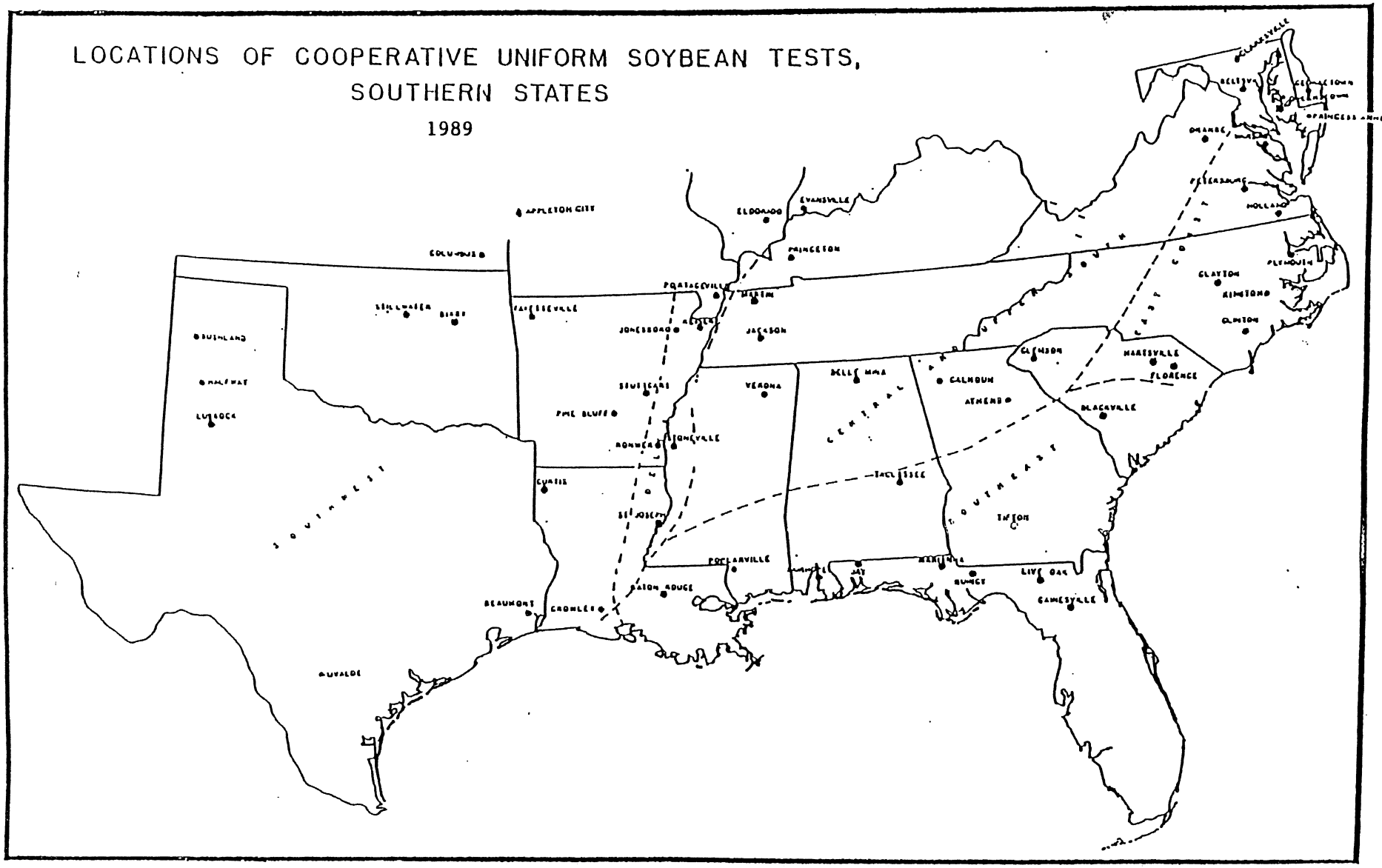
# THE UNIFORM SOYBEAN TESTS SOUTHERN REGION 1989

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
COOPERATING WITH
STATE AGRICULTURAL EXPERIMENT STATIONS
SOUTHERN REGION
STONEVILLE, MISSISSIPPI

# LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES

1989



# THE UNIFORM SOYBEAN TESTS

## SOUTHERN STATES

## 1989

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## INTRODUCTION

The Soybean Production Research Program has been directed toward the development of improved strains of soybeans and the obtaining of fundamental information necessary to the efficient breeding of strains to meet specific needs. Breeding lines are developed and evaluated in the several federal and state research programs. As breeding lines demonstrate specific qualities in the individual programs, they are advanced to the preliminary and southern uniform regional tests, conducted in cooperation with research workers in the southern states. This testing program enables breeders to evaluate new strains under a wide variety of conditions, and permits new strains to be put into production in a minimum amount of time.

Eleven uniform test groups have been established to evaluate the best strains developed in the breeding programs. The groups 00 through IV are adapted in the northern part of the United States, and the groups IV-S through VIII are grown in the southern part. Within their area of adaptation, there is a maturity range of 12 to 18 days within each maturity class. The best standard varieties available of each maturity class are used as check varieties with which to compare new strains as to seed yield, chemical composition, maturity, height, lodging, seed quality, and reaction to diseases and nematodes. For the groups grown in the southern area, the major check varieties are: Douglas, Stafford, Essex, Forrest, Leflore, Sharkey, Stonewall, Thomas and Kirby. At Stoneville, Mississippi, where all maturity classes will mature, the approximate maturity dates of these varieties when planted during the first half of May are: Douglas and Stafford, September 7; Essex, September 25; Forrest, October 1; Leflore, October 16; Braxton, October 25; and Kirby, November 4.

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

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

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

## STRAIN IDENTIFICATION

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

Au - Alabama Agricultural Experiment Station, Auburn
Co - Coker's Pedigreed Seed Company, Hartsville, South Carolina
D - Delta Branch Experiment Station and USDA-ARS
F - Florida Agricultural Experiment Station and USDA-ARS
G - Georgia Agricultural Experiment Station
J - Delta Branch Experiment Stations, West Tennessee Experiment Station and USDA-ARS
K - Kansas Agricultural Experiment Station
Ky - Kentucky Agricultural Experiment Station
L - Illinois Agricultural Experiment Station and USDA-ARS
LS - Souther Illinois University, Carbondale
La - Louisiana Agricultural Experiment Station
Md - Maryland Agricultural Experiment Station and USDA-ARS
N - North Carolina Agricultural Experiment Station and USDA-ARS
R - Arkansas Agricultural Experiment Station
S - Missouri Agricultural Experiment Station
SC - Clemson Agricultural Experiment Station
Tn - Tennessee Agricultural Experiment Station
Ts - Texas Agricultural Experiment Station
V - Virginia Agricultural Experiment Station

