu.Nec. Sig. (5%)	Coef. of Var. (%)
						Southeast							
Blackville, S.C. 4/30	24.0	20.9	32.0	17.4	30.7	21.1	17.7	27.2	31.8	26.8	25.0	6.3	17.3
Blackville, S.C. 5/28	27.5	22.1	24.5	19.7	26.6	22.2	19.1	24.9	21.0	14.5	22.2	6.4	19.8
Tallassee, Ala.	17.5	15.8	19.9	19.3	20.4	19.0	14.8	18.1	11.0	12.8	16.9	5.7	23.2
Tifton, Ga. 4/30	17.5	17.6	16.4	7.2	17.5	14.5	7.8	16.4	22.3	5.1	14.2	5.7	27.5
Tifton, Ga. 6/10	6.5	5.4	6.1	4.5	9.6	7.7	4.4	9.4	7.6	5.1	6.6	2.9	29.9
Fairhope, Ala.	10.5	6.1	19.8	9.9	12.0	7.0	9.9	21.3	24.4	9.3	13.0	4.3	22.6
Richmond Hill, Ga.	12.2	13.6	16.5	11.6	13.3	15.4	9.5	13.9	13.9	6.9	12.7	4.0	21.2
Monetta, S.C.	17.2 4/	19.2	22.7	23.4	18.8	23.2	20.0	18.4	14.4	14.5	19.2	2.7	9.7
Mean	16.6	15.1	19.7	14.1	18.6	16.3	12.9	18.7	18.3	11.9	16.2		
						East Coast							
Holland, Va.	52.7	58.2	39.2	41.1	33.9	57.2	42.5	21.7	20.0	18.5	38.5	11.6	20.7
McCullers, N.C. 5/11	44.1 4/	42.1	39.4	43.7	36.8	36.4	37.9	25.6	32.5	26.4	36.5	5.7	11.0
McCullers, N.C. 6/15	35.7 4/	41.6	31.6	38.8	26.1	35.6	33.1	28.3	31.3	20.1	32.2	4.1	9.0
Petersburg, Va.	40.4	42.2	33.9	39.0	39.0	39.9	38.5	30.2	34.0	27.5	36.4	8.1	9.8
Plymouth, N. C.	48.6	46.2	31.0	32.9	33.7	27.9	33.7	18.1	32.7	13.4	31.8	7.5	17.0
Williamsburg, Va.	36.9	38.7	33.0	33.8	34.8	28.1	38.3	27.4	17.1	27.9	31.6	3.2	7.0
Willard, N. C.	43.7	26.1	30.8	22.4	30.3	38.2	23.4	18.5	30.5	17.9	28.2	7.4	17.0
Hartsville, S.C.	34.5	32.3	30.4	20.4	24.8	21.3	22.9	24.0	12.9	16.9	24.0	6.0	17.2
Florence, S.C. 5/20 2/	-	26.1	23.2	21.5	25.1	18.6	16.6	17.0	14.1	13.7	19.5	3.6	12.5
Florence, S.C. 6/20 2/	-	14.9	14.8	21.3	18.0	13.1	15.9	14.4	8.1	9.7	14.5	1.9	8.9
Mean	42.1	40.9	33.7	34.0	32.4	35.6	33.8	24.2	26.4	21.1	32.4		

1/ Date of planting is given where two or more tests were planted at one location.
2/ Not included in mean.
3/ Bottom land
4/ N44-95.

Table 23: Summary of the lodging data for the strains of the Uniform Test, Group VII, 1946

Location	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow	Volstate	CNS	Palmetto	Tanner	Mean
West											
Stuttgart, Ark.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	2.0	2.0	1.4
Chillicothe, Texas	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Miller County, Ark.	1.5	1.3	1.0	2.0	1.5	1.0	1.0	2.5	2.0	2.5	1.6
Mean	1.2	1.1	1.0	1.3	1.2	1.0	1.0	2.2	1.7	1.8	1.4
Upper and Central South											
Clemson, S. C. 6/7	1.0	1.0	2.0	1.0	2.0	2.0	1.0	3.0	2.0	3.0	1.8
Clemson, S. C. 6/11	2.0	2.0	3.0	2.0	4.0	3.0	4.0	3.0	5.0	5.0	3.3
Clemson, S.C. 7/5	2.0	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	3.0	1.9
State College, Miss.	3.0	1.0	3.0	2.0	4.0	1.0	2.0	4.0	5.0	4.0	2.9
Experiment, Ga.	2.0	1.0	1.0	2.0	1.0	1.0	2.0	4.0	2.0	3.0	1.9
Watkinsville, Ga.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	1.3
Mean	1.8	1.2	2.0	1.5	2.3	1.7	2.0	3.0	3.0	3.3	2.2
Delta											
Stoneville, Miss. 4/19	2.9	2.3	2.9	2.3	3.0	2.3	2.3	3.5	4.3	4.5	3.0
Stoneville, Miss. 5/29	2.3	2.0	3.0	3.3	3.5	2.9	3.0	4.0	4.0	4.3	3.2
Stoneville, Miss. 6/17	2.0	1.0	2.0	2.0	3.0	2.0	2.0	3.3	3.0	3.5	2.4
Clarkedale, Ark.	1.5	1.0	2.3	2.5	2.0	1.0	2.3	4.3	3.0	4.0	2.4
Raymond, Miss.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	4.0	1.5
Winchester, Ark.	1.0	1.0	-	1.0	2.0	1.0	1.0	4.0	4.0	4.0	2.1
Hamburg, La.	2.0	1.0	3.0	1.0	3.0	2.0	2.0	3.0	4.0	4.0	2.5
Baton Rouge, La.	1.0	1.0	2.0	1.0	2.0	2.0	1.0	3.0	4.0	4.0	2.1
Marianna, Ark.	1.5	1.0	1.0	2.3	2.0	1.5	1.3	2.3	3.5	3.5	2.0
Melrose, La.	1.0	1.0	1.0	1.0	2.0	1.0	1.0	3.0	3.0	3.0	1.7
Anchorage, Miss.	-	2.7	2.5	2.5	2.5	2.9	2.3	4.0	3.3	3.8	2.9
Tunica, Miss.	-	2.0	3.8	4.0	4.0	-	3.8	4.0	4.2	4.3	3.8
Dunleith, Miss.	-	2.8	3.8	3.0	4.0	2.3	3.0	3.3	4.3	4.7	3.5
Mean	1.6	1.5	2.4	2.1	2.6	1.8	2.0	3.3	3.7	4.0	2.5

Table 23: (Continued)

Location	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow	Volstate	C.N.S.	Palmetto	Tanner	Mean
					East Coast						
Holland, Va.	1.0	2.0	2.0	2.0	4.0	1.0	3.0	4.0	1.0	5.0	2.5
McCullers, N.C. 5/11	1.0	1.0	2.0	2.0	2.0	1.0	2.0	4.0	3.0	3.0	2.1
McCullers, N.C. 6/15	1.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	3.0	4.0	2.4
Petersburg, Va.	3.0	1.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	4.0	2.8
Plymouth, N.C.	2.0	2.0	4.0	4.0	3.0	3.0	4.0	5.0	5.0	5.0	3.7
Williamsburg, Va.	1.8	1.5	2.3	2.8	2.0	1.0	1.8	3.0	3.0	2.5	2.2
Willard, N.C.	2.0	1.0	1.0	1.0	2.0	1.0	2.0	3.0	3.0	4.0	2.0
Florence, S.C. 5/20	1.0	1.0	2.0	1.0	1.0	1.0	1.0	3.0	3.0	3.0	1.7
Florence, S.C. 6/20	2.0	1.0	2.0	1.0	2.0	1.0	1.0	3.0	3.0	3.0	1.9
Mean	1.6	1.4	2.3	2.1	2.3	1.4	2.2	3.6	3.0	3.7	2.4
					Southeast						
Richmond Hill, Ga.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.0	1.0	1.0	1.0	2.0	2.0	1.0	2.0	2.0	3.0	1.6
Mean	1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	1.5	2.0	1.3

Table 24: Summary of the maturity data, days earlier (-) or later than Volstate for the strains of the Uniform Test, Group VII, 1946

Location	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow
			West			
Stuttgart, Ark.	-16	-17	-4	0	-15	6
Chillicothe, Texas	-15	-15	0	0	0	11
Fayetteville, Ark.	-3	-3	0	4	-3	4
Mean	-11.3	-11.7	-1.3	1.3	-6.0	7.0
			Upper and Central South			
Clemson, S.C. 6/7	7	0	3	0	0	14
State College, Miss.	0	-12	6	0	-7	13
Experiment, Ga.	-10	-20	-4	5	-10	5
Belle Mina, Ala.	2	0	0	0	0	0
Watkinsville, Ga.	-13	-13	0	0	-13	0
Mean	-2.8	-9.0	1.0	1.0	-6.0	6.4
			Delta			
Stoneville, Miss. 4/19	-19	-24	-2	-1	-7	0
Stoneville, Miss. 5/29	-2	-27	1	4	-9	4
Stoneville, Miss. 6/17	-7	-7	1	1	1	8
Clarkedale, Ark.	-10	-15	0	-5	-5	-5
Raymond, Miss.	2	-2	24	0	2	0
Winchester, Ark.	-20	-20	0	0	-20	8
Baton Rouge, La.	-11	-22	4	0	-2	8
Marianna, Ark.	-21	-36	7	7	-20	9
Hamburg, La.	-17	-17	3	0	8	13
Melrose, La.	-5	-25	0	-2	-2	0
Dunleith, Miss.	-	-9	3	3	-6	3
Anchorage, Miss. 1/	-	-15	-3	4	-2	3
Mean	-11.0	-18.5	3.7	.6	-5.5	4.4
			Southeast			
Tifton, Ga. 4/30	-5	-5	9	0	-3	15
Tifton, Ga. 6/10	0	-1	5	-1	3	5
Richmond Hill, Ga.	-4	-3	0	0	0	6
Mean	-3.0	-3.0	4.7	-0.3	0.0	8.7
			East Coast			
Holland, Va.	-1	-9	12	-1	8	13
McCullers, N.C. 5/11	-4	-10	2	2	-2	4
McCullers, N.C. 6/15	-4	-6	2	1	-2	3
Petersburg, Va.	-5	-5	10	-3	7	9
Plymouth, N.C.	-5	-9	1	1	-2	5
Williamsburg, Va.	-1	-3	0	2	-3	1
Willard, N.C.	-7	-14	2	0	-7	8
Florence, S.C. 5/20	0	-15	0	2	-3	4
Florence, S.C. 6/20	0	-5	0	1	-2	4
Mean	-3.0	-8.4	3.2	0.6	-0.7	5.7

Table 24: (Continued)

Location	Volstate	C.N.S.	Palmetto	Tanner	Date Planted	V'state Matured	Days to Maturity
			West				
Stuttgart, Ark.	0	2	-4	-4	5-30	10-26	149
Chillicothe, Texas	0	0	0	0	6-18	11-9	144
Fayetteville, Ark.	0	-3	0	0	5-29	10-26	150
Mean	0.0	-0.3	-1.3	-1.3	6-5	11-1	149
			Upper and Central South				
Clemson, S.C. 6/7	0	7	7	3	6-7	10-1	116
State College, Miss.	0	0	13	6	5-8	10-22	167
Experiment, Ga.	0	-4	-10	-8	5-22	10-30	161
Belle Mina, Ala.	0	0	0	0	5-10	11-9	183
Watkinsville, Ga.	0	0	0	0	4-19	10-23	187
Mean	0	0.6	2.0	0.2	5-13	10-29	163
			Delta				
Stoneville, Miss. 4/19	0	1	1	-9	4-19	11-1	196
Stoneville, Miss. 5/29	0	-6	-5	-16	5-29	11-10	165
Stoneville, Miss. 6/17	0	2	2	1	6-17	10-23	128
Clarkedale, Ark.	0	-5	0	-10	5-10	10-25	168
Raymond, Miss.	0	0	0	0	5-10	11-6	180
Winchester, Ark.	0	0	0	0	5-7	10-22	168
Baton Rouge, La.	0	8	3	-7	4-22	10-12	173
Marianna, Ark.	0	-6	-6	-6	4-27	11-16	203
Hamburg, La.	0	3	13	8	4-29	10-12	167
Melrose, La.	0	0	-2	0	5-1	10-20	172
Dunleith, Miss.	0	2	5	0	4-27	11-1	188
Anchorage, Miss. 1/	0	0	-3	-6	5-10	10-19	162
Mean	0.0	-0.1	1.0	-3.5	5-7	10-29	175
			Southeast				
Tifton, Ga. 4/30	0	4	7	2	4-30	10-6	159
Tifton, Ga. 6/10	0	3	-2	-3	6-10	10-21	133
Richmond Hill, Ga.	0	-1	-3	-3	6-25	10-23	120
Mean	0.0	2.0	0.7	-1.3	6-1	10-17	138
			East Coast				
Holland, Va.	0	15	18	15	6-3	10-14	134
McCullers, N.C. 5/11	0	4	0	0	5-11	10-28	170
McCullers, N.C. 6/15	0	2	0	0	6-15	10-30	137
Petersburg, Va.	0	9	10	9	5-14	10-28	167
Plymouth, N.C.	0	3	1	1	5-7	10-27	173
Williamsburg, Va.	0	2	-2	2	6-7	11-10	157
Willard, N.C.	0	5	2	0	4-25	10-22	180
Florence, S.C. 5/20	0	0	0	0	5-20	10-20	153
Florence, S.C. 6/20	0	0	0	0	6-20	10-20	122
Mean	0.0	4.4	3.2	3.0	5-24	10-26	155

1/Not included in the mean.

Table 25: Summary of height data for the strains of the Uniform Test, Group VII, 1946

Location	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow
			West			
Stuttgart, Ark.	30	24	30	31	34	27
Chillicothe, Texas	20	16	22	20	21	22
Fayetteville, Ark.	30	25	34	31	31	29
Miller County, Ark.	34	24	31	31	34	31
Mean	28.5	22.3	29.3	28.3	30.0	27.3
			Upper and Central South			
Clemson, S.C. 6/7	42	23	30	26	32	34
Clemson, S.C. 6/11	40	21	30	32	40	32
Clemson, S.C. 7/5	30	18	24	30	38	24
Experiment, Ga.	42	34	37	40	39	38
State College, Miss.	42	36	44	40	43	40
Watkinsville, Ga.	37	28	31	33	36	31
Mean	38.8	26.7	32.7	33.5	38.0	33.2
			Delta			
Stoneville, Miss. 4/19	41	34	37	32	44	41
Stoneville, Miss. 5/29	45	34	42	37	47	37
Stoneville, Miss. 6/17	35	24	33	29	38	35
Clarkedale, Ark.	48	33	46	49	48	44
Raymond, Miss.	45	33	44	37	43	46
Winchester, Ark.	60	38	47	40	55	42
Baton Rouge, La.	40	14	36	12	32	27
Marianna, Ark.	40	21	30	33	39	34
Hamburg, La.	36	20	36	13	36	34
Melrose, La.	30	18	20	15	40	36
Anchorage, Miss.[1]	-	34	44	39	49	44
Tunica, Miss.[1]	-	34	44	46	50	-
Dunleith, Miss.[1]	-	33	37	33	30	39
Mean	42.0	26.9	37.1	29.7	42.2	37.6
			East Coast			
Holland, Va.	44	45	44	45	49	36
McCullers, N.C. 5/11	46	36	40	42	42	38
McCullers, N.C. 6/15	38	30	38	38	40	38
Plymouth, N.C.	48	40	44	44	46	42
Williamsburg, Va.	43	38	37	36	40	30
Willard, N.C.	48	30	36	32	38	36
Florence, S.C. 5/20	42	25	46	35	46	36
Florence, S.C. 6/20	40	28	42	35	44	36
Mean	43.6	34.0	40.9	38.4	43.2	36.5
			Southeast			
Tifton, Ga. 4/30	29	16	26	11	33	25
Tifton, Ga. 6/10	18	12	15	15	23	16
Richmond Hill, Ga.	29	20	26	20	30	21
Mean	25.3	16.0	22.3	15.3	28.7	20.7

Table 25: Continued

Location	Volstate	C.N.S.	Palmetto	Tanner	Mean
		West			
Stuttgart, Ark.	28	30	40	36	31.0
Chillicothe, Texas	20	23	27	23	21.4
Fayetteville, Ark.	31	27	36	33	30.7
Miller County, Ark.	30	34	40	35	32.4
Mean	27.3	28.5	35.8	31.8	28.9
		Upper and Central South			
Clemson, S.C. 6/7	30	28	48	40	33.3
Clemson, S.C. 6/11	36	30	48	36	34.5
Clemson, S.C. 7/5	28	18	36	32	27.8
Experiment, Ga.	39	34	44	37	38.4
State College, Miss.	39	28	47	44	40.3
Watkinsville, Ga.	28	28	39	30	32.1
Mean	33.3	27.6	43.7	36.5	34.4
		Delta			
Stoneville, Miss. 4/19	32	32	54	45	39.2
Stoneville, Miss. 5/29	37	34	51	40	40.3
Stoneville, Miss. 6/17	29	27	37	34	32.1
Clarkedale, Ark.	44	45	51	46	45.4
Raymond, Miss.	33	40	53	45	41.9
Winchester, Ark.	38	38	60	46	46.4
Baton Rouge, La.	14	28	52	45	28.9
Marianna, Ark.	32	26	45	42	34.2
Hamburg, La.	20	30	54	40	31.9
Melrose, La.	16	30	38	40	28.3
Anchorage, Miss. [1]	40	45	57	53	-
Tunica, Miss. [1]	41	39	54	41	-
Dunleith, Miss. [1]	35	29	48	42	-
Mean	29.5	33.0	49.5	42.3	37.0
		East Coast			
Holland, Va.	41	35	54	48	44.1
McCullers, N.C. 5/11	40	32	56	48	42.0
McCullers, N.C. 6/15	34	36	56	44	39.2
Plymouth, N.C.	42	30	60	48	44.4
Williamsburg, Va.	34	35	37	38	36.8
Willard, N.C.	32	30	60	50	39.2
Florence, S.C. 5/20	32	35	60	58	41.5
Florence, S.C. 6/20	32	36	48	42	38.3
Mean	35.9	33.6	53.9	47.0	40.7
		Southeast			
Tifton Ga, 4/30	12	27	50	38	26.7
Tifton, Ga. 6/10	13	15	28	21	17.6
Richmond Hill, Ga.	20	25	35	22	24.8
Mean	15.0	22.3	37.7	27.0	23.0

[1] Not included in the mean.