LOCATION OF SOYBEAN NURSERIES ALONG WITH SOIL TYPE

| Location | IV | V | VI | VII | VIII | Soil | Highest yielding variety | Yield |
|---|---|---|---|---|---|---|---|---|
| East Coast | | | | | | | | |
| Queenstown, MD | 1* | 1 | | | | Matapeake silt loam | Douglas | 49 |
| Warsaw, VA | 1* | 1* | | | | Suffolk sandy loam | Essex | 46 |
| Holland, VA | | 1 | 1 | 1 | | Rains f. s. loam | Forrest | 59 |
| Plymouth, VA | | 1* | 1* | 1 | | Bladen f. s. loam | Sharkey | 48 |
| Kinston, ND | | | 1 | 1 | | Norfolk sandy loam | Leflore | 30 |
| Clinton, NC | | | 1* | 1 | | Norfolk sandy loam | Stonewall | 56 |
| Florence, SC (A) | | | 1 | 1 | 1 | Goldsboro loamy sand | Sharkey | 39 |
| Florence, SC (B) | | | | 1 | 1 | Goldsboro loamy sand | Stonewall | 31 |
| Southeast | | | | | | | | |
| Blackville, SC | | | 1 | 1* | 1* | Norfolk loamy sand | Stonewall | 36 |
| Tifton, GA | | | 1 | 1 | 1 | Tifton sandy loam | Stonewall | 42 |
| Tallahassee, AL | | | 1* | 1* | 1 | Cahaba f. s. loam | Sharkey | 35 |
| Gainesville, FL | | | | 1 | 1* | Arredonda f. sand | Stonewall | 38 |
| Quincy, FL | | | 1 | 1 | 1* | Norfolk sandy loam | Co6738 | 43 |
| Jay, FL | | | 1* | 1* | 1* | Red Bay sandy loam | Thomas | 37 |
| Fairhope, AL | | | 1 | 1 | 1 | Malbis f. s. l. | Sharkey | 41 |
| Baton Rouge, LA | | | 1 | 1 | 1 | Olivier silt loam | Thomas | 42 |
| Upper & Central South | | | | | | | | |
| Orange, VA | 1 | 1 | | | | Davidson clay loam | Stafford | 42 |
| Clemson, SC | | 1 | 1 | 1 | | Cecil sandy loam | Leflore | 45 |
| Calhoun, GA | | 1 | 1 | 1 | | Waynesboro loam | Sharkey | 57 |
| Athens, GA | | 1 | 1* | 1* | 1 | Cecil sandy loam | Stonewall | 48 |
| Knoxville, TN | 1 | 1 | | | | Sequatchie silt loam | Essex | 47 |
| Carbondale, IL | 1* | 1 | | | | Stoy silt loam | Stafford | 45 |
| Villa Ridge, IL | 1 | | | | | | Stafford | 45 |
| Princeton, KY | 1* | 1 | | | | Crider silt loam | Forrest | 57 |
| Martin, TN | 1 | 1 | | | | Falaja silt loam | Forrest | 56 |
| Tiptonville, TN | 1 | 1 | | | | Morganfield silt loam | Stafford | 47 |
| Jackson, TN | | 1 | 1 | | | Lexington silt loam | Sharkey | 48 |

| Location | IV | V | VI | VII | VIII | Soil | Highest yielding variety | Yield |
|---|---|---|---|---|---|---|---|---|
| Delta | | | | | | | | |
| Poplarville, MS(A) | 1* | 1* | 1 | | | Tiptonville s. l. | Stafford | 50 |
| Poplarville, MS(B) | 1 | 1 | 1 | | | Sharkey clay | Stafford | 43 |
| Keiser, AR | 1* | 1* | 1* | | | Sharkey silty clay | Stafford | 61 |
| Jonesboro, AR | 1 | 1 | 1 | | | Calloway silt loam | Stafford | 43 |
| Pine Tree, AR | 1 | 1 | 1 | | | Calloway silt loam | Stafford | 56 |
| Stoneville, MS(A) | 1 | 1* | 1* | 1* | 1 | Bosket f. s. l. | Forrest | 42 |
| Stoneville, MS(B) | 1* | 1* | 1* | 1* | 1* | Sharkey clay | | |
| Rohwer, AR | | | 1 | 1* | | Perry clay | Stonewall | 46 |
| St. Joseph, LA | | 1 | 1 | 1 | | Sharkey clay | Sharkey | 43 |
| West | | | | | | | | |
| Ottowa, KS | 1* | 1 | | | | Woodson s. loam | Douglas | 45 |
| Pittsburg, KS | 1 | 1 | | | | Parsons silt loam | Douglas | 52 |
| Chanute, KS | 1 | 1 | | | | Parson silt loam | Douglas | 42 |
| Bixby, OK | 1 | 1 | 1 | | | Reinach silt loam | Forrest | 46 |
| Stuttgart, AR | | 1 | 1 | 1 | | Crowley silt loam | Sharkey | 49 |
| Bossier City, LA | | 1 | 1 | 1 | | Norwood v.f.s.l. | Sharkey | 42 |
| Beaumont, TX | | 1 | 1 | 1* | 1* | Beranard-Morey s.c.l. | Sharkey | 33 |
| Lubbock TX | 1 | 1 | | | | Acuff loam | Stafford | 54 |
| Bushland, TX | 1 | | | | | Acuff loam | Douglas | 45 |
| Clovis, NM | 1 | | | | | Pullman s. c. l. | Stafford | 27 |

[1]Fertilizer applied converted to pounds N, $P_2O_5$, $K_2O$. For example: 400# of 2-12-12 equals 8-48-48.

* Preliminary nursery also grown.

## METHODS

The uniform nurseries were planted in 4-row plots with 3 replications. All seed was packeted at Stoneville, Mississippi for planting 19-foot rows. In most cases a 16-foot section was harvested from each of the two center rows. Randomized block designs are used for groups. Row widths at the different locations vary from 30 to 40 inches. An attempt was made to follow the best cultural and management practices in conducting these strain comparisons.

The preliminary nurseries were planted in 4-row plots with 2 replications at each of 6 to 8 locations.

Planting rate - all strains were packeted for planting at the rate of 9 seeds per foot, in 36-inch rows.

Yields are taken by harvesting a 16-foot length from the mid-section of each plot. Actual seed weights are recorded after the seed of strains have a uniform moisture content. A bushel weight of 60 pounds is used in determining bushels per acre.

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

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

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

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

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

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

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

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

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

1 - very good; 2 - good; 3 - fair; 4 - poor; 5 - very poor

The factors considered in estimating seed quality are development of seed, wrinkling damage, and brightness. While the seed quality score indicates relative appearance of seed for the several varieties at one location, considerable difference can exist among factors responsible for the poorer grades in different locations.

Disease and nematode ratings: Ratings are made on a 1 to 5 basis with 1 being resistant and 5 very susceptible or in other cases rated R - resistant, M - moderate, and S - susceptible.

All strains of V maturity and later are resistant to bacterial pustule. Very little injury was observed from phytophthora rot in 1988.

Plantings were made in the greenhouse at Athens, Georgia for Meloidogyne incognita and M. arenaria ratings and in the field near Blackville, South Carolina for M. arenaria ratings.

Plantings were made in the greenhouse at Jackson, Tennessee in soil infested with the soybean cyst nematode. Separate plantings were made to evaluate strains for reaction to SCN race 3 and 4.

Plantings were made in the field cage at Stoneville to evaluate for feeding by soybean looper. Plantings were made in single hills spaced 18 inches in the row with rows spaced 30 inches. Two replications were grown. A heavy population of moths were released at the time plants were in about the fourth to fifth trifoliolate state.

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

UNIFORM GROUP IV-S

1989

| | Variety or strain | Parentage | Generation composited |
|---|---|---|---|
| 1. | Douglas | Williams X Calland | $F_5$ |
| 2. | Stafford | V66-318 X V68-2331 | $F_5$ |
| 3. | K1130 | Forrest X Hobbit | $F_5$ |
| 4. | K1133 | V75-345 X S76-2120 | $F_5$ |
| 5. | Md83-5008 | L70L-3048 X D74-7824 | $F_5$ |
| 6. | K1154 | V76-482 X Essex | $F_5$ |
| 7. | S85-1163 | L77-443 X L77-906 | $F_5$ |
| 8. | V83-1357 | Essex(3) X L73-811 | $F_4$ |
| 9. | LS82-3646 | Forrest X (Dorman X SRF 400) | $F_5$ |
| 10. | S85-1725 | Peking X Elf | $F_5$ |
| 11. | S86-4499 | L77-443 X L77-906 | $F_5$ |
| 12. | V84-484 | Md71-1643-82 X Will | $F_5$ |

Background of lines used as parents:

V66-318 is a selection from D53-184 X J22 which was grown in Preliminary Group IV-S in 1968.
V68-2331 is a selection from York X Clark which was grown in Uniform Group V in 1971.
V75-345 is a selection from Essex X Shore.
S76-2120 is a selection from D67-3297 X Essex. D67-3297 is a selection from Hill(2) X PI 171442.
L70L-3048 is a selection from L15 (Wayne Rps) X D64-3146. D64-3146 is a selection from D49-2491(5) X Hawkeye.
D74-7824 is a selection from Forrest X D70-3001. D70-3001 is of the same parentage as Centennial.
V76-462 is a selection from Essex X SRF400.
L77-443 is a selection from Union X L75-8020. L75-8020 is a Corsoy type resistant to phytophthora rot.
L77-906 is a Corsoy type resistant to phytophthora rot.
Md77-1643-88 is a selection from Adelphi X PI157483

# UNIFORM GROUP IV-S

## 1989

Uniform Group IV-S nurseries were grown at 22 locations. Results from these plantings are summarized in Tables 1-7. Table 1 gives a general summary of performance which includes 1, 2 and 3-year seed yield data, 1, 2 and 3-year oil and protein data, along with general agronomic characteristics, response to soybean cyst nematodes and purple stain. Results from individual locations are reported in Tables 2-7.

Plantings were made in the greenhouse to rate the individual strains to SCN Races 3 and 4. Five strains were resistant to SCN Race 3 and three strains were resistant to Races 3 and 4. Information on purple stain development was reported from Orange and Warsaw, Virginia. At Warsaw Douglas had 37% of the seed showing stain, while five strains showed no stain.

Three strains, K1130, K1133 and Md83-5008 have been evaluated three years. All three are at the late side of maturity to IV-S, similar in maturity to Stafford. Md83-5008 has a three-year mean seed yield advantage over Stafford in each of the production regions. This strain is being increased for release and will be named as a cultivar. It is resistant to SCN Race 3.

TABLE 1 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP IV-S, 1989

| | NO. OF LOCATIONS | DOUGLAS | STAFFORD | K1130 | K1133 | MD83 5008 |
|---|---|---|---|---|---|---|
| Seed Yield - 1989 | | | | | | |
| East Coast | 2 | 48.4 | 43.7 | 46.6 | 48.4 | 47.5 |
| Upper and Central South | 7 | 32.5 | 45.8 | 42.6 | 41.0 | 47.8 |
| Delta | 7 | 28.7 | 46.3 | 38.2 | 44.7 | 54.5 |
| West | 7 | 41.4 | 40.5 | 38.9 | 36.6 | 39.7 |
| 1988-89 | | | | | | |
| East Coast | | 40.8 | 39.7 | 41.1 | 43.0 | 42.2 |
| Upper & Central South | | 33.6 | 42.9 | 41.9 | 40.4 | 44.2 |
| Delta | | 31.5 | 45.8 | 59.4 | 43.6 | 52.4 |
| West | | 40.5 | 41.5 | 41.3 | 39.1 | 41.4 |
| 1987-89 | | | | | | |
| East Coast | | 37.4 | 37.6 | 40.3 | 40.7 | 40.0 |
| Upper & Central South | | 31.5 | 41.2 | 39.1 | 39.0 | 43.1 |
| Delta | | 35.0 | 45.5 | 39.1 | 43.6 | 50.4 |
| West | | 42.7 | 44.0 | 44.9 | 41.0 | 43.8 |
| Oil Content - 1989 | | 21.3 | 21.3 | 21.5 | 21.2 | 21.1 |
| 1988-89 | | 21.6 | 21.8 | 22.6 | 21.5 | 21.5 |
| 1987-89 | | 21.5 | 21.6 | 22.1 | 21.3 | 21.4 |
| Protein Content - 1989 | | 40.9 | 39.6 | 37.4 | 38.4 | 39.0 |
| 1988-89 | | 40.8 | 39.3 | 37.0 | 37.9 | 38.4 |
| 1987-89 | | 41.0 | 39.5 | 37.4 | 38.3 | 38.6 |
| Seed size | | 19.0 | 13.1 | 11.5 | 13.3 | 13.8 |
| Maturity index | | 10-01 | +7 | +8 | +7 | +8 |
| Height | | 30 | 29 | 28 | 34 | 32 |
| Seed quality | | 3.0 | 1.4 | 1.6 | 1.5 | 1.7 |
| Purple stain % | | 3.7 | 0 | 0 | 1.0 | 0.3 |
| SCN race 3 | | S | S | S | S | R |
| SCN race 4 | | S | S | S | S | S |
| Flower color | | W | P | W | P | W |
| Pubescence color | | T | G | T | G | T |
| Pod wall color | | Tn | Tn | Tn | Tn | Tn |