Table 26: Summary of seed quality data for the strains of the Uniform Test, Group VII, 1946

Location	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow
			West			
Stuttgart, Ark.	2.3	2.0	2.5	2.0	2.0	1.8
Chillicothe, Texas	2.0	1.0	1.0	1.0	1.0	1.0
Fayetteville, Ark.	2.5	2.8	3.5	2.5	2.8	3.3
Miller County, Ark.	2.3	2.0	4.0	2.0	2.0	4.0
Mean	2.3	2.0	2.8	1.9	2.0	2.5
			Upper and Central South			
Clemson, S.C. 6/7	2.0	3.0	3.0	2.0	3.0	2.0
Clemson, S.C. 6/11	3.0	3.0	3.0	2.0	3.0	2.0
Clemson, S.C. 7/5	3.0	3.0	2.0	2.0	2.0	2.0
Experiment, Ga.	1.0	2.0	2.0	2.0	2.0	3.0
Belle Mina, Ala.	2.0	2.3	2.0	1.3	1.5	1.7
Watkinsville, Ga.	2.0	3.0	1.0	2.0	2.0	5.0
Mean	2.2	2.7	2.2	1.9	2.3	2.6
			Delta			
Stoneville, Miss. 4/19	1.5	1.5	2.0	1.0	1.0	1.0
Stoneville, Miss. 5/29	1.5	1.5	2.0	1.0	1.0	1.0
Stoneville, Miss. 6/17	1.8	1.0	1.8	1.0	1.3	1.0
Clarkedale, Ark.	3.0	2.5	2.3	2.3	2.3	2.3
Raymond, Miss.	2.0	2.0	3.0	1.0	2.8	3.0
Winchester, Ark.	2.5	1.8	2.5	2.0	3.8	3.0
Baton Rouge, La.	5.0	4.0	1.0	3.0	2.0	2.0
Marianna, Ark.	2.5	2.5	2.8	2.3	2.5	2.8
Hamburg, La.	5.0	5.0	3.0	3.0	3.0	5.0
Melrose, La.	4.0	3.0	4.0	4.0	3.0	4.0
Anchorage, Miss.[1]	-	-	1.0	1.0	1.0	1.0
Tunica, Miss.[1]	-	1.0	2.0	2.0	2.0	-
Dunleith, Miss.	-	1.5	1.5	1.0	1.0	1.3
Mean	2.9	2.4	2.4	2.0	2.2	2.4
			East Coast			
Holland, Va.	3.0	2.0	2.0	1.0	2.0	1.0
McCullers, N.C. 5/11	1.0	2.0	1.0	1.0	1.0	1.0
McCullers, N.C. 6/15	2.0	2.0	2.0	2.0	2.0	2.0
Petersburg, Va.	2.0	2.0	2.0	1.0	2.0	3.0
Plymouth, N.C.	2.0	2.5	2.0	2.0	2.0	2.0
Williamsburg, Va.	2.0	1.0	2.0	1.0	2.0	2.0
Willard, N.C.	2.5	4.0	2.0	2.5	2.5	3.0
Mean	2.1	2.2	1.9	1.5	1.9	2.0
			Southeast			
Richmond Hill, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	2.0	3.0	3.0	5.0	3.0	2.0
Fairhope, Ala.	4.0	5.0	4.0	3.0	3.0	4.0
Mean	2.3	3.0	2.7	3.0	2.3	2.3

Table 26: (Continued)

Location	Volstate	C.N.S.	Palmetto	Tanner	Mean
		West			
Stuttgart, Ark.	1.5	2.5	2.3	2.5	2.1
Chillicothe, Texas	1.0	1.0	1.0	2.0	1.2
Fayetteville, Ark.	3.0	4.0	3.8	3.5	3.2
Miller County, Ark.	2.0	3.0	2.3	2.5	2.6
Mean	1.9	2.6	2.4	2.6	2.3
		Upper and Central South			
Clemson, S.C. 6/7	2.0	2.0	2.0	3.0	2.4
Clemson, S.C. 6/11	2.0	2.0	2.0	3.0	2.5
Clemson, S.C. 7/5	2.0	2.0	2.0	3.0	2.3
Experiment, Ga.	2.0	1.0	2.0	2.0	1.9
Belle Mina, Ala.	1.0	1.8	2.5	1.5	1.8
Watkinsville, Ga.	2.0	1.0	1.0	1.0	2.0
Mean	1.8	1.6	1.9	2.3	2.2
		Delta			
Stoneville, Miss. 4/19	1.0	1.0	2.0	2.0	1.4
Stoneville, Miss. 5/29	1.0	1.0	1.0	2.0	1.3
Stoneville, Miss. 6/17	1.0	1.3	1.9	1.0	1.3
Clarkedale, Ark.	2.3	2.3	2.5	3.0	2.5
Raymond, Miss.	1.0	4.0	2.0	2.0	2.3
Winchester, Ark.	2.3	2.3	2.0	2.8	2.5
Baton Rouge, La.	5.0	2.0	3.0	3.0	3.0
Marianna, Ark.	2.5	1.8	2.5	2.8	2.5
Hamburg, La.	3.0	3.0	4.0	4.0	3.8
Melrose, La.	3.0	2.0	4.0	4.0	3.5
Anchorage, Miss. 1/	1.0	1.0	1.0	2.0	1.1
Tunica, Miss. 1/	1.5	2.0	2.5	2.3	1.9
Dunleith, Miss.	1.0	1.8	2.0	2.3	1.5
Mean	2.1	2.0	2.4	2.6	2.3
		East Coast			
Holland, Va.	1.0	2.0	3.0	3.0	2.0
McCullers, N.C. 5/11	1.0	1.0	1.0	2.0	1.2
McCullers, N.C. 6/15	2.0	2.0	2.0	2.0	2.0
Petersburg, Va.	1.0	3.0	2.0	1.0	1.9
Plymouth, N.C.	2.0	2.0	2.5	2.5	2.2
Williamsburg, Va.	1.0	2.0	1.0	2.0	1.6
Willard, N.C.	3.0	2.0	2.0	3.0	2.7
Mean	1.6	2.0	1.9	2.2	1.9
		Southeast			
Richmond Hill, Ga.	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	4.0	5.0	2.0	3.0	3.2
Fairhope, Ala.	4.0	2.0	5.0	3.0	3.7
Mean	3.0	2.7	2.7	2.3	2.6

1/Not included in Mean.

Table 27: Summary of the seed weight, in grams per 100 seeds, for the strains of the Uniform Test, Group VII, 1946

Location	Strain										
	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow	Vol-state	C.N.S.	Pal-metto	Tanner	Mean
West											
Stuttgart, Ark.	12.6	13.4	14.0	15.7	13.6	23.1	14.6	15.7	12.1	10.7	14.6
Chillicothe, Texas	16.1	16.5	13.4	13.8	12.7	25.4	14.3	12.4	11.5	11.7	14.8
Fayetteville, Ark.	17.2	18.9	14.0	17.5	14.9	23.6	16.0	13.7	11.8	11.1	15.9
Miller County, Ark.	10.7	9.7	10.4	9.9	9.3	16.5	10.0	13.1	10.5	8.7	10.9
Mean	14.2	14.6	13.0	14.2	12.6	22.2	13.7	13.7	11.5	10.6	14.0
Upper and Central South											
Clemson, S.C. 6/7	16.6	16.4	13.1	15.2	13.1	21.7	15.3	13.3	11.3	10.0	14.6
Clemson, S.C. 6/11	16.2	16.5	14.7	17.2	14.1	24.3	14.9	12.8	12.3	9.9	15.3
Clemson, S.C. 7/5	12.6	14.9	11.7	15.6	10.8	19.9	12.8	10.4	9.1	9.4	12.7
Experiment, Ga.	18.0	13.6	14.1	17.1	16.5	25.4	16.4	14.0	11.3	12.1	15.9
Belle Mina, Ala.	14.6	13.7	12.4	14.8	11.6	20.6	13.5	12.6	10.1	9.1	13.3
Mean	15.6	15.0	13.2	16.0	13.2	22.4	14.6	12.6	10.8	10.1	14.4
Delta											
Stoneville, Miss. 4/19	15.0	15.1	14.5	15.7	12.5	25.0	15.8	14.3	12.0	10.5	15.0
Stoneville, Miss. 5/29	14.2	14.2	14.1	17.0	11.6	24.5	15.9	12.8	10.9	10.1	14.5
Stoneville, Miss. 6/17	13.2	13.0	10.7	12.9	11.2	19.2	12.3	11.4	9.7	8.8	12.2
Clarkedale, Ark.	16.3	13.5	14.0	15.3	12.4	22.2	14.4	13.4	12.1	11.1	14.5
Raymond, Miss.	13.4	14.3	11.2	14.3	11.4	25.2	14.2	13.4	10.3	9.5	13.7
Winchester, Ark.	11.8	12.3	12.8	13.4	11.8	21.2	12.8	12.4	10.8	10.1	12.9
Marianna, Ark.	12.7	12.6	12.7	15.0	11.4	20.9	14.5	12.2	12.1	9.8	13.4
Anchorage, Miss.[1]	-	14.8	13.5	-	12.9	23.7	16.4	13.3	11.1	9.1	-
Tunica, Miss.[1]	-	14.0	12.3	14.9	12.4	-	14.0	12.5	10.4	9.8	-
Dunleith, Miss.[1]	-	14.0	13.8	17.0	11.5	23.7	15.0	13.3	11.7	10.6	-
Mean	13.8	13.6	12.9	14.8	11.8	22.6	14.3	12.8	11.1	10.0	13.8

Table 27: (Continued)

Location	Strain										
	N-44-92	Ogden	N-44-774	Roanoke	N-42-26	Woods Yellow	Vol-state	C.N.S.	Pal-metto	Tanner	Mean
					Southeast						
Blackville, S.C.	17.6	16.9	17.9	13.8	15.5	26.9	13.1	14.4	13.7	11.1	15.6
Tifton, Ga. 4/30	11.8	13.8	11.7	10.8	10.0	21.0	11.6	13.2	12.2	7.0	12.3
Tifton, Ga. 6/10	15.4	15.3	11.8	12.7	11.8	20.7	12.4	12.0	10.6	8.8	13.2
Richmond Hill, Ga.	18.0	18.0	15.0	18.0	16.0	26.0	16.0	16.0	14.0	12.0	16.9
Mean	15.1	15.7	12.8	13.8	12.6	22.6	13.3	13.7	12.3	9.3	14.1
					East Coast						
Holland, Va.	17.6	16.9	16.2	18.5	14.1	24.8	17.9	13.5	13.2	11.1	16.4
McCullers, N.C. 5/11	18.5	17.2	15.7	18.1	15.9	27.8	18.6	14.6	13.4	12.5	17.2
McCullers, N.C. 6/15	19.7	17.7	15.7	16.8	15.3	28.1	16.7	14.5	12.0	12.7	16.9
Petersburg, Va.	17.5	19.5	15.0	18.0	14.5	24.5	17.0	13.8	10.5	12.0	16.2
Williamsburg, Va.	18.0	17.0	15.7	17.6	14.7	24.5	17.1	12.9	10.9	10.9	15.9
Willard, N.C.	17.7	15.0	13.4	14.0	13.9	25.4	14.0	13.8	11.3	11.6	15.0
Florence, S.C. 5/20 1/	-	12.0	10.8	11.2	12.1	19.0	10.8	11.3	9.4	8.9	-
Florence, S.C. 6/20 1/	-	12.4	10.1	11.9	12.2	18.0	11.5	10.8	9.0	9.0	-
Mean	18.2	17.2	15.3	17.2	14.7	25.9	16.9	13.9	11.9	11.8	16.3

1/Not included in the mean.

Table 28: Summary of two-year average yields of the strains of the Uniform Test, Group VII, 1946

Location	Roanoke	Ogden	Volstate	CNS	Palmetto	Woods Yellow [1]	Tanner [1]	Mean
				West				
Miller County, Ark.	23.5	16.0	22.4	13.8	10.1	16.5	-	17.2
Stuttgart, Ark.	18.2	15.5	18.7	17.5	15.4	-	19.4	17.1
Fayetteville, Ark.	15.2	19.6	18.7	12.1	9.5	14.6	-	15.0
Chillicothe, Texas	7.6	8.8	8.8	8.0	6.3	8.0	-	7.9
Mean	16.1	15.0	17.2	12.9	10.3	-	-	14.3
				Upper and Central South				
State College, Miss.	38.0	32.4	33.1	20.5	15.3	25.1	-	27.4
Clemson, S. C.	27.7	25.2	26.7	21.5	17.1	25.0	-	23.9
Experiment, Ga.	20.7	18.4	18.8	16.6	15.0	19.6	14.3	18.2
Watkinsville, Ga.	14.0	12.3	14.7	13.0	10.2	13.1	-	12.9
West Point, Miss.	25.2	24.7	25.4	15.4	11.6	21.5	18.3	20.5
Mean	25.1	22.6	23.7	17.4	13.8	20.9	-	20.6
				East Coast				
McCullers, N. C.	37.9	39.9	33.9	21.9	30.3	31.2	17.8	32.8
Willard, N. C.	27.3	31.1	26.9	19.7	31.6	32.0	-	27.3
Plymouth, N. C.	30.2	37.8	29.2	15.9	26.3	25.5	-	27.9
Hartsville, S. C.	22.2	28.7	22.2	23.5	16.5	19.5	13.8	22.6
Florence, S. C.	21.2	20.4	18.5	17.7	14.6	18.5	13.3	18.5
Mean	27.8	31.6	26.1	19.7	23.9	25.3	-	25.8

Table 28:- (Continued)

Location	Roanoke	Ogden	Volstate	CNS	Palmetto	Woods Yellow [1]	Tanner [1]	Mean
				Delta				
Raymond, Miss	34.1	31.0	30.6	26.8	24.9	23.5	19.0	29.5
Clarkedale, Ark.	37.6	36.1	36.4	16.9	16.3	-	13.6	28.7
Tunica, Miss.	28.1	26.6	31.5	12.2	17.6	-	-	23.2
Stoneville, Miss.	25.8	24.9	25.7	18.5	15.4	25.7	12.8	22.1
Winchester, Ark.	23.9	24.1	23.6	10.5	6.4	15.7	-	17.7
Marianna, Ark.	24.1	19.4	20.6	12.9	10.5	-	10.7	17.5
Baton Rouge, La.	8.5	14.5	6.8	20.4	21.3	6.7	7.4	14.3
Hamburg, La.	10.8	9.0	11.6	13.3	10.6	3.7	-	11.1
Anchorage, Miss. [1]	-	29.4	31.7	16.6	18.0	28.0	-	-
Mean	24.1	23.2	23.3	16.4	15.4	-	-	20.5
				Southeast				
Monetta, S. C.	26.9	24.7	25.2	23.8	23.3	25.6	16.1	24.8
Fairhope, Ala.	20.3	19.6	20.7	27.7	28.5	18.3	13.9	23.4
Blackville, S. C.	16.0	15.8	16.2	24.9	18.3	16.6	-	18.2
Tifton, Ga.	15.6	16.9	16.7	17.3	18.8	14.3	12.1	17.1
Richmond Hill, Ga.	14.0	13.9	13.0	15.6	14.8	14.1	7.0	14.3
Mean	18.6	18.2	18.4	21.9	20.7	17.8	-	19.6
Mean of all Tests:	22.7	22.5	22.0	17.7	17.0			

	Two-year Average Yield Rank						
West	2	3	1	4	5		
Cen. & Upper South	1	3	2	5	6	4	
East Coast	2	1	3	6	5	4	
Delta	1	3	2	4	5		
Southeast	3	5	4	1	2	6	

1/Not included in mean.