TABLE 1 - (continued)

| | K1154 | S85 1163 | V83- 1357 | LS82- 3646 | S85- 1725 | S86- 4499 | V84- 484 |
|---|---|---|---|---|---|---|---|
| Seed Yield - 1989 | | | | | | | |
| East Coast | 50.1 | 48.9 | 49.5 | 47.5 | 50.3 | 48.9 | 44.8 |
| Upper and Central South | 46.5 | 43.0 | 44.3 | 47.3 | 40.0 | 44.9 | 44.2 |
| Delta | 44.1 | 50.0 | 45.5 | 50.7 | 49.5 | 51.4 | 44.2 |
| West | 42.4 | 42.7 | 48.0 | 36.4 | 39.1 | 42.7 | 43.5 |
| 1988-89 | | | | | | | |
| East Coast | 43.9 | 41.3 | 42.9 | | | | |
| Upper & Central South | 42.7 | 40.7 | 42.7 | | | | |
| Delta | 42.4 | 45.7 | 45.3 | | | | |
| West | 42.9 | 41.5 | 43.9 | | | | |
| 1987-89 | | | | | | | |
| East Coast | | | | | | | |
| Upper & Central South | | | | | | | |
| Delta | | | | | | | |
| West | | | | | | | |
| Oil Content - 1989 | 20.9 | 20.8 | 20.1 | 20.7 | 20.4 | 21.4 | 21.7 |
| 1988-89 | 21.0 | 21.3 | 20.3 | | | | |
| 1987-89 | | | | | | | |
| Protein Content - | | | | | | | |
| 1989 | 40.9 | 39.6 | 42.2 | 40.7 | 41.6 | 39.5 | 40.4 |
| 1988-89 | 40.7 | 39.1 | 42.0 | | | | |
| 1987-89 | | | | | | | |
| Seed size | 13.4 | 17.4 | 13.5 | 14.2 | 15.5 | 17.6 | 16.3 |
| Maturity index | +6 | +2 | +7 | +6 | -2 | 0 | +1 |
| Height | 27 | 38 | 29 | 33 | 35 | 38 | 37 |
| Seed quality | 1.6 | 2.6 | 1.6 | 1.8 | 2.6 | 2.6 | 2.2 |
| Purple stain % | 0 | 17.0 | 0 | 0 | 7.0 | 14.0 | 13.0 |
| SCN race 3 | S | R | S | R | R | R | S |
| SCN race 4 | S | R | S | S | R | R | S |
| Flower color | P | P | P | P | W | P | W |
| Pubescence color | G | T | T | T | T | T | G |
| Pod wall color | Tn | Tn | Tn | Tn | Tn | Tn | Tn |

TABLE 2 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN UNIFORM GROUP IV-S, 1989

| LOCATION | DOUGLAS | STAFFORD | K1130 | K1133 | MD83-5008 | K1154 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN,MD | 49.7 | 43.3 | 47.3 | 42.8 | 46.3 | 48.7 |
| WARSAW,VA | 47.0 | 44.1 | 45.8 | 53.9 | 48.6 | 51.5 |
| MEAN | 48.4 | 43.7 | 46.6 | 48.4 | 47.5 | 50.1 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE,VA | 40.6 | 42.7 | 49.9 | 38.6 | 44.8 | 45.3 |
| KNOXVILLE,TN | 20.6 | 45.0+ | 38.7+ | 40.8+ | 56.3+ | 50.6+ |
| CARBONDALE,IL | 25.5 | 45.4 | 48.2 | 37.9 | 49.5 | 44.0 |
| VILLA RIDGE,IL | 38.3 | 44.8 | 40.2 | 45.2 | 48.2 | 48.5 |
| PRINCETON,KY | 42.0 | 53.8+ | 62.5+ | 51.7 | 48.4 | 61.3+ |
| MARTIN,TN | 37.5 | 41.3 | 32.3 | 39.4 | 44.2 | 36.3 |
| TIPTONVILLE,TN | 24.1 | 47.6+ | 27.8 | 34.3 | 44.9+ | 41.0+ |
| MEAN | 32.7 | 45.8 | 42.8 | 41.1 | 48.0 | 46.7 |
| | | | DELTA | | | |
| PORTAGEVILLE,MO(A) | 18.7 | 49.5+ | 36.6+ | 43.9+ | 59.3+ | 51.9+ |
| PORTAGEVILLE,MO(B) | 26.4 | 43.3+ | 30.1 | 36.4+ | 48.5+ | 27.9 |
| KEISER,AR | 35.0 | 60.6 | 46.4 | 55.9 | 65.9 | 57.3 |
| JONESBORO,AR | 26.4 | 43.0+ | 45.7+ | 39.2+ | 48.1+ | 43.9+ |
| PINE TREE,AR | 35.3 | 50.1+ | 38.9 | 46.8+ | 52.0+ | 46.3+ |
| STONEVILLE,MS(A) | 30.3 | 30.9 | 31.1 | 45.7+ | 52.9+ | 37.2+ |
| STONEVILLE,MS(B)* | 0.7 | 3.2 | 13.4 | 12.3 | 28.6 | 23.2 |
| MEAN | 28.7 | 46.2 | 38.1 | 44.7 | 54.5 | 44.1 |
| | | | WEST | | | |
| CHANUTE,KS | 41.7 | 37.9- | 41.4 | 37.6- | 43.9 | 34.6 |
| OTTAWA,KS | 45.5 | 29.8- | 36.5- | 28.7- | 33.9- | 37.7- |
| PITTSBURG,KS | 52.7 | 49.9 | 48.2 | 40.7- | 41.7- | 52.6 |
| BIXBY,OK | 35.0 | 43.0+ | 41.0+ | 37.0 | 40.0+ | 45.0+ |
| BUSHLAND,TX | 44.5 | 41.5 | 41.8 | 36.3 | 37.0 | 39.1 |
| LUBBOCK,TX | 51.0 | 54.0 | 41.1 | 50.3 | 51.2 | 47.2 |
| CLOVIS,NM | 18.6 | 27.1+ | 22.5 | 25.6 | 39.4+ | 34.9+ |
| MEAN | 41.3 | 40.5 | 38.9 | 36.6 | 41.0 | 41.6 |

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

TABLE 2 - (continued)

| LOCATION | V83-1357 | LS82-3646 | S85-1725 | S86-4499 | V84 484 | L.S.D. (.05) | C.V. (%) |
|---|---|---|---|---|---|---|---|
| | | | EAST COAST | | | | |
| QUEENSTOWN,MD | 46.6 | 48.3 | 46.5 | 47.5 | 42.6 | 5.7 | 7.3 |
| WARSAW,VA | 52.4 | 46.7 | 54.1 | 50.3 | 46.9 | 12.6 | |
| MEAN | 49.5 | 47.5 | 50.3 | 48.9 | 44.8 | | |
| | | | UPPER AND CENTRAL SOUTH | | | | |
| ORANGE,VA | 41.6 | 43.6 | 35.2 | 44.5 | 45.0 | 9.4 | 13.1 |
| KNOXVILLE,TN | 44.9 | 47.1 | 36.1 | 43.2 | 41.0 | 7.9 | 10.7 |
| CARBONDALE,IL | 45.9 | 46.9 | 48.3 | 50.7 | 49.8 | 6.1 | 7.9 |
| VILLA RIDGE,IL | 48.2 | 50.7 | 45.5 | 50.0 | 40.4 | | 7.6 |
| PRINCETON,KY | 54.5 | 57.1 | 42.0 | 44.5 | 50.5 | 9.7 | 11.2 |
| MARTIN,TN | 36.6 | 44.2 | 36.3 | 39.7 | 43.0 | 9.0 | 13.5 |
| TIPTONVILLE,TN | 39.7 | 43.0 | 37.6 | 43.1 | 41.3 | 10.4 | 12.0 |
| MEAN | 44.5 | 47.5 | 40.1 | 45.1 | 44.4 | | |
| | | | DELTA | | | | |
| PORTAGEVILLE,MO(A) | 49.0 | 62.6 | 58.3 | 67.5 | 43.4 | 11.0 | 12.9 |
| PORTAGEVILLE,MO(B) | 27.4 | 41.2 | 35.8 | 39.7 | 34.1 | 5.3 | 8.8 |
| KEISER,AR | 62.0 | 63.4 | 63.3 | 58.6 | 60.1 | 6.3 | 6.4 |
| JONESBORO,AR | 50.2 | 45.5 | 45.1 | 49.3 | 49.2 | 8.4 | 11.4 |
| PINE TREE,AR | 44.6 | 51.3 | 49.6 | 45.1 | 50.2 | 5.0 | 6.3 |
| STONEVILLE,MS(A) | 39.5 | 40.0 | 44.7 | 42.6 | 33.0 | 7.0 | 10.5 |
| STONEVILLE,MS(B) | 20.6 | 14.4 | 18.6 | 14.2 | 11.6 | 5.4 | 22.0 |
| MEAN | 45.5 | 50.7 | 49.5 | 50.5 | 45.0 | . | . |
| | | | WEST | | | | |
| CHANUTE,KS | 38.2 | 35.4 | 36.6 | 42.2 | 40.2 | 3.5 | 5.3 |
| OTTAWA,KS | 32.4 | 37.6 | 34.4 | 41.2 | 38.2 | 7.6 | 12.3 |
| PITTSBURG,KS | 43.4 | 39.0 | 45.0 | 51.9 | 52.8 | 7.1 | 8.9 |
| BIXBY,OK | 39.0 | 34.0 | 39.0 | 45.0 | 45.0 | 4.5 | |
| BUSHLAND,TX | 33.9 | 34.1 | 31.6 | 37.6 | 38.0 | 4.3 | 6.7 |
| LUBBOCK,TX | 46.4 | 45.4 | 42.1 | 42.0 | 46.2 | 7.0 | 8.8 |
| CLOVIS,NM | 35.7 | 31.0 | 32.5 | 43.0 | 42.0 | 7.2 | 15.4 |
| MEAN | 38.4 | 36.6 | 37.3 | 43.3 | 43.2 | | |

TABLE 3 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP IV-S, 1989

| LOCATION | DOUGLAS | STAFFORD | K1130 | K1133 | MD88-5008 | K1154 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| QUEENSTOWN,MD | 20.9 | 19.8 | 20.4 | 20.8 | 20.8 | 20.2 |
| WARSAW,VA | 21.5 | 21.2 | 21.5 | 22.3 | 21.3 | 21.1 |
| ORANGE,VA | 20.6 | 20.6 | 21.1 | 20.7 | 20.2 | 19.6 |
| KNOXVILLE,TN | 22.7 | 22.0 | 22.4 | 22.6 | 22.2 | 21.8 |
| CARBONDALE,IL | 0.0 | 21.8 | 21.9 | 20.9 | 21.7 | 20.8 |
| PRINCETON,KY | 19.8 | 20.7 | 21.4 | 20.3 | 19.9 | 20.9 |
| PORTAGEVILLE,MO(A) | 22.5 | 22.9 | 22.8 | 22.5 | 22.3 | 21.6 |
| KEISER,AR | 21.7 | 22.1 | 21.9 | 22.5 | 22.2 | 21.5 |
| PITTSBURG,KS | 19.7 | 9.7 | 19.0 | 18.3 | 18.4 | 18.9 |
| LUBBOCK,TX | 22.6 | 22.4 | 22.4 | 21.5 | 21.8 | 22.1 |
| MEAN | 19.2 | 21.3 | 21.5 | 21.2 | 21.1 | 20.9 |
| | | | PROTEIN PERCENTAGE | | | |
| QUEENSTOWN, MD | 39.8 | 40.4 | 37.3 | 37.9 | 38.8 | 41.0 |
| WARSAW, VA | 41.4 | 40.4 | 38.7 | 39.8 | 40.4 | 42.2 |
| ORANGE,VA | 38.9 | 38.3 | 35.3 | 36.4 | 37.2 | 40.5 |
| KNOXVILLE,TN | 42.1 | 40.3 | 38.0 | 38.6 | 40.1 | 41.2 |
| CARBONDALE,IL | 0.0 | 38.7 | 36.6 | 39.0 | 37.7 | 40.0 |
| PRINCETON, KY | 43.9 | 40.7 | 38.4 | 40.8 | 41.6 | 41.9 |
| PORTAGEVILLE,MO(A) | 39.5 | 38.3 | 36.9 | 37.5 | 39.0 | 40.0 |
| KEISER,AR | 42.0 | 41.0 | 39.2 | 38.1 | 39.6 | 41.2 |
| PITTSBURG,KS | 41.8 | 39.0 | 37.6 | 39.3 | 39.1 | 41.8 |
| LUBBOCK,TX | 38.5 | 38.7 | 36.6 | 36.6 | 36.9 | 38.7 |
| MEAN | 36.8 | 39.6 | 37.4 | 38.4 | 39.0 | 40.9 |
| | | | GRAMS PER 100 SEED | | | |
| QUEENSTOWN, MD | 22.6 | 13.9 | 13.0 | 14.4 | 15.9 | 14.9 |
| WARSAW, VA | 19.5 | 13.2 | 12.7 | 14.0 | 14.0 | 14.3 |
| ORANGE,VA | 18.7 | 13.4 | 12.0 | 12.9 | 14.6 | 14.4 |
| KNOXVILLE,TN | 17.0 | 14.7 | 13.3 | 16.0 | 16.3 | 16.0 |
| CARBONDALE,IL | 18.0 | 12.0 | 10.4 | 12.1 | 11.6 | 11.8 |
| PRINCETON, KY | 20.7 | 14.3 | 12.1 | 13.6 | 14.8 | 13.8 |
| PORTAGEVILLE,MO(A) | 15.0 | 12.2 | 10.2 | 12.3 | 12.1 | 12.0 |
| KEISER,AR | 18.5 | 12.0 | 8.5 | 11.0 | 13.5 | 11.0 |
| PITTSBURG,KS | 21.1 | 11.7 | 10.9 | 13.1 | 11.3 | 13.0 |
| LUBBOCK,TX | 18.6 | 13.7 | 12.0 | 13.5 | 13.9 | 13.1 |
| MEAN | 19.0 | 13.1 | 11.5 | 13.3 | 13.8 | 13.4 |