Table 29: Summary of three-year and four-year average yields for the strains of the Uniform Test, Group VII

Location	Roanoke	Volstate	Ogden	CNS	Palmetto	Woods Yellow[1]	Mean	Ogden	Volstate	Palmetto	Woods Yellow
	YIELDS - 1944-46, Inc.							YIELDS - 1943-46, Incl.			
West											
Stuttgart, Ark.	20.5	20.5	16.6	17.1	16.9	-	18.3	16.2	18.0	13.3	-
Miller County, Ark.	22.7	23.3	16.8	14.8	9.5	18.3	17.4	15.5	19.9	-	-
Fayetteville, Ark.	13.3	15.7	17.3	10.8	7.7	10.8	13.0	14.9	12.7	-	8.4
Mean	18.8	19.8	16.9	14.2	11.4	-	16.2	15.5	12.6	-	-
Upper and Central South											
State College, Miss.	31.6	28.6	29.6	15.8	12.1	21.7	23.5	26.3[1]	24.5	-	16.9
Clemson, S. C.	26.4	24.7	23.4	20.0	18.0	22.5	22.5	28.6	26.1	18.2	24.2
Experiment, Ga.	22.5	19.5	20.3	19.6	13.4	20.1	19.1	19.0	18.1	12.4	18.9
Watkinsville, Ga.	14.5	14.2	13.3	12.2	9.7	12.6	12.8	16.8	15.5	10.8	14.2
Fairhope, Ala.	19.8	22.0	20.3	30.2	27.8	19.3	24.0	-	-	-	-
Mean	23.0	21.8	21.4	19.6	16.2	19.2	20.4	21.5	21.1	13.8	18.6
Delta											
Clarkedale, Ark.	36.4	34.9	38.3	18.0	19.8	-	29.5	33.2	29.4	17.4	-
Stoneville, Miss.	31.5	29.6	31.0	19.6	14.3	26.8	25.2	33.3	34.2	15.7	31.7
Marianna, Ark.	30.0	26.8	25.2	17.8	13.2	-	22.6	21.1	23.0	11.4	-
Winchester, Ark.	22.6	22.7	20.6	12.4	7.8	15.8	17.2	19.0	19.1	7.2	12.4
Baton Rouge, La.	8.3	8.4	13.3	15.3	15.5	8.0	12.2	16.1[1]	8.5	-	8.9
Anchorage, Miss.[1]	-	28.8	27.8	14.8	13.5	23.5	-	-	-	-	-
Mean	25.8	24.5	25.7	16.6	14.1	-	21.3	26.6	26.4	12.9	-
Southeast											
Monetta, S. C.	22.2	21.6	20.8	19.9	18.8	19.5	20.5	16.9	-	19.2	19.1
Tifton, Ga.	17.6	18.4	19.3	20.8	22.8	16.4	19.8	17.9	16.5	20.9	15.4
Richmond Hill, Ga.	12.9	11.3	12.4	14.2	14.6	13.3	13.1	13.7	13.6	17.1	13.4
Mean	17.6	17.1	17.5	18.3	18.7	16.4	17.8	16.2	-	19.1	16.0
East Coast											
McCullers, N. C.	35.6	32.0	23.3	21.8	28.3	30.4	28.2	25.8[1]	31.5	26.0	29.1
Plymouth, N. C.	30.7	30.4	35.8	16.8	26.0	27.1	27.9	33.3[1]	27.4	-	23.9
Willard, N. C.	25.6	25.6	27.9	17.6	29.4	29.6	25.2	27.6	25.0	27.3	28.9
Florence, S. C.	26.5	23.8	23.8	21.9	19.6	23.1	23.1	24.2	22.6	15.6	20.1
Mean	29.6	27.9	27.8	19.5	25.8	27.5	26.1	25.9	26.4	23.0	26.0

[1]/Not included in the mean.

Uniform Test, Group VIII

The Group VIII test consists of eight varieties and one new strain. The origin of these varieties is as follows:

Variety or Strain	Originating Agency	Origin
Acadian	La. Agr. Exp. Sta.	Formerly La. 40-290
Cherokee	U. S. Dept. of Agr.	P.I. 93057 from Hangchow, China
Coker 433 (Yelnando)	Coker Pedigreed Seed Co.	Sel. from the cross (Yelredo x Nanda)
Gatan	Ga. Agr. Exp. Sta.	Sel. out of Otootan
Mamloxi	Delta Br. Exp. Sta.	Sel. from the cross (Mammoth Yellow x Biloxi)
Mamotan	Delta Br. Exp. Sta.	Sel. from the cross (Mammoth Yellow x Otootan)
La. Green	La. Agr. Exp. Sta.	Sel. from a hybrid population
Nanda	U. S. Dept. of Agr.	P.I. 95727 from Shariin, Chosen, 1932
Seminole	U. S. Dept. of Agr.	P.I. 93058 from Hangchow, China

Twenty-three tests of the Group VIII strains were planted at 20 locations in 1946. Complete tests of Group VIII were planted at two dates at Tifton, Georgia, and at three dates at Stoneville, Mississippi. The agronomic and chemical data are summarized in tables 30 to 39, inclusive.

The two new strains, Coker #433 and Louisiana Green, were entered in Group VIII in 1946. Coker #433 has since been named Yelnando and is being released by the Coker Pedigreed Seed Company. Yelnando in these first year tests has not appeared outstanding. The results indicate that the variety is better adapted across the Upper South, in that yields of Yelnando through this region were usually above the mean for the group. Louisiana Green, although low in percent of oil, appeared promising through the Lower South. This variety made excellent yields at Fairhope, Alabama, and at Baton Rouge and Opelousas, Louisiana. According to the disease ratings, Louisiana Green is more resistant to Bacterial Pustule and Blight than the other varieties of Group VIII.

The two, three, and four-year averages show Mamotan, Mamloxi, and Nanda to be the best varieties through the mid-South of Group VIII maturity. In the Lower South and Southeast, Acadian, Mamloxi and Seminole are leading varieties.

Table 30: Summary of agronomic and chemical data for strains of the Uniform Test, Group VIII

Location	No. tests in mean	Mamotan 6640	Manda	Mamloxi	Acadian	Coker 433	La. Green	Cherokee	Gatan	Seminole	Mean
Yields - 1946											
West	3	13.3	13.2	11.5	14.6	14.3	13.8	12.5	13.2	10.2	12.9
Cen. & Upper South	4	29.5	30.4	26.2	18.7	23.5	16.6	14.4	14.9	18.3	21.4
Delta	7	21.4	18.8	18.8	17.9	17.5	18.4	11.7	11.3	10.2	16.2
Southeast	5	13.2	13.6	14.2	16.8	11.7	16.5	13.7	14.2	10.6	13.8
East Coast	3	24.8	23.9	25.7	20.3	20.4	16.5	15.9	14.0	16.8	19.8
Mean	22	20.4	19.7	19.0	17.7	17.2	16.8	13.3	13.2	12.7	16.6
Two-year Av. Yields - 1945-46											
West	2	18.5	17.5	17.4	17.7	-	-	14.4	16.1	12.4	16.3
Cen. & Upper South	2	21.6	21.1	18.1	15.5	-	-	13.8	13.7	14.9	16.9
Delta	4	24.3	23.5	24.6	26.0	-	-	16.5	15.0	15.3	20.7
Southeast	4	17.0	17.4	18.8	20.1	-	-	13.8	17.1	17.8	17.4
East Coast	2	22.8	23.0	21.2	18.1	-	-	11.5	13.6	18.4	18.4
Mean	14	20.8	20.5	20.5	20.5	-	-	14.3	15.4	16.0	18.3
3-YR. AV. YIELDS - 1944-46		21.1	19.9	20.5	20.7	-	-	14.7	15.6	16.1	18.3
4-YR. AV. YIELDS - 1943-46		19.4	19.3	18.8	18.2	-	-	-	-	14.7	18.1
Lodging											
West	3	1.0	1.3	1.1	2.1	1.3	1.9	1.9	2.0	2.1	1.6
Delta	7	1.8	2.3	2.1	3.0	2.4	3.8	2.5	3.9	2.5	2.7
East Coast	2	1.8	2.0	2.0	3.0	3.5	3.5	3.0	3.5	3.5	2.9
Southeast	3	1.3	1.7	1.7	2.0	1.7	3.3	1.7	3.7	2.7	2.2
Mean	15	1.5	1.9	1.8	2.6	2.2	3.3	2.3	3.4	2.6	2.4
Maturity											
Days earlier (-) or later than Acadian											
Delta	6	-.8	3.8	-.2	0	3.5	9.2	2.5	.2	5.5	
Southeast	4	2.5	2.3	3.0	0	.5	6.5	3.0	2.3	1.0	
Mean	10	.5	3.2	1.1	0	2.3	8.1	2.7	1.0	3.7	

	Acadian Planted	Acadian Matured	Days to Maturity
Delta	May 6	Nov. 10	188
Southeast	May 26	Oct. 29	156
Mean	May 14	Nov. 5	175

Table 30: (Continued)

Location	No. tests in mean	Mamotan 6640	Nanda	Manloxi	Acadian	Coker 433	La. Green	Cherokee	Gatan	Seminole	Mean
					Height						
West	3	27.7	32.7	31.0	38.3	36.3	38.7	33.7	37.7	31.7	34.2
Delta	7	39.3	43.6	42.0	53.7	42.9	53.1	45.3	51.3	41.0	45.8
East Coast	2	39.0	39.0	38.0	48.0	47.5	51.0	36.0	52.0	40.0	43.4
Southeast	5	30.0	34.2	35.6	45.8	38.6	42.2	36.2	43.2	34.4	37.8
Mean	17	34.5	38.4	37.1	48.0	41.0	47.1	39.5	46.6	37.3	41.1
					Seed Quality						
West	3	2.2	1.9	2.1	1.9	2.2	2.6	2.4	2.5	2.6	2.3
Delta	7	2.4	2.3	2.1	1.7	2.7	2.0	2.5	2.0	3.4	2.3
Cen. & Upper South	2	1.7	1.5	1.8	1.0	1.8	2.7	2.0	1.5	2.7	1.9
Southeast	2	3.5	3.0	2.0	3.0	2.5	3.5	1.5	3.0	1.5	2.6
Mean	14	2.4	2.2	2.0	1.8	2.4	2.4	2.3	2.2	2.9	2.3
					Seed Weight						
West	3	16.7	21.0	14.8	12.7	15.8	12.1	19.3	11.4	26.7	16.7
Delta	7	17.8	17.7	14.6	11.7	16.6	11.2	18.4	9.5	26.1	16.0
Cen. & Upper South	3	18.8	18.8	15.2	12.0	16.5	11.4	18.1	10.1	25.7	16.3
East Coast	2	18.0	16.9	13.8	11.1	15.0	9.2	17.6	9.3	24.2	15.0
Southeast	3	18.2	19.3	15.6	11.9	17.0	12.1	18.5	10.2	25.8	16.5
Mean	18	17.9	18.6	14.8	11.9	16.3	11.3	18.4	10.0	25.9	16.1
					Percent Protein						
West	3	39.1	39.6	41.0	43.9	44.5	43.6	46.0	44.0	44.6	42.9
Delta	7	43.1	43.2	43.6	42.4	44.0	44.1	45.9	42.8	45.4	43.8
Cen. & Upper South	3	40.5	40.5	40.4	40.3	40.1	43.0	45.5	41.9	44.3	41.8
East Coast	2	44.2	42.6	43.6	42.2	43.2	43.9	45.8	41.7	43.9	43.5
Southeast	3	44.8	44.6	46.0	44.9	44.7	46.2	46.7	43.3	45.6	45.2
Mean	18	42.4	42.3	43.0	42.7	43.5	44.2	46.0	42.8	45.0	43.5
					Percent Oil						
West	3	20.0	20.4	19.2	19.8	19.5	17.9	18.0	17.0	18.6	18.9
Delta	7	18.6	18.7	18.2	19.7	18.3	17.8	17.6	16.9	18.2	18.2
Cen. & Upper South	3	18.9	19.3	18.1	19.6	19.0	17.1	17.1	16.4	17.5	18.1
East Coast	2	18.0	18.8	17.1	19.1	18.7	17.2	16.9	17.1	18.6	17.9
Southeast	3	19.2	19.7	17.7	18.5	19.3	17.4	18.5	16.7	19.5	18.5
Mean	18	18.9	19.3	18.1	19.4	18.8	17.6	17.7	16.8	18.4	18.3
					Iodine No. of Oil						
West	3	138.9	134.4	139.1	137.7	134.3	140.2	136.7	139.7	136.3	137.5
Delta	7	137.9	133.6	138.3	135.7	131.1	138.3	135.5	139.0	135.3	136.1
Cen. & Upper South	3	140.7	137.3	142.6	141.3	137.3	143.6	139.9	144.8	140.8	140.9
East Coast	2	139.9	136.2	141.0	140.6	134.7	143.1	139.4	143.9	137.3	139.6
Southeast	3	137.1	131.5	137.4	136.5	128.7	138.1	135.3	138.6	133.7	135.2
Mean	18	138.6	134.3	139.3	137.6	132.7	140.0	136.8	140.6	136.3	137.4

Table 31: Summary of yields in bushels per acre for the strains of the Uniform Test, Group VIII, 1946

Location[1]	Mamotan 6640	Nanda	Mamloxi	La. Green	Acadian	Coker 433
			West			
Stuttgart, Ark.	14.6	16.3	13.9	15.6	14.2	14.9
Miller County, Ark.	10.0	9.8	7.6	14.8	17.8	13.8
Chillicothe, Texas	15.2	13.6	13.1	11.1	11.7	14.2
Mean	13.3	13.2	11.5	13.8	14.6	14.3
			Upper and Central South			
Crossville, Ala.	35.0	42.1	35.5	15.0	22.4	29.0
Experiment, Ga.	24.4	25.1	23.0	18.9	18.8	21.2
Belle Mina, Ala.	21.8	20.2	17.3	12.4	9.2	13.9
West Point, Miss.	36.7	34.0	29.0	20.1	24.2	29.7
Mean	29.5	30.4	26.2	16.6	18.7	23.5
			Delta			
Baton Rouge, La.	24.8	23.4	23.7	37.2	38.6	22.1
Stoneville, Miss. 4/19	36.0	25.5	28.5	16.9	22.2	24.0
Stoneville, Miss. 5/29[2] [3]	-	27.8	15.1	19.7	30.9	10.6
Stoneville, Miss. 6/27	19.5	20.0	16.2	17.3	14.1	20.3
Opelousas, La.[2]	14.8	9.1	19.6	26.3	27.4	14.3
Raymond, Miss.	17.0	18.0	10.7	14.4	11.7	9.7
Marianna, Ark.	13.9	14.1	17.6	12.6	11.1	18.0
Clarkedale, Ark.	17.3	12.0	15.9	11.9	9.7	11.1
Mean	21.4	18.8	18.8	18.4	17.9	17.5
			Southeast			
Tifton, Ga. 4/30	16.3	16.9	16.5	16.6	15.6	14.0
Tifton, Ga. 6/10	10.3	9.0	8.6	8.5	7.4	5.6
Fairhope, Ala.	9.3	10.4	13.6	30.9	26.0	8.6
Richmond Hill, Ga.	9.4	11.3	10.9	10.0	12.5	11.7
Monetta, S. C.	20.7	20.6	21.3	16.6	22.3	18.6
Mean	13.2	13.6	14.2	16.5	16.8	11.7
			East Coast			
McCullers, N. C.	29.1	28.2	27.9	17.6	21.8	21.8
Florence, S. C.	19.0	18.4	14.0	12.1	8.7	16.4
Hartsville, S. C.	26.3	25.0	35.3	19.8	30.5	23.1
Mean	24.8	23.9	25.7	16.5	20.3	20.4
			Yield Rank - 1946			
West	4	5	8	3	1	2
Con. & Upper South	2	1	3	7	5	4
Delta	1	2	3	4	5	6
Southeast	7	6	3	2	1	8
East Coast	2	3	1	7	5	4