TABLE 3 - (continued)

| LOCATION | S85-1163 | V83-1357 | LS82-3646 | S85-1725 | S86-4499 | V84-484 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| QUEENSTOWN, MD | 20.8 | 20.3 | 19.6 | 19.9 | 20.6 | 21.1 |
| WARSAW, VA | 20.9 | 21.5 | 20.9 | 20.5 | 21.8 | 21.9 |
| ORANGE, VA | 20.6 | 19.3 | 20.5 | 20.1 | 21.1 | 20.9 |
| KNOXVILLE, TN | 21.6 | 20.6 | 21.2 | 21.9 | 22.0 | 23.2 |
| CARBONDALE, IL | 20.5 | 19.6 | 20.8 | 20.5 | 21.5 | 21.2 |
| PRINCETON, KY | 19.8 | 19.9 | 20.8 | 19.3 | 20.1 | 20.6 |
| PORTAGEVILLE, MO (A) | 21.8 | 20.4 | 21.8 | 21.0 | 22.3 | 22.6 |
| KEISER, AR | 21.3 | 20.7 | 21.6 | 20.8 | 22.4 | 22.8 |
| PITTSBURG, KS | 18.9 | 17.8 | 18.1 | 19.0 | 20.1 | 20.2 |
| LUBBOCK, TX | 21.7 | 21.0 | 21.6 | 21.6 | 22.0 | 22.4 |
| MEAN | 20.8 | 20.1 | 20.7 | 20.5 | 21.4 | 21.7 |
| | | | PROTEIN PERCENTAGE | | | |
| QUEENSTOWN, MD | 36.8 | 42.0 | 40.5 | 40.2 | 37.1 | 39.1 |
| WARSAW, VA | 41.4 | 41.9 | 42.3 | 43.8 | 40.0 | 42.4 |
| ORANGE, VA | 36.2 | 42.1 | 38.4 | 38.8 | 37.0 | 39.2 |
| KNOXVILLE, TN | 39.7 | 42.6 | 42.2 | 41.9 | 39.5 | 40.4 |
| CARBONDALE, IL | 40.2 | 42.0 | 39.7 | 41.6 | 39.8 | 39.9 |
| PRINCETON, KY | 44.0 | 43.8 | 42.0 | 43.7 | 44.5 | 44.5 |
| PORTAGEVILLE, MO (A) | 38.5 | 41.2 | 40.2 | 41.3 | 38.2 | 39.3 |
| KEISER, AR | 40.7 | 42.3 | 40.9 | 42.2 | 39.9 | 40.5 |
| PITTSBURG, KS | 39.7 | 43.9 | 41.0 | 42.4 | 39.6 | 39.3 |
| LUBBOCK, TX | 39.0 | 40.1 | 40.0 | 40.5 | 39.0 | 39.7 |
| MEAN | 39.6 | 42.2 | 40.7 | 41.6 | 39.5 | 40.4 |
| | | | GRAMS PER 100 SEED | | | |
| QUEENSTOWN, MD | 19.2 | 15.1 | 14.9 | 16.9 | 18.4 | 17.6 |
| WARSAW, VA | 20.3 | 13.9 | 14.3 | 16.7 | 20.1 | 15.7 |
| ORANGE, VA | 16.9 | 13.8 | 14.6 | 15.6 | 18.3 | 17.9 |
| KNOXVILLE, TN | 17.3 | 16.0 | 16.3 | 16.7 | 17.3 | 17.3 |
| CARBONDALE, IL | 14.7 | 12.2 | 11.8 | 13.5 | 15.6 | 14.8 |
| PRINCETON, KY | 19.1 | 14.4 | 14.7 | 17.4 | 16.8 | 18.3 |
| PORTAGEVILLE, MO (A) | 16.1 | 12.5 | 14.0 | 13.5 | 16.0 | 14.9 |
| KEISER, AR | 16.0 | 12.0 | 14.0 | 14.0 | 16.5 | 14.0 |
| PITTSBURG, KS | 17.1 | 11.7 | 12.1 | 16.8 | 18.2 | 15.1 |
| LUBBOCK, TX | 17.0 | 13.7 | 15.6 | 13.9 | 18.6 | 17.3 |
| MEAN | 17.4 | 13.5 | 14.2 | 15.5 | 17.6 | 16.3 |