Table 31: (Continued)

Location	Gatan	Cherokee	Seminole	Mean	Bu. Nec for Sig (5%)	Coef. of Var. (%)
			West			
Stuttgart, Ark.	13.6	14.1	13.4	14.5	N.S.	13.4
Miller County, Ark.	14.2	14.0	9.6	12.4	4.1	22.5
Chillicothe, Texas	11.8	9.4	7.6	11.9	N.S.	33.1
Mean	13.2	12.5	10.2	12.9		
			Upper and Central South			
Crossville, Ala.	18.3	13.3	19.4	25.6	7.0	18.7
Experiment, Ga.	12.8	15.9	17.8	19.8	3.2	11.1
Belle Mina, Ala.	10.2	7.9	10.9	13.7	4.2	20.7
West Point, Miss.	18.1	20.4	24.9	26.3	4.8	12.8
Mean	14.9	14.4	18.3	21.4		
			Delta			
Baton Rouge, La.	10.7	20.2	14.4	23.9	5.4	15.5
Stoneville, Miss. 4/19	9.7	13.2	9.3	20.6	7.7	25.6
Stoneville, Miss. 5/29 [2]	11.9	-	-	19.8	8.0	25.5
Stoneville, Miss. 6/17	13.2	11.9	7.8	15.6	3.9	17.3
Opelousas, La. [2]	7.0	11.5	4.0	14.8	-	-
Raymond, Miss.	12.4	13.3	13.2	13.3	3.9	20.1
Marianna, Ark.	9.8	5.8	12.0	12.8	N.S.	45.6
Clarkedale, Ark.	12.1	5.8	4.3	11.1	5.0	31.1
Mean	11.3	11.7	10.2	16.2		
			Southeast			
Tifton, Ga. 4/30	12.4	17.5	17.8	15.9	N.S.	18.0
Tifton, Ga. 6/10	7.4	9.1	2.6	7.6	3.0	26.6
Fairhope, Ala.	17.5	10.4	8.5	15.0	4.2	19.3
Richmond Hill, Ga.	16.0	13.4	10.5	11.7	N.S.	25.1
Monetta, S. C.	17.9	18.3	13.5	18.9	3.1	11.3
Mean	14.2	13.7	10.6	13.8		
			East Coast			
McCullers, N. C.	16.1	14.8	16.9	21.6	5.6	17.7
Florence, S. C.	13.4	11.8	15.7	14.4	2.2	10.6
Hartsville, S. C.	12.5	21.0	17.8	23.5	6.0	17.2
Mean	14.0	15.9	16.8	19.8		
			Yield Rank - 1946			
West	6	7	9			
Cen. & Upper South	8	7	6			
Delta	8	7	9			
Southeast	4	5	9			
East Coast	9	8	6			

Table 32: Summary of lodging data for the strains of the Uniform Test, Group VIII, 1946.

Location	Strain				
	Mamotan	Nanda	Memloxi	Louisiana Green	Acadian
		West			
Stuttgart, Ark.	1.0	1.0	1.0	3.0	3.0
Miller County, Ark.	1.0	1.8	1.3	1.8	2.3
Chillicothe, Texas	1.0	1.0	1.0	1.0	1.0
Mean	1.0	1.3	1.1	1.9	2.1
		Delta			
Baton Rouge, La.	2.0	2.0	2.0	4.0	4.0
Stoneville, Miss. 4/19	2.5	3.8	3.5	5.0	4.8
Stoneville, Miss. 5/29 [1]	-	3.7	2.8	4.3	4.0
Stoneville, Miss. 6/17	2.0	2.3	2.3	4.0	3.0
Raymond, Miss.	1.0	1.0	1.0	1.0	1.0
Marianna, Ark.	1.0	2.5	2.3	5.0	3.0
Opelousas, La.	2.0	2.0	2.0	4.0	3.0
Clarkedale, Ark.	1.8	2.5	1.3	3.5	2.3
Mean	1.8	2.3	2.1	3.8	3.0
		Southeast			
Richmond Hill, Ga.	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.0	2.0	2.0	4.0	2.0
Experiment, Ga.	2.0	2.0	2.0	5.0	3.0
Mean	1.3	1.7	1.7	3.3	2.0
		East Coast			
McCullers, N.C.	1.5	2.0	2.0	4.0	3.0
Florence, S.C.	2.0	2.0	2.0	3.0	3.0
Mean	1.8	2.0	2.0	3.5	3.0

Table 32: (Continued)

Location	STRAIN				
	Coker 433	Gatan	Cherokee	Seminole	Mean
		West			
Stuttgart, Ark.	2.0	1.0	2.0	3.0	1.9
Miller County, Ark.	1.0	4.0	2.8	2.3	2.0
Chillicothe, Texas	1.0	1.0	1.0	1.0	1.0
Mean	1.3	2.0	1.9	2.1	1.6
		Delta			
Baton Rouge, La.	3.0	4.0	3.0	2.0	2.9
Stoneville, Miss. 4/19	3.7	5.0	3.8	3.7	4.0
Stoneville, Miss. 5/29 1/	3.3	4.8	-	-	-
Stoneville, Miss. 6/17	2.5	3.8	2.5	3.0	2.8
Raymond, Miss.	1.0	1.0	1.0	1.0	1.0
Marianna, Ark.	2.3	4.8	1.3	2.5	2.7
Opelousas, La.	2.0	4.0	3.0	1.0	2.6
Clarkedale, Ark.	2.5	5.0	2.8	4.5	2.9
Mean	2.4	3.9	2.5	2.5	2.7
		Southeast			
Richmond Hill, Ga.	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	2.0	5.0	2.0	3.0	2.6
Experiment, Ga.	2.0	5.0	2.0	4.0	3.0
Mean	1.7	3.7	1.7	2.7	2.2
		East Coast			
McCullers, N.C.	4.0	4.0	3.0	3.0	2.9
Florence, S.C.	3.0	3.0	3.0	4.0	2.8
Mean	3.5	3.5	3.0	3.5	2.9

1/Not included in mean.

Table 33: Summary of the maturity data, days earlier (-) or later than Acadian, for the strains of the Uniform Test, Group VIII, 1946

Location	Strain						
	Mamotan	Nanda	Mamloxi	La. Green	Acadian	Coker 433	Gatan
West							
Stuttgart, Ark.	0	0	0	10	0	4	-1
Upper and Central South							
Experiment, Ga.	-3	3	5	7	0	3	0
Delta							
Baton Rouge, La.	-5	-1	3	13	0	-5	-5
Stoneville, Miss. 4/19	0	6	4	9	0	9	-1
Stoneville, Miss. 5/29[1]	-	6	5	11	0	9	7
Stoneville, Miss. 6/17	0	1	1	18	0	2	3
Opelousas, La.	10	5	-4	5	0	5	-8
Marianna, Ark.	0	4	0	2	0	2	4
Clarkedale, Ark.	-10	8	-5	8	0	8	8
Mean	-.8	3.8	-.2	9.2	-	3.5	.2
Southeast							
Tifton, Ga. 4/30	1	2	2	10	0	-1	0
Tifton, Ga. 6/10	2	2	5	5	0	0	5
Tallassee, Ala.	7	5	1	7	0	3	4
Richmond Hill, Ga.	0	0	4	4	0	0	0
Mean	2.5	2.3	3.0	6.5	0.0	0.5	2.3
East Coast							
McCullers, N.C.	-6	-6	-6	0	0	-4	-6

Table 33: (Continued)

Location	Strain		Acadian Planted	Acadian Matured	Days to Maturity
	Cherokee	Seminole			
West					
Stuttgart, Ark.	3	1	5-30	11-2	156
Upper and Central South					
Experiment, Ga.	0	3	5-29	11-5	160
Delta					
Baton Rouge, La.	3	-3	4-22	10-25	186
Stoneville, Miss. 4/19	7	3	4-19	11-4	199
Stoneville, Miss. 5/29 [1]	-	-	5-29	11-2	157
Stoneville, Miss. 6/17	12	16	6-17	11-1	137
Opelousas, La.	10	5	4-30	11-5	189
Marianna, Ark.	-25	4	4-27	11-28	215
Clarkedale, Ark.	8	8	5-10	11-25	199
Mean	2.5	5.5	5-6	11-10	188
Southeast					
Tifton, Ga. 4/30	0	-1	4-30	10-22	175
Tifton, Ga. 6/10	0	0	6-10	10-27	139
Tallassee, Ala.	9	5	5-7	11-5	182
Richmond Hill, Ga.	3	0	6-25	10-29	126
Mean	3.0	1.0	5-26	10-29	156
East Coast					
McCullers, N.C.	0	-4	6-15	11-11	149

[1] Not included in mean.

Table 34: Summary of height data for the strains of the Uniform Test, Group VIII, 1948

Location	Strains				
	Mamotan	Nanda	Mamloxi	Louisiana Green	Acadian
West					
Stuttgart, Ark.	28	34	34	42	41
Miller County, Ark.	36	40	38	44	48
Chillicothe, Texas	19	24	21	30	26
Mean	27.7	32.7	31.0	38.7	38.3
Delta					
Baton Rouge, La.	30	36	38	56	52
Stoneville, Miss. 4/19	42	41	46	56	60
Stoneville, Miss. 5/29 [1]	-	43	41	42	57
Stoneville, Miss. 6/17	33	41	38	42	47
Opelousas, La.	36	40	36	66	64
Raymond, Miss.	50	50	49	54	54
Marianna, Ark.	37	42	39	47	47
Clarkedale, Ark.	47	55	48	51	52
Mean	39.3	43.6	42.0	53.1	53.7
Southeast					
Tifton, Ga. 4/30	33	41	42	44	50
Tifton, Ga. 6/10	18	21	21	32	34
Richmond Hill, Ga.	19	26	27	32	38
Tallassee, Ala.	36	40	42	51	54
Experiment, Ga.	44	43	46	52	53
Mean	30.0	34.2	35.6	42.2	45.8
East Coast					
McCullers, N. C.	38	38	38	52	48
Florence, S. C.	40	40	38	50	48
Mean	39.0	39.0	38.0	51.0	48.0

[1] Not included in mean.

Table 34: (Continued)

Location	Strains				
	Coker 433	Gatan	Cherokee	Seminole	Mean
		West			
Stuttgart, Ark.	37	44	34	34	36.4
Miller County, Ark.	44	42	39	42	41.4
Chillicothe, Texas	28	27	28	19	24.7
Mean	36.3	37.7	33.7	31.7	34.2
		Delta			
Baton Rouge, La.	39	49	48	34	42.4
Stoneville, Miss. 4/19	41	45	53	47	47.9
Stoneville, Miss. 5/29	37	45	-	-	44.2
Stoneville, Miss. 6/17	41	37	38	34	39.0
Opelousas, La.	36	65	48	36	47.4
Raymond, Miss.	47	56	51	46	50.8
Marianna, Ark.	48	49	36	41	42.9
Clarkedale, Ark.	48	58	43	49	50.1
Mean	42.9	51.3	45.3	41.0	45.8
		Southeast			
Tifton, Ga. 4/30	44	47	43	37	42.3
Tifton, Ga. 6/10	22	34	24	19	25.0
Richmond Hill, Ga.	33	40	28	32	30.5
Tallassee, Ala.	48	43	40	38	43.6
Experiment, Ga.	46	52	46	46	47.6
Mean	38.6	43.2	36.2	34.4	37.8
		East Coast			
McCullers, N. C.	50	50	36	38	43.1
Florence, S. C.	45	54	36	42	43.7
Mean	47.5	52.0	36.0	40.0	43.4

Table 35: Summary of seed quality data for the strains of the Uniform Test, Group VIII, 1946

Location	Strain				
	Mamotan 6640	Nanda	Mamloxi	Louisiana Green	Acadian
West					
Stuttgart, Ark.	2.0	2.0	2.3	2.8	2.0
Miller County, Ark.	3.5	2.8	3.0	3.0	2.8
Chillicothe, Texas	1.0	1.0	1.0	2.0	1.0
Mean	2.2	1.9	2.1	2.6	1.9
Upper and Central South					
Experiment, Ga.	2.0	2.0	2.0	4.0	1.0
Belle Mina, Ala.	1.3	1.0	1.5	1.3	1.0
Mean	1.7	1.5	1.8	2.7	1.0
Delta					
Baton Rouge, La.	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss. 4/19	1.0	1.5	1.8	2.3	1.3
Stoneville, Miss. 5/29[1]	-	1.3	2.0	2.0	1.3
Stoneville, Miss. 6/17	1.0	1.0	1.0	1.0	1.0
Opelousas, La.	4.0	3.0	2.0	2.0	2.0
Raymond, Miss.	4.0	3.0	3.0	2.0	2.0
Marianna, Ark.	1.8	2.3	2.0	2.0	1.3
Clarkedale, Ark.	2.8	3.0	2.8	2.5	2.3
Mean	2.4	2.3	2.1	2.0	1.7
Southeast					
Richmond Hill, Ga.	2.0	2.0	2.0	2.0	2.0
Fairhope, Ala.	5.0	4.0	2.0	5.0	4.0
Mean	3.5	3.0	2.0	3.5	3.0

Table 35: (Continued)

Location	Strain				
	Coker 433	Gatan	Cherokee	Sominole	Mean
			West		
Stuttgart, Ark.	2.3	3.0	2.0	2.8	2.4
Miller County, Ark.	3.3	3.5	3.3	4.0	3.2
Chillicothe, Texas	1.0	1.0	2.0	1.0	1.2
Mean	2.2	2.5	2.4	2.6	2.3
			Upper and Central South		
Experiment, Ga.	2.0	1.0	2.0	3.0	2.1
Belle Mina, Ala.	1.5	2.0	2.0	2.3	1.5
Mean	1.8	1.5	2.0	2.7	1.9
			Delta		
Baton Rouge, La.	2.0	2.0	2.0	3.0	2.1
Stoneville, Miss. 4/19	2.3	1.0	2.0	3.3	1.8
Stoneville, Miss. 5/29 1/	2.0	1.5	-	-	1.7
Stoneville, Miss. 6/17	1.0	1.0	2.0	3.0	1.3
Opelousas, La.	3.0	2.0	3.0	5.0	2.8
Raymond, Miss.	5.0	2.0	2.0	4.0	3.0
Marianna, Ark.	2.3	2.5	2.8	2.5	2.2
Clarkedale, Ark.	3.0	3.0	3.5	3.3	2.9
Mean	2.7	2.0	2.5	3.4	2.3
			Southeast		
Richmond Hill, Ga.	2.0	2.0	1.0	1.0	1.8
Fairhope, Ala.	3.0	4.0	2.0	2.0	3.4
Mean	2.5	3.0	1.5	1.5	2.6

1/ Included in the mean.