TABLE 4 - RELATIVE MATURITY DATA, DAYS EARLIER (-) OR LATER (+) THAN DOUGLAS, FOR THE STRAINS IN UNIFORM GROUP IV-S, 1989

| LOCATION | DOUGLAS | STAFFORD | K1130 | K1133 | MD88 5008 | K1154 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN,MD | 10-15 | +4 | +4 | +3 | +7 | +4 |
| WARSAW,VA | 10-08 | +3 | +2 | +1 | +1 | +1 |
| MEAN | 10-11 | +4 | +3 | +2 | +4 | +3 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 10-05 | +7 | +11 | +6 | +8 | +6 |
| KNOXVILLE,TN | 09-11 | +23 | +19 | +13 | +18 | +9 |
| CARBONDALE,IL | 10-14 | +4 | +4 | +5 | +3 | +6 |
| PRINCETON, KY | 10-04 | +5 | +5 | +8 | +7 | +7 |
| MEAN | 10-01 | +10 | +10 | +8 | +9 | +7 |
| | | | DELTA | | | |
| PORTAGEVILLE,MO(A) | 09-23 | +11 | +11 | +14 | +13 | +8 |
| PORTAGEVILLE,MO(B) | 10-01 | +9 | +8 | +9 | +9 | +6 |
| KEISER,AR | 09-22 | +10 | +5 | +9 | +10 | +7 |
| JONESBORO,AR | 09-19 | +4 | +6 | +4 | +7 | +3 |
| PINE TREE,AR | 09-28 | +2 | +1 | +1 | +2 | -1 |
| STONEVILLE,MS(A) | 09-10 | +1 | +10 | +9 | +10 | +9 |
| STONEVILLE,MS(B) | 09-07 | +1 | +10 | +9 | +10 | +9 |
| MEAN | 09-20 | +5 | +7 | +8 | +8 | +5 |
| | | | WEST | | | |
| BIXBY,OK | 10-05 | +6 | +6 | +6 | +6 | +5 |
| BUSHLAND,TX | 09-28 | +14 | +17 | +15 | +17 | +13 |
| LUBBOCK, TX | 09-30 | +7 | +10 | +14 | +9 | +12 |
| MEAN | 10-01 | +10 | +10 | +8 | +9 | +7 |

TABLE 4 - (continued)

| LOCATION | S85-1163 | V83-1357 | LS82-3646 | S85-1725 | S86-4499 | V84-484 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | +0 | +3 | +4 | -4 | 0 | -2 |
| WARSAW, VA | +1 | +1 | 0 | -5 | -1 | 0 |
| MEAN | +1 | +2 | +2 | -5 | -1 | -1 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 0 | +7 | +7 | -2 | -1 | +2 |
| KNOXVILLE, TN | +5 | +12 | +19 | 0 | +1 | +5 |
| CARBONDALE, IL | 0 | +6 | +3 | -1 | +1 | +2 |
| PRINCETON, KY | 0 | +6 | +2 | 0 | 0 | +3 |
| MEAN | +1 | +8 | +8 | -1 | 0 | +3 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | +6 | +10 | +11 | -1 | +6 | 0 |
| PORTAGEVILLE, MO (B) | +4 | +8 | +4 | -1 | +3 | -2 |
| KEISER, AR | +3 | +9 | +8 | +1 | +1 | +3 |
| JONESBORO, AR | +1 | +5 | +5 | 0 | +1 | +4 |
| PINE TREE, AR | +1 | 0 | -1 | -2 | -2 | -1 |
| STONEVILLE, MS (A) | -2 | +13 | +5 | -5 | -1 | -2 |
| STONEVILLE, MS (B) | +3 | +8 | +4 | +2 | +2 | -1 |
| MEAN | +2 | +8 | +5 | -1 | +1 | 0 |
| | | | WEST | | | |
| BIXBY, OK | +6 | +6 | +1 | 0 | 0 | 0 |
| BUSHLAND, TX | +2 | +14 | +12 | +2 | 0 | +5 |
| LUBBOCK, TX | +1 | +12 | +7 | -2 | -2 | -1 |
| MEAN | +3 | +11 | +7 | 0 | -1 | +1 |

TABLE 5 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP IV-S, 1989

| LOCATION | DOUGLAS | STAFFORD | K1133 | K1130 | MD88-5008 | K1154 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 42 | 36 | 29 | 32 | 34 | 27 |
| WARSAW, VA | 36 | 30 | 30 | 34 | 36 | 30 |
| MEAN | 39 | 33 | 30 | 33 | 35 | 29 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 39 | 36 | 39 | 40 | 45 | 34 |
| KNOXVILLE, TN | 26 | 31 | 25 | 35 | 31 | 31 |
| CARBONDALE, IL | 22 | 23 | 23 | 24 | 25 | 21 |
| VILLA RIDGE, IL | 32 | 28 | 29 | 43 | 34 | 30 |
| PRINCETON, KY | 32 | 31 | 30 | 30 | 30 | 27 |
| MEAN | 30 | 30 | 29 | 34 | 33 | 29 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 27 | 34 | 30 | 33 | 36 | 27 |
| PORTAGEVILLE, MO (B) | 25 | 20 | 21 | 25 | 28 | 18 |
| KEISER, AR | 27 | 25 | 27 | 28 | 31 | 27 |
| PINE TREE, AR | 26 | 23 | 20 | 26 | 27 | 21 |
| STONEVILLE, MS (A) | 30 | 21 | 23 | 27 | 27 | 21 |
| STONEVILLE, MS (B)* | 13 | 11 | 13 | 15 | 17 | 14 |
| JONESBORO, AR | 27 | 21 | 26 | 31 | 31 | 23 |
| MEAN | 27 | 24 | 25 | 29 | 30 | 24 |
| | | | WEST | | | |
| CHANUTE, KS | 32 | 40 | 37 | 38 | 40 | 38 |
| OTTAWA, KS | 40 | 36 | 33 | 38 | 37 | 31 |
| PITTSBURG, KS | 38 | 37 | 34 | 36 | 41 | 31 |
| BIXBY, OK | 36 | 32 | 33 | 33 | 35 | 30 |
| BUSHLAND, TX | 24 | 28 | 28 | 29 | 28 | 25 |
| LUBBOCK, TX | 25 | 26 | 21 | 26 | 28 | 23 |
| CLOVIS, NM | 23 | 22 | 21 | 27 | 26 | 25 |
| MEAN | 31 | 32 | 30 | 32 | 34 | 29 |

* Not included in mean.

TABLE 5 - (continued)