Table 36: Summary of seed weight data for the strains of the Uniform Test, Group VIII, 1946

Location	Strain				
	Mamotan 6640	Nanda	Mamloxi	Louisiana Green	Acadian
West					
Stuttgart, Ark.	17.2	17.5	15.8	11.8	12.4
Miller County, Ark.	14.6	26.4	11.8	9.9	12.4
Chillicothe, Texas	18.3	19.1	16.9	14.5	13.3
Mean	16.7	21.0	14.8	12.1	12.7
Upper and Central South					
Crossville, Ala.	19.9	19.6	15.6	11.6	12.7
Experiment, Ga.	20.3	20.2	15.8	12.4	12.0
Belle Mina, Ala.	16.6	16.7	14.1	10.3	11.3
Mean	18.8	18.8	15.2	11.4	12.0
Delta					
Baton Rouge, La.	17.5	16.9	14.4	11.8	10.1
Stoneville, Miss. 4/19	19.9	19.5	16.6	11.8	12.4
Stoneville, Miss. 5/29 [1]	-	18.4	14.6	11.6	12.1
Stoneville, Miss. 6/17	13.5	13.5	10.6	9.7	9.7
Opelousas, La.	21.2	19.0	16.6	11.6	13.3
Raymond, Miss.	19.2	20.1	15.6	11.1	11.7
Marianna, Ark.	16.4	16.7	13.8	10.5	11.1
Clarkedale, Ark.	16.6	18.2	14.4	11.9	13.4
Mean	17.8	17.7	14.6	11.2	11.7
Southeast					
Tifton, Ga. 4/30	18.2	18.7	14.2	11.7	12.1
Tifton, Ga. 6/10	15.5	17.2	13.6	10.6	10.7
Richmond Hill, Ga.	21.0	22.0	19.0	14.0	13.0
Mean	18.2	19.3	15.6	12.1	11.9
East Coast					
McCullers, N.C.	21.5	19.9	16.5	10.8	12.7
Florence, S.C.	14.6	14.0	11.2	7.6	9.5
Mean	18.0	16.9	13.8	9.2	11.1

Table 36: (Continued)

Location	Strain				
	Coker 433	Gatan	Cherokee	Seminole	Mean
		West			
Stuttgart, Ark.	17.6	12.0	17.0	26.2	16.4
Miller County, Ark.	11.9	9.7	18.4	26.4	15.7
Chillicothe, Texas	17.8	12.4	22.6	27.6	18.1
Mean	15.8	11.4	19.3	26.7	16.7
		Upper and Central South			
Crossville, Ala.	15.0	9.9	19.4	24.7	16.4
Experiment, Ga.	19.2	10.5	18.8	29.0	17.6
Belle Mina, Ala.	15.3	9.8	16.2	23.5	14.9
Mean	16.5	10.1	18.1	25.7	16.3
		Delta			
Baton Rouge, La.	15.5	8.0	19.2	27.2	15.6
Stoneville, Miss. 4/19	19.5	10.5	20.1	26.1	17.4
Stoneville, Miss. 5/29 [1]	17.0	10.3	-	-	-
Stoneville, Miss. 6/17	13.6	8.3	18.2	25.4	13.6
Opelousas, La.	18.9	9.9	20.3	25.8	17.4
Raymond, Miss.	15.6	8.6	16.3	26.9	16.1
Marianna, Ark.	15.5	10.3	16.7	24.0	15.0
Clarkedale, Ark.	17.3	10.8	17.8	27.6	16.4
Mean	16.6	9.5	18.4	26.1	16.0
		Southeast			
Tifton, Ga. 4/30	17.1	10.2	18.7	27.3	16.5
Tifton, Ga. 6/10	14.9	9.4	15.8	21.0	14.3
Richmond Hill, Ga.	19.0	11.0	21.0	29.0	18.8
Mean	17.0	10.2	18.5	25.8	16.5
		East Coast			
McCullers, N.C.	17.3	10.2	20.3	26.5	17.3
Florence, S.C.	12.7	8.3	14.8	21.8	12.7
Mean	15.0	9.3	17.6	24.2	15.0

[1] Not included in mean.

Table 37: Summary of the two-year average yields for the strains of the Uniform Test, Group VIII, 1945-46

Location	Mamo-tan	Aca-dian	Mam-loxi	Nanda	Semi-nole	Gatan	Chero-kee	Mean
			West					
Stuttgart, Ark.	17.1	17.4	17.5	19.2	15.9	17.9	15.2	17.2
Miller County, Ark.	19.9	17.9	17.3	15.8	8.9	14.2	13.6	15.4
Mean	18.5	17.7	17.4	17.5	12.4	16.1	14.4	16.3
			Central and Upper South					
Experiment, Ga.	20.5	17.6	18.6	21.5	17.1	15.1	15.9	18.0
West Point, Miss.	22.6	13.4	17.6	20.7	12.6	12.2	11.7	15.8
Mean	21.6	15.5	18.1	21.1	14.9	13.7	13.8	16.9
			Delta					
Raymond, Miss.	27.4	28.2	24.9	25.6	16.0	19.5	22.8	23.5
Marianna, Ark.	23.7	18.4	26.5	23.7	17.5	17.8	11.5	19.9
Stoneville, Miss.	28.0	23.7	25.5	24.0	12.4	13.0	14.5	20.2
Baton Rouge, La.	18.2	33.5	21.5	20.5	15.1	9.6	17.2	19.4
Clarkedale, Ark. 1/	32.7	21.4	29.8	-	17.8	-	-	25.4
Mean	24.3	26.0	24.6	23.5	15.3	15.0	16.5	20.7
			East Coast					
McCullers, N. C.	25.8	24.4	27.1	26.2	16.0	13.7	12.0	20.7
Florence, N. C.	19.7	11.8	15.3	19.7	20.7	13.5	11.0	16.0
Mean	22.8	18.1	21.2	23.0	18.4	13.6	11.5	18.4
			Southeast					
Monetta, S. C.	25.4	24.3	26.0	23.5	18.7	20.3	17.3	22.2
Fairhope, Ala.	17.5	25.9	21.5	16.8	21.1	21.9	14.9	19.0
Tifton, Ga.	16.6	15.4	16.7	16.6	17.6	12.2	12.0	15.3
Richmond Hill, Ga.	8.5	14.6	10.8	12.6	13.7	13.9	11.0	12.2
Mean	17.0	20.1	18.8	17.4	17.8	17.1	13.8	17.4
AVERAGE OF 14 TESTS	20.8	20.5	20.5	20.5	16.0	15.4	14.3	18.3

1/ Not included in mean.

Table 38: Summary of the three-year average yields for the strains of the Uniform Test, Group VIII, 1944-46

Location	Mam-loxi	Mamo-tan	Nanda	Aca-dian	Gatan	Semi-nole	Chero-keo	Mean
Stuttgart, Ark.	17.9	17.3	19.7	17.3	18.7	15.5	15.1	17.4
Miller County, Ark.[1]	18.0	19.0	17.6	15.6	-	8.7	-	15.8
Stoneville, Miss.	24.6	28.6	23.4	23.0	14.4	11.3	12.5	19.7
Marianna, Ark.[1]	19.1	19.5	21.6	16.2	16.3	12.5	12.5	16.8
Raymond, Miss.[1]	-	27.5	24.8	27.8	20.0	18.1	21.6	23.3
Clarkedale, Ark.[1]	24.6	24.5	-	15.8	-	9.6	-	18.6
Baton Rouge, La.[1]	16.2	15.6	19.0	29.1	9.0	13.5	-	17.1
Experiment, Ga.	21.4	21.4	20.5	19.3	16.2	17.7	17.4	19.1
McCullers, N. C.	26.2	25.7	25.3	23.7	15.2	16.4	13.3	20.8
Tifton, Ga.	20.9	19.1	18.5	20.4	15.7	19.8	15.4	18.5
Monetta, S. C.	19.3	18.9	18.8	18.8	16.9	14.7	13.0	17.2
Richmond Hill, Ga.	11.3	10.0	11.2	15.0	12.2	12.8	12.9	12.2
MEAN	20.1	20.1	19.9	19.2	15.7	15.1	14.0	17.7
			Yield Rank					
Stuttgart, Ark.	3	4	1	4	2	6	7	
Miller County, Ark.	2	1	3	4		5		
Stoneville, Miss.	2	1	3	4	5	7	6	
Marianna, Ark.	3	2	1	5	4	6	6	
Raymond, Miss.		2	3	1	5	6	4	
Clarkedale, Ark.	1	2		3		4		
Baton Rouge, La.	3	4	2	1	6	5		
Experiment Ga.	1	1	3	4	7	5	6	
McCullers, N. C.	1	2	3	4	6	5	7	
Tifton, Ga.	1	4	5	2	6	3	7	
Monetta, S. C.	1	2	3	3	5	6	7	
Richmond Hill, Ga.	5	7	6	1	4	3	2	

[1] Not included in mean.

Table 39: Summary of the four-year average yields for the strains of the Uniform Test, Group VIII, 1943-46

Location	Mamo-tan	Nanda	Mam-loxi	Aca-dian	Semi-nole	Mean
Stuttgart, Ark	13.2	14.9	14.1	13.2	11.7	13.4
Stoneville, Miss.	29.2	25.4	25.1	22.9	13.5	23.2
Marianna, Ark.	16.5	18.4	15.8	12.9	10.0	14.7
Clarkedale, Ark. 1/	20.5	-	20.8	13.6	8.1	15.8
Experiment, Ga.	19.1	18.6	19.3	17.1	16.3	18.1
McCullers, N. C.	26.4	26.1	23.9	23.3	15.9	23.1
Tifton, Ga.	16.5	17.0	19.2	18.5	19.3	18.1
Monetta, S. C.	19.6	17.7	17.9	18.0	14.5	17.5
Richmond Hill, Ga.	10.8	12.1	11.3	15.6	13.7	12.7
MEAN	18.9	18.8	18.3	17.7	14.4	17.6
			Yield Rank			
Stuttgart, Ark.	3	1	2	3	5	
Stoneville, Miss.	1	2	3	4	5	
Marianna, Ark.	2	1	3	4	5	
Clarkedale, Ark.	2		1	3	4	
Experiment, Ga.	2	3	1	4	5	
McCullers, N. C.	1	2	3	4	5	
Tifton, Ga.	5	4	2	3	1	
Monetta, S. C.	1	4	3	2	5	
Richmond Hill, Ga.	5	3	4	1	2	

1/Not included in the mean.

Preliminary Test, Group V

The varieties of Group IV-S mature in early September across the mid-south and those of Group VI in early October. At the time the soybean program was initiated, strains intermediate in maturity were not available.

In the various breeding programs, strains of Group V maturity have been selected from hybrid populations resulting from crosses between corn belt and adapted southern varieties. Crosses between Arksoy 2913 and the varieties, Dunfield, Patoka, Manchuria 13-177, Macoupin and Chief; Haberlandt x Dunfield and others, are yielding promising new strains.

Twenty-three strains from such crosses were grown in a Preliminary Group V test at five locations in 1946. The agronomic and chemical data for these strains are given in tables 40 and 41.

The four strains, D423-774 (Dunfield x Arksoy), D417-721 (Arksoy x Patoka), D414-714 (Chief x Arksoy), and D49-977 (Macoupin x Arksoy), were entered in the new Uniform Test, Group V, in 1947.

Table 40: Summary of agronomic data for the strains in the Preliminary Test V, 1946

Strain	MEAN								
	Yield[1]	Lodging	Maturity[2]	Height	Seed Quality	Gms. 100/Seed	Percent Protein	Percent Oil	Iodine No. of Oil
Ogden	36.6	1.3	15	33	1.3	14.6	41.3	20.9	134.8
D423-774	31.7	3.6	3	41	1.2	13.3	41.6	21.3	132.5
D417-721	30.3	3.0	13	43	1.3	13.7	41.7	21.4	130.0
D414-714	29.9	2.7	9	43	1.3	11.5	42.3	20.1	131.0
D49-977	29.8	1.5	11	32	1.3	13.5	40.9	21.5	133.2
D423-963	28.8	3.0	13	35	1.3	13.1	40.1	21.0	134.0
D412-979	28.0	3.5	8	38	1.2	12.8	43.4	20.6	130.4
D424-786	27.8	4.1	14	42	1.3	11.6	43.5	19.7	127.6
D418-985	27.4	3.4	12	41	1.3	12.7	41.0	21.4	131.2
D414-715	27.3	3.4	15	47	1.8	14.1	41.6	21.2	129.6
D417-934	27.3	3.2	8	34	1.5	13.1	42.4	20.8	133.1
S100	26.7	2.8	0	41	1.4	13.5	43.8	19.6	129.6
D424-832	26.6	3.7	11	40	1.1	10.1	40.6	21.0	131.9
D432-686	26.5	3.3	10	35	1.3	13.1	39.9	21.6	130.6
D421-737	26.5	3.6	10	42	1.3	13.3	41.8	20.2	138.1
D423-956	26.4	4.1	5	39	1.2	13.3	39.6	22.8	133.0
D424-757	26.4	4.4	4	36	1.3	12.6	42.1	20.7	123.7
D431-837	26.3	3.9	12	35	1.4	12.5	40.1	21.6	127.1
D423-740	26.2	2.9	7	30	1.1	11.5	41.9	20.7	134.4
D432-855	26.1	4.0	9	42	1.4	12.1	39.3	21.9	132.0
D433-862	25.6	2.7	4	39	1.4	12.9	40.2	21.2	134.4
D433-864	25.1	3.5	12	40	1.3	14.0	38.7	22.5	131.6
D424-797	25.0	4.2	9	39	1.3	13.1	40.4	21.7	130.6
D413-923	24.7	3.9	16	39	1.9	15.5	41.6	20.8	131.6
D438-1012	23.1	4.0	14	40	1.2	12.5	40.4	20.8	130.7

1/Average of five locations.
2/Days earlier (-) or later than S100.
Mean maturity date of S100, September 22.

Table 41: Summary of yield data and yield rank for the strains in the Preliminary Test V, 1946

Strain	Mean	Sikeston, Mo.	Plymouth N. C.	Stoneville, Miss.	Anchorage, Miss.	Stuttgart, Ark.	Sikeston, Mo.	Plymouth, N. C.	Stoneville, Miss.	Anchorage, Miss.	Stuttgart, Ark.
				YIELD					YIELD RANK		
Ogden	36.6	36.3	67.3	27.6	36.5	15.3	18	1	6	1	3
D423-774	31.7	39.3	42.7	30.8	30.9	15.0	7	3	1	5	4
D417-721	30.3	37.6	37.6	28.6	34.6	13.3	14	7	6	2	11
D414-714	29.9	41.9	43.2	27.9	23.8	12.7	2	2	7	17	17
D49-977	29.8	40.6	40.7	25.2	31.2	11.5	4	4	16	4	22
D423-963	28.8	34.3	39.1	25.8	33.1	11.6	22	6	14	3	21
D412-979	28.0	38.8	31.0	30.3	26.7	13.1	10	16	2	11	12
D424-786	27.8	34.7	36.1	26.0	27.4	15.0	21	9	13	10	5
D418-985	27.4	36.7	33.6	29.2	24.8	12.8	17	13	3	13	16
D414-715	27.3	39.4	34.1	22.7	28.6	11.8	6	12	23	5	20
D417-934	27.3	37.9	30.1	28.8	27.5	12.4	11	17	4	9	18
S100	26.7	43.3	22.1	28.7	24.7	14.7	1	24	5	15	6
D424-832	26.6	37.6	33.6	25.2	22.3	14.2	14	14	16	22	9
D432-686	26.5	34.2	39.4	24.7	23.4	11.0	22	5	19	20	25
D421-737	26.5	37.9	26.6	27.1	27.7	13.0	11	22	11	8	13
D423-956	26.4	41.6	28.3	24.5	23.0	14.6	3	19	20	21	7
D424-757	26.4	39.1	27.1	27.6	23.5	14.5	8	21	8	19	8
D431-837	26.3	33.9	36.9	22.7	24.8	13.4	24	8	23	13	10
D423-740	26.2	39.6	28.1	26.9	25.3	11.1	5	20	12	12	24
D432-855	26.1	35.7	35.4	24.9	19.1	15.5	19	10	18	24	2
D433-862	25.6	39.1	32.4	27.2	16.6	12.9	8	15	10	25	14
D433-864	25.1	37.0	28.9	23.0	23.8	12.8	16	18	22	17	15
D424-797	25.0	37.7	21.8	25.5	24.6	15.6	13	25	15	16	1
D413-923	24.7	35.3	24.7	24.1	28.4	11.2	20	23	21	7	23
D438-1012	23.1	27.2	34.7	21.0	20.2	12.4	25	11	25	23	19
Mean	27.4	37.5	34.2	26.2	26.1	13.2					
Bu. Nec. for Sig. (5%)		3.5	5.9	6.9	5.5	2.2					
Coef. of Var.(%)		6.7	12.0	18.4	15.6	9.2					

EFFECT OF LOCATION ON COMPOSITION

Average chemical composition of soybean varieties and strains at each selection nursery location would be of importance in evaluating individual strains. The most desirable way of obtaining this information for the uniform nurseries would be to analyze each strain at each location in the area where the nursery is grown. Since this would entail the analysis of many samples it appears more feasible to analyze composites. The strain composites were prepared by including equal weights of seed from each location where that group was grown. These composition data have been presented in the preceding sections and give a satisfactory estimate of the performance of the strains in the area of their adaptation.

Group composites were prepared for each location by taking equal weights of seed from each strain in the test. These composites furnish information on the effect of location on chemical composition of soybean seed. Table 42 gives the chemical analysis of the location composites for the 1946 season and for the two-year and three-year means. As the same strains within each group are grown at each location, the chemical analyses give comparable information between locations. Previous studies have shown varieties x locations interaction to be low for percent protein, percent oil, and iodine number of oil, within the area of adaptation of the strains.

Table 42: Chemical composition of soybean seed grown at each of the Uniform Test locations for 1946, the two-year means for 1945-46, and the three-year means for 1944-46 (composite sample or mean of all strains grown in each respective Group Test).

Location	1946			Two-Year Mean			Three-Year Mean		
	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
Group IV-S (Mean of 6 strains in 1946, 9 strains in 1945)									
Coweta, Okla.	41.6	20.3	132.5	39.9	21.7	131.0	39.7	21.6	130.7
Stillwater, Okla.	45.5	18.9	127.5	42.2	19.9	127.2	43.3	19.5	125.0
Nowata, Okla.	45.1	18.2	130.7	-	-	-	-	-	-
Lubbock, Texas	43.4	20.7	128.3	42.7	20.6	126.7	42.3	20.6	126.4
Stuttgart, Ark.	43.5	20.8	132.9	-	-	-	-	-	-
Muskogee, Okla.	41.1	19.8	128.3	-	-	-	-	-	-
Chillicothe,Tex.	44.7	20.4	131.2	-	-	-	-	-	-
Fayetteville,Ark.	46.2	19.0	132.0	-	-	-	-	-	-
Vinita, Okla.	48.4	17.3	130.3	-	-	-	-	-	-
Jackson, Tenn.	39.9	22.2	136.1	38.4	22.8	133.5	39.6	22.1	130.0
Orange, Va.	39.8	22.2	135.2	39.7	21.8	133.7	40.3	21.7	132.7
Charlotte, Va.	41.2	20.1	133.0	-	-	-	-	-	-
Knoxville, Tenn.	43.8	20.5	132.1	41.4	21.1	130.6	42.8	20.6	129.7
Blacksburg, Va.	39.6	20.3	134.2	40.4	20.2	133.1	-	-	-
Crossville,Tenn.	40.6	20.9	137.3	38.5	21.9	134.5	39.4	21.6	134.7
Sikeston, Mo.	41.2	21.0	134.3	41.7	20.9	131.6	43.1	20.4	130.3
Stoneville, Miss.	41.6	20.1	134.5	42.7	20.0	133.8	41.8	20.4	132.1
Tunica, Miss.	41.4	20.9	132.1	41.0	21.1	129.4	40.9	21.2	130.1
Dunleith, Miss.	43.5	19.6	133.5	-	-	-	-	-	-
Opelousas, La.	45.2	20.8	133.8	44.1	20.9	130.9	43.3	21.3	129.1
Baton Rouge, La.	44.3	20.7	131.5	42.9	21.1	131.7	43.2	21.0	129.8
Group VI (Mean of 11 strains in 1945, 9 strains in 1946)									
Coweta, Okla.	41.6	20.3	132.5	40.9	20.1	133.0	41.0	20.1	132.3
Lubbock, Texas	42.6	20.5	132.1	43.5	19.3	131.1	43.0	19.5	130.1
Stillwater, Okla.	45.5	18.9	130.1	44.8	18.9	128.5	45.9	18.5	127.2
Stuttgart, Ark.	44.3	21.0	132.2	44.8	20.7	130.7	44.6	20.7	130.0
Fayetteville,Ark.	46.2	19.8	132.0	44.3	20.0	132.3	44.4	19.4	130.8
Muskogee, Okla.	41.8	20.3	128.9	-	-	-	-	-	-
Heavener, Okla.	45.8	19.0	127.0	43.9	19.7	132.4	42.7	20.0	127.4
Chillicothe, Tex.	46.2	18.5	136.5	-	-	-	-	-	-
Miller County,Ark.	32.7	23.6	137.1	38.1	21.8	133.7	37.4	22.3	131.8
Crossville, Ala.	43.2	20.0	138.0	-	-	-	-	-	-
Jackson, Tenn.	40.3	21.9	136.0	38.5	22.2	134.5	39.0	21.7	132.8
Bowling Green,Va.	32.9	23.4	141.4	-	-	-	-	-	-
Knoxville, Tenn.	44.8	19.5	132.5	43.4	19.9	131.3	43.1	20.2	132.3
Belle Mina, Ala.	39.4	22.2	135.9	-	-	-	-	-	-
Crossville,Tenn.	40.6	20.1	139.9	40.2	20.4	137.2	41.0	20.0	137.1
Watkinsville,Ga.	45.3	20.0	131.5	43.0	20.5	129.3	42.4	21.1	129.9

Table 42: (Continued)

	Percentage of Protein	Percentage of Oil	Iodine number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
Group VI (Continued)									
Clarkedale, Ark.	39.4	21.6	134.0	39.8	20.9	134.0	40.4	20.7	132.9
Marianna, Ark.	40.0	21.6	133.2	39.3	21.5	131.7	39.9	21.0	132.6
Sikeston, Mo.	41.3	20.0	135.5	42.0	20.0	133.9	-	-	-
Anchorage, Miss.	40.6	21.0	135.7	41.5	21.2	133.1	41.8	20.6	131.1
Stoneville, Miss.	42.2	19.8	138.2	44.0	18.9	136.8	42.4	19.5	135.5
Dunleith, Miss.	42.5	20.0	135.1	-	-	-	-	-	-
Winchester, Ark.	41.6	20.9	130.6	41.2	21.1	129.6	41.3	21.1	129.6
Tunica, Miss.	39.8	21.7	133.3	39.7	21.7	132.2	40.5	20.9	132.1
Hamburg, La.	46.5	19.1	134.6	-	-	-	-	-	-
Baton Rouge, La.	44.4	20.6	134.5	44.3	21.1	133.3	43.8	20.0	132.5
Melrose, La.	41.7	20.6	134.7						
McCullers, N.C.	42.6	21.1	138.8	42.8	20.7	135.3	45.2	19.8	134.3
Plymouth, N.C.	45.4	19.1	135.8	45.2	19.0	134.5	45.7	18.8	134.2
Tallassee, Ala.[1]	39.0	22.9	132.8	39.1	22.4	130.6	39.5	22.3	130.8
Monetta, S.C.	45.4	19.8	128.2	43.9	20.6	129.8	44.2	20.3	129.0
Group VII (Mean of ten strains 1945 and 1946)									
Stuttgart, Ark.[2]	43.1	20.0	132.8	43.8	19.7	132.6	43.7	19.8	132.0
Chillicothe, Tex.	43.8	18.7	138.3	-	-	-	-	-	-
Fayetteville, Ark.	46.0	18.7	134.4	43.7	18.9	135.8	43.8	18.6	134.2
Miller County, Ark.	33.9	23.1	137.9	39.1	21.2	135.4	38.6	21.2	133.0
Clemson, S. C.	41.6	20.6	136.7	41.7	20.2	133.3	41.8	20.2	134.3
Crossville, Ala.	42.3	18.8	138.8	-	-	-	-	-	-
State College, Miss.	42.8	19.2	134.3	43.5	19.2	132.2	43.7	18.7	132.5
Experiment, Ga.	39.4	20.8	134.6	40.4	20.5	132.8	41.0	20.3	133.2
Bolle Mina, Ala.	39.6	19.7	136.2	-	-	-	-	-	-
Watkinsville, Ga.	43.0	19.5	132.8	42.6	20.1	132.0	40.9	20.4	132.7
Stoneville, Miss.	42.5	19.2	137.3	43.0	18.5	135.9	42.8	18.8	134.7
Clarkedale, Ark.	40.4	20.4	135.4	41.1	19.6	135.5	41.3	19.6	135.1
Raymond, Miss.	41.0	21.0	134.6	42.3	20.4	131.9	-	-	-
Winchester, Ark.	40.2	20.9	132.6	43.5	20.2	131.7	41.1	20.3	131.8
Baton Rouge, La.	45.5	19.4	135.1	46.1	18.4	132.5	45.5	18.0	132.4
Marianna, Ark.[2]	39.7	20.4	135.2	39.0	20.4	134.8	40.2	19.6	135.1
Hamburg, La.	45.7	18.4	136.0	45.9	17.8	134.3	-	-	-
Melrose, La.	40.0	21.4	135.1	-	-	-	-	-	-
Blackville, S. C.	36.8	22.1	136.5	38.5	21.1	134.3	-	-	-
Tallassee, Ala.[1]	40.2	22.5	134.1	41.6	21.6	131.7	-	-	-
Tifton, Ga.	46.1	18.5	137.2	45.3	19.4	132.8	43.5	19.4	132.3
Richmond Hill, Ga.	43.4	20.6	133.0	45.0	20.1	128.9	45.3	19.7	129.2

Table 42: (Continued)

	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil	Percentage of Protein	Percentage of Oil	Iodine Number of Oil
Group VII (Continued)									
Holland, Va.	45.9	18.4	137.3						
McCullers, N.C.	44.2	19.4	139.2	43.7	19.2	135.5	44.0	19.1	135.5
Plymouth, N.C.	45.4	18.4	136.3	45.6	18.2	135.1	45.9	18.0	135.3
Williamsburg, Va.	44.0	18.9	140.0	-	-	-	-	-	-
Willard, N.C.	43.2	19.8	135.7	44.3	19.3	132.2	43.9	19.2	133.3
Florence, S.C.	42.9	19.6	135.1	42.4	19.5	133.3	42.5	19.5	133.8
Group VIII (mean of 13 strains in 1945, 9 strains in 1946)									
Stuttgart, Ark.	43.1	18.7	137.4	43.9	18.4	137.0	44.0	18.7	135.3
Miller County, Ark.	39.9	20.4	137.2	42.3	19.2	136.7	41.9	19.4	135.0
Chillicothe, Tex.	45.8	17.7	137.8	-	-	-	-	-	-
Crossville, Ala.	44.9	16.6	142.8	-	-	-	-	-	-
Experiment, Ga.	40.0	19.4	138.9	40.1	19.9	136.7	40.9	19.7	136.1
Belle Mina, Ala.	40.7	18.3	141.1		-	-	-	-	-
Baton Rouge, La.	44.5	19.2	135.8	45.8	18.5	133.9	-	-	-
Stoneville, Miss.	43.5	18.4	136.1	43.7	18.3	136.3	43.5	18.8	134.9
Opelousas, La.	47.3	18.1	135.1	-	-	-	-	-	-
Raymond, Miss.	43.0	18.3	131.5	43.7	18.7	131.4	43.7	19.0	131.0
Marianna, Ark.	40.0	18.9	138.5	40.2	18.5	138.7	41.2	18.4	137.7
Clarkedale, Ark.	44.8	16.2	139.6	-	-	-	-	-	-
Tifton, Ga.	46.4	18.0	136.0	46.9	18.3	132.4	46.7	18.8	132.0
Richmond Hill, Ga.	43.2	19.6	133.7	44.3	19.5	132.3	44.6	19.5	131.8
McCullers, N.C.	45.9	17.2	141.8	44.7	17.4	139.2	44.0	17.9	138.1
Florence, S.C.	40.9	18.7	137.3	41.3	18.2	137.1	-	-	-

1/ Auburn, Ala. data used for 1944 and 1945, Tallassee data 1946.
2/ Mean of 11 strains in 1945 and 9 strains in 1946.

SOYBEAN DISEASE INVESTIGATIONS IN THE SOUTHERN STATES

by Howard W. Johnson[1/]

INTRODUCTION

A program of cooperative soybean disease research has been developed in the southern states by the Division of Forage Crops and Diseases, and the work has been closely integrated with that of the U. S. Regional Soybean Laboratory and of the cooperating personnel of the state agricultural experiment stations in the region. In 1946, as in the previous years, major attention of the pathologists was directed to rating the susceptibility and resistance to diseases of the strains and varieties in the uniform soybean test groups. The direct participation of the pathologists in this phase of the breeding and improvement work, as well as in the earlier phases when selections are being evaluated in only one locality, seems desirable and will be continued. In addition to participating in the breeding program with soybeans, the pathologists conducted a regional uniform soybean seed treatment test at several southern locations in 1946 and in North Carolina, soybeans were dusted with copper dust in an attempt to control foliage diseases. Artificial inoculations were made with several soybean pathogenes to learn more about varietal reaction to diseases and the general biology of the parasite.

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1/ The author is indebted to the state and federal employees cooperating in these investigations for much of the information summarized in this annual report. Their generous cooperation has contributed greatly to the progress that has been made in getting underway a coordinated program of soybean disease investigations in the southern states.

EXPERIMENTAL DATA

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.

The disease ratings made on the strains in the Uniform Soybean Tests, Groups IV-S, VI, VII, and VIII, at a number of locations in the South in 1946 are summarized in tables 1 to 4. These data show that CNS, Ogden, Dortchsoy No. 2, Palmetto, Cherokee, and Louisiana Green are the varieties most resistant to the bacterial pustule-blight complex. Wildfire, another bacterial disease, was more prevalent in the South in 1946 than in any previous year, and the varieties named above also showed the least wildfire infection. Frogeye, a fungus disease, was also severe in several nurseries in 1946, and Roanoke, Volstate, Woods Yellow, Burdette No. 19, and Coker's Selection No. 433 appeared to be somewhat more resistant to this disease than the other strains in the uniform nurseries. Mosaic, a virus disease, was present in most of the nurseries and was quite prevalent in some varieties, but appeared to be causing little damage. Downy mildew, another fungus disease, occurred at some locations but not in epidemic proportions.

In an inoculation test made by S. G. Lehman in the greenhouse at Raleigh, N. C., with the organisms causing bacterial pustule and bacterial blight on 54 named varieties and hybrid selections, none of the named varieties were entirely free of bacterial pustule or bactorial blight lesions. Cherokee showed the least bacterial pustule and very little bacterial blight, with Ogden and Palmetto also showing considerable resistance to these diseases. In this test, CNS showed more bacterial pustule and considerably more bacterial blight than the three varieties named above. Several of the North Carolina hybrid selections showed resistance to bacterial pustule and bacterial blight equal to Cherokee, Ogden, and Palmetto.

At McCullers, N. C., in 1946, thirty named varieties and twenty numbered selections were planted on a plot where nematode infested soybeans had grown in the preceding four years. When the roots were examined and rated for nematode infestation in September, Palmetto appeared to be the most resistant variety in the test. S-100, Volstate, and P.I. No. 88461 were other strains having low indices of infestation; while Laredo, Tokyo, Yelnando, (Coker's Selection No. 433), Gatan, Cherokee, Ogden, Roanoke, Burdette 13, and Burdette 20 were moderately susceptible.

Inoculation experiments made by J. L. Weimer in field plots at Experiment, Georgia, with the southern blight fungus, Sclerotium rolfsii, showed that none of the 400 selections and 47 previously untested varieties of soybeans in the 1946 test possess much, if any, resistance to this disease if the plants are brought into contact with the causal fungus under conditions suitable for infection. This is particularly true in the early part of the plants' growing period.

Table 1: Summary of disease ratings of the strains of the Uniform Soybean Test, Group IV-S, 1946. 1/

Locations	S-100	C101	Patoka	S55-19	Gibson	Hong-kong	Lincoln
			Bacterial Pustule-Blight				
Knoxville, Tenn.	3.00	3.00	2.00	2.50	3.00	2.00	2.00
Crossville, Tenn.	1.00	2.00	2.00	1.00	3.00	2.00	1.00
Stoneville, Miss.	3.50	3.50	3.50	3.50	3.50	3.00	4.00
Crowley, La.	5.00	4.00	4.50	5.00	3.50	3.50	-
Hamburg, La.	4.00	3.66	3.66	5.00	4.33	4.00	-
			Wildfire				
Stoneville, Miss.	4.25	2.75	2.50	3.25	5.00	2.00	1.50
Crowley, La.	1.00	0.00	0.00	0.00	0.50	0.00	-
Hamburg, La.	0.66	0.33	0.00	0.00	0.00	0.00	-
			Progeye				
Stoneville, Miss.	1.00	1.75	1.00	1.25	1.25	1.50	0.75
Crowley, La.	0.75	4.50	2.00	1.75	4.50	3.00	-
Hamburg, La.	2.00	3.66	2.33	2.33	4.00	3.66	

1/ Dicease ratings at Knoxville and Crossville, Tenn. made by O.H. Long; at Stoneville, Miss. by J.L. Weimer; at Crowley and Hamburg, La. by S.J.P. Chilton and R.K. Speairs. All ratings made on a 0 to 5 scale for susceptibility.

Table 2: Summary of the disease ratings for the strains of the Uniform Test, Group VI, 1946[1/]

Location	Strain								
	Dortchsoy No. 2	Ogden	Burdette No. 20	2-40A	Burdette No. 19	Dortchsoy No. 7	Rose Non-Pop	Burdette No. 13	Arksoy 2913
Bacterial Pustule-Blight									
McCullers, N.C.[2/]	1.00	1.00	3.00	3.50	4.00	4.00	3.50	3.50	4.00
Plymouth, N.C.[2/]	1.00	1.00	2.00	3.00	3.00	3.00	2.00	2.00	3.00
Monetta, S.C.[2/]	1.00	1.00	4.00	4.00	3.00	4.00	4.00	4.00	4.00
Tallassee, Ala.	0.00	0.25	0.50	1.00	0.50	1.25	0.75	1.25	1.00
Fairhope, Ala.	1.00	1.00	3.75	3.75	5.00	4.25	3.00	3.50	4.75
Knoxville, Tenn.	1.00	1.00	2.50	2.50	3.00	4.00	2.50	3.00	3.00
Crossville, Tenn.	0.00	0.00	1.00	1.00	2.00	3.00	1.00	3.00	2.00
Jackson, Tenn.	0.00	1.00	2.00	3.00	2.00	3.00	3.00	3.00	3.00
Watkinsville, Ga.	2.25	2.00	1.50	1.25	1.25	1.75	1.25	2.00	2.50
Stoneville, Miss.	1.63	1.25	3.13	3.38	3.25	3.50	3.63	3.63	3.13
Baton Rouge, La.	2.25	3.00	3.50	4.25	5.00	4.50	4.25	4.00	4.00
Crowley, La.	3.50	3.75	1.50	5.00	5.00	5.00	5.00	4.50	5.00
Hamburg, La.	1.50	2.00	2.25	3.25	4.00	4.50	3.25	3.75	4.25
Melrose, La.	3.00	3.00	2.00	3.66	4.00	4.00	3.33	3.66	3.66
Opelousas, La.	2.25	2.50	2.25	4.50	4.75	5.00	4.50	4.50	4.75
Wildfire									
Watkinsville, Ga.	1.25	1.00	0.75	1.25	1.75	1.75	1.75	1.75	1.00
Stoneville, Miss.	1.00	0.88	2.50	2.88	3.38	3.50	3.38	3.00	3.00
Baton Rouge, La.	1.00	0.50	1.00	1.00	1.00	1.25	1.00	1.25	1.00
Crowley, La.	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.00	0.25
Hamburg, La.	0.25	0.00	0.25	0.50	0.25	0.50	0.75	1.25	0.50
Melrose, La.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00
Opelousas, La.	0.50	0.50	0.25	0.25	0.50	0.25	0.25	1.00	0.00

Table 2: (Continued)

Location	STRAIN								
	Dortchsoy No. 2	Ogden	Burdette No. 20	2-40A	Burdette No. 19	Dortchsoy No. 7	Rose Non-Pop	Burdette No. 13	Arksoy 2913
					Frogeye				
Fairhope, Ala.	0.00	1.00	0.75	0.00	0.00	0.00	1.25	0.00	0.00
Stoneville, Miss.	0.63	1.13	1.25	0.38	0.13	0.13	1.25	0.75	0.38
Baton Rouge, La.	1.00	2.50	4.50	0.75	0.25	0.75	3.25	0.75	0.75
Crowley, La.	0.00	2.50	5.00	1.25	0.00	0.00	4.50	0.00	0.25
Hamburg, La.	0.25	2.25	5.00	0.75	0.25	0.50	4.00	0.25	0.25
Melrose, La.	0.00	2.33	4.00	0.00	0.33	0.00	0.33	0.00	0.00
Opelousas, La.	0.50	2.00	4.75	0.00	0.25	0.00	2.50	0.00	0.00
					Mosaic				
Tallassee, Ala.	1.00	1.00	1.75	1.25	1.50	1.75	3.00	2.25	2.00
Fairhope, Ala.	0.25	0.25	1.00	0.00	0.00	0.00	0.75	1.25	0.00
Stoneville, Miss.	0.50	0.75	0.38	0.63	0.38	0.38	1.00	1.00	0.50

1/ Disease ratings at McCullers, N.C., Plymouth, N.C. and Monetta, S.C. made by E.E. Hartwig; at Knoxville, Crossville and Jackson, Tenn. by O.H. Long; at Tallassee, Ala., Fairhope, Ala., Watkinsville, Ga., Stoneville, Miss. and Baton Rouge, La. by J.L. Weimer; at Crowley, Hamburg, Melrose and Opelousas, La. by S.J.P. Chilton and R.K. Speairs. All ratings made on a 0 to 5 scale for susceptibility.

2/ Ratings made at these locations are for bacterial pustule and wildfire combined, with bacterial blight excluded.

Table 3. Summary of disease ratings of the strains of the Uniform Soybean Test, Group VII, 1946[1]

Location	STRAIN											
	Roanoke	Ogden	Volstate	F.C. 30261-1	Woods Yellow	P.I. 54618 -4-1-2	N44 -774	Palmetto	CNS	N42 -26	N44 -92	Tanner
				Bacterial Pustule-Blight								
McCullers, N.C.[2]	1.50	1.00	1.50	1.50	1.00	2.40	1.25	1.00	0.00	1.75	1.00	2.90
Plymouth, N.C.[2]	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	0.00	2.00	1.00	2.00
Tallassee, Ala.	1.00	0.00	0.50	0.00	0.50	0.00	1.00	0.25	0.00	0.75	0.50	1.25
Fairhope, Ala.	2.50	1.75	3.00	3.25	2.75	-	2.50	1.50	1.00	3.00	2.75	3.00
Tifton, Ga.	4.00	2.00	4.00	3.67	4.00	-	2.75	2.00	2.00	3.00	3.00	3.00
Blackville, S.C.	2.88	2.25	2.25	-	2.00	-	3.00	1.63	1.25	2.75	2.25	3.00
Experiment, Ga.	1.50	1.00	1.25	1.25	1.50	1.50	1.00	1.00	1.00	1.75	1.50	1.25
Watkinsville, Ga.	1.50	1.25	2.25	-	1.00	-	2.00	1.00	1.00	1.50	1.00	1.25
Stoneville, Miss.	3.88	1.25	3.88	-	3.13	3.25	2.50	1.38	1.00	2.13	2.00	2.38
Baton Rouge, La.	4.00	2.50	4.00	3.67	4.25	4.00	2.75	1.00	2.00	3.50	2.75	3.25
Crowley, La.	5.00	3.25	5.00	-	3.75	-	3.00	1.25	1.25	2.25	4.50	2.50
Hamburg, La.	3.75	2.25	3.25	-	3.25	-	2.25	1.25	1.00	1.75	1.75	2.00
Melrose, La.	4.00	3.50	3.75	-	2.75	-	3.00	1.25	1.75	1.50	2.50	1.25
Opelousas, La.	4.50	2.75	4.50	-	4.25	-	2.50	1.00	2.00	1.50	1.50	3.25
					Wildfire							
Tifton, Ga.	1.50	0.25	1.50	0.25	1.75	-	0.75	0.25	0.25	1.50	1.00	1.25
Watkinsville, Ga.	2.25	1.00	1.50	-	0.50	-	0.50	0.50	0.25	1.00	0.50	0.75
Stoneville, Miss.	2.75	0.25	2.50	-	2.50	2.50	1.00	0.63	0.63	1.38	1.00	1.38
Baton Rouge, La.	1.00	0.50	1.25	1.00	1.25	1.00	0.75	0.50	1.00	1.00	1.00	1.00
Crowley, La.	0.75	0.25	0.00	-	1.25	-	0.50	0.00	0.00	0.00	0.00	0.00
Hamburg, La.	0.50	0.25	0.00	-	0.25	-	0.00	0.00	0.00	0.00	0.50	0.25
Melrose, La.	0.00	0.00	0.00	-	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Opelousas, La.	0.75	0.00	0.75	-	1.25	-	0.25	0.00	0.50	0.00	0.25	0.50

Table 3: (Continued)

Location	STRAINS											
	Roanoke	Ogden	Volstate	F.C. 30261 -1	Woods Yellow	P.I. 54618 -4-1-2	N44 -774	Pal- metto	CNS	N42 -26	N44 -92	Tanner
					Frogeye							
Fairhope, Ala.	0.00	1.00	0.25	0.25	0.00	-	0.75	0.25	0.25	1.00	1.00	1.00
Blackville, S.C.	0.25	0.00	0.00	-	0.25	-	0.00	0.00	0.25	0.00	0.00	0.25
Stoneville, Miss.	0.13	0.88	0.25	-	0.50	0.38	0.75	0.38	0.25	1.88	1.63	1.88
Baton Rouge, La.	0.25	2.00	0.25	0.00	0.75	0.00	2.25	5.00	3.00	4.25	3.50	4.75
Crowley, La.	0.00	2.50	0.00	-	0.00	-	2.00	3.25	2.25	5.00	3.50	5.00
Hamburg, La.	0.75	2.25	0.75	-	0.75	-	2.50	3.50	2.75	5.00	3.50	4.50
Melrose, La.	0.00	1.25	0.00	-	0.00	-	2.00	2.00	2.50	4.00	2.75	3.50
Opelousas, La.	0.75	2.25	0.75	-	0.00	-	3.00	4.00	2.75	5.00	4.25	3.50
					Mosaic							
Tallassee, Ala.	1.75	1.00	1.25	-	1.50	-	1.75	2.50	2.50	1.50	1.50	1.50
Fairhope, Ala.	0.50	0.25	0.50	0.50	0.75	-	2.25	2.25	1.50	1.50	2.00	2.75
Stoneville, Miss.	0.75	0.38	0.75	-	0.88	0.75	1.38	2.25	1.00	0.75	0.75	1.88
Baton Rouge, La.	0.00	0.00	0.00	-	0.25	0.00	0.25	1.00	0.00	0.00	0.25	0.75
					Downy Mildew							
Tallassee, Ala.	0.50	0.00	0.75	-	1.25	-	0.25	0.00	0.25	0.25	0.00	0.00
Fairhope, Ala.	0.50	0.25	0.25	0.00	1.00	-	0.25	0.25	0.75	0.00	0.25	0.00
Blackville, S.C.	0.60	1.00	1.33	-	2.75	-	1.00	0.80	1.67	1.00	1.67	1.50
Stoneville, Miss.	0.13	0.00	0.25	-	0.75	0.13	0.13	0.00	0.38	0.00	0.00	0.00
Baton Rouge, La.	0.00	0.00	0.00	-	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00

1/ Disease ratings at McCullers and Plymouth, N.C. made by E.E. Hartwig; at Tallassee, Ala., Fairhope, Ala., Tifton, Ga., Blackville, S.C., Experiment, Ga., Watkinsville, Ga., Stoneville, Miss., and Baton Rouge, La. by J.L. Weimer; at Crowley, Hamburg, Melrose and Opelousas, La. by S.J.P. Chilton and R.K. Spears. All ratings made on a 0 to 5 scale for susceptibility.

2/ Ratings made at these locations are for bacterial pustule and wildfire combined, with bacterial blight excluded.

Table 4: Summary of disease ratings of the strains of the Uniform Soybean Test, Group VIII, 1946[1/]

Location	STRAIN								
	Mamotan	Nanda	Mamloxi	Acadian	Louisiana Green	Coker Sel. 433	Gatan	Cherokee	Seminole
				Bacterial Pustule-Blight					
McCullers, N.C.[2/]	1.50	2.35	2.25	3.15	1.35	2.75	2.00	1.00	1.50
Tallassee, Ala.	1.00	1.75	1.25	0.75	0.50	1.50	1.25	0.50	1.00
Fairhope, Ala.	3.00	3.00	2.75	3.00	1.00	3.00	3.00	1.50	2.75
Tifton, Ga.	3.50	3.00	3.25	3.00	1.00	3.00	3.00	2.00	2.75
Experiment, Ga.	2.00	2.25	2.75	2.25	1.00	2.25	2.00	1.00	2.00
Stoneville, Miss.	2.75	2.88	2.88	2.38	1.00	2.75	2.13	1.38	2.50
Baton Rouge, La.	3.75	3.50	3.25	2.00	1.00	3.25	3.00	2.25	2.50
Crowley, La.	3.00	3.25	3.00	3.25	0.75	2.75	3.25	2.25	2.50
Hamburg, La.	2.25	2.75	2.00	2.25	1.25	2.25	1.75	1.25	2.00
Melrose, La.	2.00	2.75	2.00	2.00	1.50	2.25	1.75	1.75	2.66
Opelousas, La.	2.75	3.00	2.50	2.75	1.25	3.00	2.75	2.25	2.75
				Wildfire					
Fairhope, Ala.	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00
Tifton, Ga.	1.00	2.00	1.50	1.63	0.50	1.75	0.75	0.50	0.63
Stoneville, Miss.	2.13	2.38	1.38	2.63	0.75	2.00	1.00	0.50	1.25
Baton Rouge, La.	1.00	1.00	1.00	1.00	1.00	1.25	1.00	0.50	1.00
Crowley, La.	0.00	2.25	1.50	2.00	0.25	1.50	0.25	0.25	0.25
Hamburg, La.	0.00	0.75	0.25	0.25	0.00	1.50	0.00	0.00	0.00
Melrose, La.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Opelousas, La.	1.00	0.25	1.00	0.75	0.00	1.75	0.00	0.00	0.00

Table 4: (Continued)

Location	STRAIN								
	Mamotan	Nanda	Mamloxi	Acadian	Louisiana Green	Coker Sel. 433	Gatan	Cherokee	Seminole
					Frogeye				
Fairhope, Ala.	0.50	0.00	0.00	0.75	0.00	0.00	0.75	1.00	0.50
Stoneville, Miss.	0.13	0.38	0.50	0.63	0.00	0.13	0.38	0.88	0.50
Baton Rouge, La.	0.50	0.75	0.75	5.00	1.00	0.00	5.00	3.00	1.00
Crowley, La.	0.00	0.00	0.50	3.25	0.25	0.00	3.50	3.50	2.00
Hamburg, La.	1.25	0.75	1.25	2.75	1.00	0.00	2.75	3.25	2.50
Melrose, La.	1.00	0.25	0.25	1.66	1.00	0.00	3.50	1.75	0.66
Opelousas, La.	0.25	0.50	1.50	3.00	0.25	0.00	3.00	3.50	3.00
					Mosaic				
Tallassee, Ala.	1.25	1.25	1.25	2.00	2.00	0.75	1.00	2.50	1.00
Fairhope, Ala.	2.00	1.00	2.25	3.00	2.25	1.00	2.00	1.25	2.00
Stoneville, Miss.	1.00	1.13	0.63	1.12	2.00	0.75	1.13	1.25	1.88
Baton Rouge, La.	0.00	1.00	1.00	1.25	2.25	0.75	1.25	1.00	3.00
					Downy Mildew				
Tallassee, Ala.	1.00	0.75	1.00	0.00	1.00	0.50	0.00	0.00	0.00
Fairhope, Ala.	0.25	1.00	1.00	0.00	0.75	0.00	0.00	0.25	0.25
Stoneville, Miss.	0.38	0.38	1.38	0.13	0.00	0.13	0.00	0.13	0.00
Baton Rouge, La.	0.25	0.50	1.00	0.00	0.25	0.00	0.25	0.00	0.25

1/ Disease ratings at McCullers, N.C. made by E.E. Hartwig; at Tallassee, Ala., Fairhope, Ala., Tifton, Ga., Experiment, Ga., Stoneville, Miss., and Baton Rouge, La. by J.L. Weimer at Crowley, Hamburg, Melrose, and Opelousas, La. by S.J.P. Chilton and R.K. Spears. All ratings made on a 0 to 5 scale for susceptibility.

2/ Ratings made at this location are for bacterial pustule and wildfire combined, with bacterial blight excluded.

The average disease ratings of the strains in the Uniform Soybean Tests, Groups IV-S, VI, VII, and VIII, for the three years, 1944, 1945, and 1946, are summarized in tables 5 to 8. These data were collected on survey trips in Georgia, Alabama, Mississippi, Louisiana, and South Carolina by J. L. Weimer, and have been summarized by him in a manuscript entitled "Disease Survey of Soybean Nurseries in the South", that is to be submitted for publication in the near future. Disease ratings were made on one or two dates each year at any given location, and the number of locations included in the averages varies from group to group and from year to year. All ratings were made on a scale ranging from 0 to 5 for susceptibility.

The data presented in table 5 shows that there is little, if any, disease resistance in the material of early maturity. With increasing interest in early-maturing soybeans for parts of the South, it appears that the incorporating of disease resistance in an early-maturing variety has importance. It is suggested that the progeny from such crosses as S-100 x CNS be watched carefully in 1947 and 1948 for plants exhibiting disease resistance and early maturity. The data presented in table 6 shows that Ogden and probably Dortchsoy No. 2 are more resistant than the other strains in Group VI. The data presented in table 7 show that Ogden, CNS, and Palmetto are resistant in Group VII. The data presented in table 8 show that Cherokee and probably Louisiana Green are more disease resistant than the other strains in Group VIII.

Table 5: Summary of the average disease ratings of the strains of the Uniform Test, Group IV-S, for 1944, 1945, and 1946[1]

STRAIN	PUSTULE-BLIGHT			WILDFIRE			FROGEYE			DOWNY MILDEW		
	1944	1945	1946	1944	1945	1946	1944	1945	1946	1944	1945	1946
S-100	2.3	2.4	4.0	1.0	2.5	3.6	-	-	1.25	0.5	0.8	0.5
C101	1.9	2.4	3.4	1.0	1.3	2.9	-	-	3.30	0.3	0.4	0.0
Patoka	2.0	2.0	3.5	0.8	0.8	2.3	-	-	1.78	0.8	2.2	0.3
S-55-19	-	2.5	3.5	-	0.8	3.3	-	-	1.78	-	2.2	0.0
Gibson	2.4	2.8	3.7	1.0	3.0	3.9	-	-	3.25	0.3	1.0	0.0
Hongkong	-	2.0	3.0	-	0.0	2.0	-	-	2.72	-	1.0	0.0
Lincoln	-	-	3.9	-	-	1.5	-	-	0.75	-	-	0.0
Macoupin	1.9	2.6	-	1.0	1.8	-	-	-	-	0.8	0.0	-
Boone	2.1	2.6	-	1.0	1.5	-	-	-	-	0.8	2.4	-
Chief	1.4	2.2	-	1.0	2.0	-	-	-	-	0.0	0.0	-
S55-10	2.1	2.0	-	1.0	1.8	-	-	-	-	1.0	2.8	-
S55-35	2.2	2.0	-	0.8	0.8	-	-	-	-	1.8	2.0	-

1/Ratings, except for frogeye, made and summarized by J. L. Weimer. Frogeye ratings at Stoneville, Mississippi, made by P. R. Henson, at Crowley and Hamburg, Louisiana, by S. J. P. Chilton and R. K. Spears. All ratings made on a 0 to 5 scale for susceptibility.

Table 6: Summary of average disease ratings of the strains of the Uniform Soybean Test, Group VI, for 1944, 1945, and 1946[1/]

STRAIN	PUSTULE-BLIGHT			WILDFIRE			FROGEYE			DOWNY MILDEW		
	1944	1945	1946	1944	1945	1946	1944	1945	1946	1944	1945	1946
Dortchsoy 2	-	-	1.5	-	-	0.9	-	-	0.6	-	-	0.3
Ogden	1.2	2.0	1.5	0.8	0.3	0.7	0.8	0.8	1.4	-	0.6	0.4
Burdette 20	-	-	2.5	-	-	1.4	-	-	1.9	-	-	0.2
2-40A	1.7	3.2	2.8	1.0	0.5	1.6	0.5	0.3	0.4	-	0.0	0.1
Burdette 19	-	-	3.0	-	-	1.9	-	-	0.1	-	-	0.2
Dortchsoy 7	-	-	3.1	-	-	2.0	-	-	0.3	-	-	0.1
Rose Non-Pop	-	3.0	2.8	-	1.1	2.0	-	1.0	1.6	-	0.0	0.2
Burdette 13	-	-	3.0	-	-	1.8	-	-	0.6	-	-	0.2
Arksoy 2913	1.7	3.2	3.1	0.9	0.7	1.9	0.0	0.3	0.4	-	0.2	0.0
Ralsoy	1.8	3.3	-	0.9	0.7	-	0.3	0.3	-	-	0.8	-
Mamredo	2.1	3.3	-	1.0	0.7	-	0.8	0.7	-	-	0.2	-
Magnolia	1.7	3.0	-	1.0	0.5	-	0.0	0.9	-	-	0.3	-
Armredo	1.5	3.0	-	0.9	0.4	-	1.3	1.1	-	-	0.2	-
6-40M	1.9	3.4	-	1.0	0.4	-	0.3	0.4	-	-	0.1	-
P.I. 97066	1.5	2.7	-	0.8	0.5	-	1.5	1.2	-	-	0.0	-
Delsoy	-	3.0	-	-	0.9	-	-	1.2	-	-	0.0	-
N-41-39	1.8	-	-	0.9	-	-	1.0	-	-	-	-	-
26-39M	1.3	-	-	1.0	-	-	-	-	-	-	-	-

1/Ratings made and summarized by J. L. Weimer.
All ratings made on a 0 to 5 scale for susceptibility.

Table 7: Summary of average disease ratings of the strains of the Uniform Soybean Test, Group VII, for 1944, 1945, and 1946.[1]

Strain	PUSTULE-BLIGHT			WILDFIRE			FROGEYE			DOWNY MILDEW		
	1944	1945	1946	1944	1945	1946	1944	1945	1946	1944	1945	1946
N-44-92	-	-	2.0	-	-	0.8	-	-	1.3	-	-	0.4
Ogden	1.8	1.9	1.6	0.8	0.4	0.4	0.8	0.5	0.8	-	0.8	0.3
N-44-774	-	-	2.3	-	-	0.7	-	-	0.8	-	-	0.2
Roanoke	2.2	2.8	2.8	1.8	0.8	1.7	0.6	0.0	0.1	-	1.1	0.3
N-42-26	-	-	2.3	-	-	1.0	-	-	1.6	-	-	0.2
Woods Yellow	1.9	2.4	2.4	1.8	0.8	1.4	0.5	0.3	0.4	-	1.9	1.4
Volstate	2.1	2.7	2.7	1.3	0.8	1.5	0.3	0.0	0.3	-	1.1	0.5
C.N.S.	1.1	1.8	1.2	2.0	0.6	0.5	0.3	0.0	0.7	-	1.9	0.7
Palmetto	1.6	2.2	1.3	1.1	0.6	0.4	0.6	0.2	1.0	-	0.6	0.2
Red Tanner	-	-	2.4	-	-	1.0	-	-	1.6	-	-	0.1
F.C. 30261-1	-	-	2.2	-	-	0.4	-	-	0.1	-	-	0.0
P.I. 54618-4-1-2		-	2.1	-	-	2.3	-	-	0.3	-	-	0.1
Tenn. Non-Pop	2.3	-	-	1.5	-	-	1.3	-	-	-	-	-
Rose Non-Pop	2.4	-	-	0.6	-	-	1.0	-	-	-	-	-
Monetta	2.3	2.9	-	1.8	1.1	-	0.6	0.2	-	-	0.6	-
P.I. 85355	2.0	-	-	1.6	-	-	0.5	-	-	-	-	-
Missoy	1.9	2.5	-	1.5	1.0	-	1.4	1.0	-	-	0.4	-
P.I. 89775-A	2.3	3.0	-	1.5	1.0	-	1.7	1.5	-	-	0.6	-
Mamloxi	2.3	-	-	1.4	-	-	0.7	-	-	-	-	-
Auburn 1	2.3	-	-	1.3	-	-	0.3	-	-	-	-	-
Tokyo	1.9	-	-	1.3	-	-	0.6	-	-	-	-	-
26-39-M	-	2.5	-	-	0.8	-	-	0.2	-	-	1.9	-

[1] Ratings made and summarized by J.L. Weimer.
All ratings made on a 0 to 5 scale for susceptibility.

Table 6: Summary of average disease ratings of the strains of the Uniform Soybean Test, Group VIII, for 1944, 1945 and 1946.[1]

Strain	PUSTULE-BLIGHT			WILDFIRE			FROGEYE			DOWNY MILDEW		
	1944	1945	1946	1944	1945	1946	1944	1945	1946	1944	1945	1946
Mamotan	2.1	2.4	2.7	1.4	0.7	1.3	0.5	0.2	0.3	-	1.1	0.5
Nanda	2.4	2.9	2.8	1.6	0.9	1.6	0.5	0.1	0.4	-	0.9	0.6
Mamloxi	-	2.6	2.7	-	0.8	-	-	0.2	0.4	-	1.3	1.2
Acadian	2.2	2.8	2.3	0.8	0.9	1.6	0.8	0.3	1.8	-	0.1	0.1
La. Green	-	-	0.9	-	-	0.6	-	-	0.3	-	-	0.4
Coker 433	-	-	2.6	-	-	1.5	-	-	0.1	-	-	0.2
Gatan	1.8	2.6	2.4	1.4	0.6	0.7	1.3	0.6	1.9	-	0.1	0.1
Cherokee	1.6	1.9	1.4	0.8	0.2	0.4	1.0	0.6	1.4	-	0.4	0.1
Seminole	2.1	2.6	2.3	1.1	0.6	0.8	0.9	0.3	0.6	-	0.6	0.1
Woods Yellow	2.0	2.6	-	1.4	0.9	-	0.6	0.2	-	-	1.4	-
Dolsta	2.2	2.7	-	1.4	0.7	-	0.5	0.2	-	-	1.0	-
Pelican	2.5	2.8	-	1.2	1.2	-	0.6	0.2	-	-	0.3	-
Avoyelles	1.8	2.2	-	0.8	0.6	-	1.9	0.9	-	-	0.1	-
L.Z.	2.3	2.8	-	1.1	1.0	-	0.6	0.4	-	-	0.4	-
Red Tanner	-	3.0	-	-	0.7	-	-	1.0	-	-	0.0	-

[1] Ratings made and summarized by J.L. Weimer
All ratings made on a 0 to 5 scale for susceptibility.

a-4-3-10. LEAF AND STEM DISEASES OF SOYBEANS - studies of the organisms causing them and methods for their control.

Six applications of 7 percent copper dust on soybeans infested with bacterial pustule, bacterial blight and wildfire gave only minor reduction in the amount of diseased leaf surface, and no significant increase in yield at either of two locations in North Carolina in 1946. This is in marked contrast to results obtained in 1945 when significant reduction in disease and significant increases in yield were obtained by dusting. It is thought that the differences in disease control in the two years are due to the occurrence of less violent rainstorms in 1945, and perhaps also to the use of heavier dust applications in 1945 than in 1946. Dusting did not reduce the amount of purple seed discoloration in seed harvested from these plots.

Powdery mildew of soybeans was found at several locations in North Carolina in 1946, and the fungus was identified as a species of Microsphaera. It appears to resemble the Microsphaera that occurs commonly on annual lespedeza in North Carolina, but cross inoculations with these two powdery mildews failed to give infections. Greenhouse inoculation tests indicate high susceptibility for certain soybean varieties to soybean powdery mildew and immunity, or very high resistance for others.

In Louisiana in 1946, a fungus was isolated from soybean leaves with scattered irregular patches extending from the principle veins and has been tentatively identified as a species of Glomerella. This may prove to be a previously undescribed disease of soybeans. In addition, nine known diseases were observed on soybeans in Louisiana in 1946 as follows: bacterial pustule, bacterial blight, wildfire, frogeye, leafspot, southern blight, charcoal rot, phyllosticta leafspot, downy mildew, and mosaic.

Gross examination was made of 12 different seed lots from the 1945 Louisiana soybean seed harvest by random selection of 500 seeds from each lot. The variety S-100 showed the greatest number of spotted seed, 18.6 percent.

A culture of the tobacco wildfire organism from North Carolina was used to inoculate soybeans in the greenhouse at Baton Rouge, Louisiana. Lesions similar to the wildfire lesions observed on soybeans in field plots developed seven days after inoculations, thus showing that the tobacco race of the wildfire organism is pathogenic on soybeans.

a-4-3-11: ROOT AND CROWN DISEASES OF SOYBEANS - studies of the organism causing them and methods for their control.

The regional uniform soybean seed treatment test involving five different seed lots, part of each lot treated with Arasan and part untreated, were planted on three dates at Rocky Mount, N.C., and on one date at Plymouth, N.C. Seed treatment increased emergence of all five seed lots significantly at each planting date at Rocky Mount, and significant increases in emergence occurred with three seed lots at Plymouth. Increase in seedling emergence and survival was well above 100 percent in many instances and above 200 percent in a few instances. Increases in emergence resulting from seed treatment were higher at Rocky Mount where soil temperatures were low than at Plymouth where soil temperatures were relatively high. It is evident that seed treatment with Arasan was definitely beneficial in obtaining satisfactory stands with certain lots of soybean seed planted in North Carolina in the spring of 1946.

The regional uniform soybean seed treatment test also was planted on three different dates (April 19, May 29, and June 18) at Stoneville, Mississippi, in 1946. Significant increases in stand due to treatment ranged from 45 to 66 percent in Volstate, from 64 to 218 percent in Rose Non-Pop, and from 68 to 121 percent in Giant Green. No significant increases in stand were obtained with the strains Lincoln x Richland and Ottawa Mandarin.

In Georgia in 1946, treating poor germinating seed of soybeans with Arasan at the rate of 2 ounces per bushel improved the stand and it is concluded that if poor soybean seed must be planted, it should be treated with a fungicide before planting.

At Experiment, Georgia, four varieties of soybeans inoculated with the southern blight fungus, Sclerotium rolfsii, when the plants were about two inches tall, were completely susceptible. When inoculated two weeks later, they were still completely susceptible. When inoculated a month after emergence, all four varieties showed a decided drop in susceptibility, with the greatest drop occurring in the earliest maturing variety. This suggests that the physiological age of the plants is a factor in susceptibility to southern blight. The time elapsing between inoculation and the early symptoms of infection (wilting of the tops) varied with the age of the plants from about 5 days in very young seedlings to 10 days when the plants were about 18 inches tall.

Under field conditions at Experiment, Georgia, the charcoal rot fungus, Macrophomina phaseoli, failed to cause any great amount of infection in soybean seedlings, other than in the cotyledons which usually fell off before the fungus passed from them into the stems. Heavy soil infestation with this fungus caused no appreciable reduction in stand and no noticeable retarding of the growth of the soybean plants. No evidence of infection appeared on the plants after the very young seedling stage until the plants had matured their seed and died. At this time a high percentage of the plants contained

the fungus and it appeared that the fungus had not entered the plants until they were near maturity and that its presence had not decreased the yield of seed. Under controlled temperature conditions in the laboratory, however, this fungus did cause a high percentage of seedling infection in the pre-emergence and emergence stages.

The charcoal rot disease was observed on soybeans at Melrose, Louisiana, on August 21, 1946, but the plants were mature at that time and the amount of injury caused by the disease could not be determined. Southern blight was observed to be killing soybean plants at Baton Rouge, Louisiana, from early July until the end of the growing season, but there was no rapid spread of the disease and the loss over the entire season appeared to be less than one percent.

SUMMARY

Disease ratings made on the strains in the uniform soybean test groups planted in the Southern States show that CNS, Ogden, Dortchsoy No. 2, Palmetto, Cherokee, and Louisiana Green are the varieties most resistant to the bacterial foliage disease complex. None of the early-maturing strains (Group IV-S) appear to be resistant to the bacterial leaf diseases.

With increasing interest in early-maturing soybeans for parts of the South, it appears that the incorporating of resistance to the bacterial foliage diseases in an early maturing variety has importance.

Six applications of 7 percent copper dust on soybeans infested with bacterial pustule, bacterial blight, and wildfire gave only minor reduction in the amount of diseased leaf surface and no significant increase in yield at either of two locations in North Carolina in 1946.

The regional uniform soybean seed treatment test involving five different seed lots, part of each lot treated with Arasan and part untreated, ware planted at locations in North Carolina, Georgia, and Mississippi. Seed treatment increased emergence of all five seed lots and with the poorer seed lots these increases ranged from about 100 percent in many instances to about 200 percent in a few instances.