| LOCATION | S85-1163 | V83-1357 | LS82-3646 | S85-1725 | S86-4499 | V84-484 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 45 | 29 | 37 | 38 | 38 | 43 |
| WARSAW, VA | 49 | 30 | 31 | 40 | 42 | 45 |
| MEAN | 47 | 30 | 34 | 39 | 40 | 44 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 49 | 36 | 48 | 46 | 49 | 49 |
| KNOXVILLE, TN | 37 | 32 | 34 | 39 | 36 | 34 |
| CARBONDALE, IL | 32 | 24 | 24 | 34 | 38 | 35 |
| VILLA RIDGE, IL | 40 | 30 | 40 | 41 | 36 | 40 |
| PRINCETON, KY | 38 | 29 | 33 | 35 | 36 | 38 |
| MEAN | 39 | 30 | 36 | 39 | 39 | 39 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 46 | 28 | 42 | 43 | 46 | 40 |
| PORTAGEVILLE, MO (B) | 35 | 18 | 28 | 30 | 32 | 30 |
| KEISER, AR | 41 | 26 | 28 | 37 | 37 | 36 |
| PINE TREE, AR | 35 | 20 | 28 | 34 | 34 | 36 |
| STONEVILLE, MS (A) | 44 | 23 | 24 | 43 | 37 | 29 |
| STONEVILLE, MS (B)* | 22 | 13 | 17 | 21 | 18 | 15 |
| JONESBORO, AR | 42 | 28 | 29 | 40 | 38 | 37 |
| MEAN | 37 | 27 | 30 | 35 | 39 | 36 |
| | | | WEST | | | |
| CHANUTE, KS | 31 | 37 | 35 | 43 | 35 | 35 |
| OTTAWA, KS | 46 | 33 | 45 | 37 | 41 | 44 |
| PITTSBURG, KS | 43 | 31 | 38 | 39 | 41 | 44 |
| BIXBY, OK | 36 | 26 | 31 | 36 | 39 | 33 |
| BUSHLAND, TX | 29 | 26 | 28 | 27 | 29 | 28 |
| LUBBOCK, TX | 34 | 23 | 29 | 31 | 29 | 27 |
| CLOVIS, NM | 27 | 27 | 25 | 24 | 27 | 26 |
| MEAN | 35 | 29 | 33 | 34 | 34 | 34 |

TABLE 6 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP IV-S, 1989

| LOCATION | DOUGLAS | STAFFORD | K1130 | K1133 | MD88-5008 | K1154 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 3.3 | 3.2 | 2.5 | 3.3 | 3.5 | 2.2 |
| WARSAW,VA | 2.2 | 1.7 | 1.5 | 2.2 | 3.3 | 1.3 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 2.0 | 2.7 | 2.0 | 3.3 | 5.0 | 2.7 |
| KNOXVILLE, TN | 1.2 | 1.7 | 1.3 | 1.3 | 2.3 | 1.3 |
| CARBONDALE, IL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| VILLA RIDGE, IL | 1.0 | 1.0 | 1.0 | 2.8 | 3.2 | 1.0 |
| PRINCETON, KY | 1.0 | 1.0 | 1.0 | 1.3 | 1.7 | 1.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.0 |
| PORTAGEVILLE, MO (B) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| KEISER, AR | 1.0 | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 |
| PINE TREE, AR | 1.7 | 1.3 | 1.0 | 1.3 | 2.0 | 1.0 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| JONESBORO, AR | 1.0 | 1.0 | 1.0 | 1.7 | 1.0 | 1.0 |
| | | | WEST | | | |
| CHANUTE, KS | 1.0 | 1.0 | 1.0 | 2.0 | 2.0 | 1.0 |
| OTTAWA, KS | 1.3 | 3.0 | 2.7 | 4.0 | 4.0 | 2.0 |
| PITTSBURG, KS | 1.3 | 2.0 | 1.3 | 4.0 | 4.0 | 1.3 |
| BIXBY, OK | 1.0 | 2.0 | 1.0 | 3.0 | 3.0 | 1.0 |
| BUSHLAND, TX | 2.5 | 3.2 | 2.5 | 2.8 | 4.0 | 2.0 |
| LUBBOCK, TX | 1.7 | 1.5 | 1.5 | 2.2 | 2.2 | 1.5 |
| CLOVIS, NM | 1.0 | 3.0 | 2.0 | 2.0 | 4.0 | 1.0 |

TABLE 6 - (continued)

| LOCATION | S85-1163 | V83-1357 | LS82-3646 | S85-1725 | S86-4499 | V84-484 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 3.3 | 2.5 | 3.2 | 3.8 | 3.2 | 3.2 |
| WARSAW, VA | 3.2 | 1.5 | 2.0 | 3.8 | 3.7 | 2.4 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 4.7 | 3.0 | 4.7 | 3.0 | 3.3 | 3.3 |
| KNOXVILLE, TN | 3.7 | 1.3 | 1.3 | 3.2 | 1.7 | 2.0 |
| CARBONDALE, IL | 1.5 | 1.0 | 1.0 | 2.0 | 1.5 | 1.0 |
| VILLA RIDGE, IL | 2.2 | 1.0 | 1.8 | 4.3 | 2.3 | 1.5 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 2.0 | 1.0 | 1.5 | 2.5 | 2.0 | 1.0 |
| PORTAGEVILLE, MO (B) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| KEISER, AR | 2.0 | 1.0 | 1.0 | 2.0 | 2.0 | 1.0 |
| PINE TREE, AR | 2.3 | 1.0 | 1.7 | 2.7 | 2.7 | 2.3 |
| STONEVILLE, MS (A) | 2.0 | 3.0 | 2.0 | 2.0 | 2.3 | 2.0 |
| STONEVILLE, MS (B) | 2.7 | 1.0 | 1.0 | 2.7 | 1.7 | 2.0 |
| JONESBORO, AR | 2.0 | 1.4 | 1.5 | 2.1 | 2.0 | 1.6 |
| | | | WEST | | | |
| CHANUTE, KS | 1.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 |
| OTTAWA, KS | 2.7 | 2.0 | 3.3 | 3.3 | 3.7 | 2.7 |
| PITTSBURG, KS | 2.0 | 1.7 | 4.0 | 4.3 | 2.3 | 2.3 |
| BIXBY, OK | 2.0 | 1.0 | 3.0 | 2.0 | 1.0 | 1.0 |
| BUSHLAND, TX | 2.5 | 2.5 | 3.2 | 3.0 | 2.5 | 2.0 |
| LUBBOCK, TX | 2.0 | 1.5 | 1.5 | 2.0 | 2.0 | 2.2 |
| CLOVIS, NM | 1.9 | 1.8 | 3.0 | 2.4 | 1.9 | 1.7 |

TABLE 7 - SEED QUALITY SCORES FOR THE STRAINS IN UNIFORM GROUP IV-S, 1989

| LOCATION | DOUGLAS | STAFFORD | K1130 | K1133 | MD88-5008 | K1154 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 3.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| WARSAW,VA | 2.0 | 1.0 | 1.2 | 1.0 | 1.2 | 1.5 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| KNOXVILLE, TN | 4.7 | 2.0 | 2.3 | 1.8 | 1.8 | 2.2 |
| CARBONDALE, IL | 5.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 |
| VILLA RIDGE, IL | 3.0 | 1.0 | 1.0 | 2.8 | 3.2 | 1.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 3.0 | 1.5 | 2.0 | 1.5 | 1.5 | 1.5 |
| PORTAGEVILLE, MO (B) | 3.5 | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 |
| KEISER, AR | 3.0 | 1.0 | 1.5 | 1.5 | 152 | 1.5 |
| PINE TREE, AR | 2.3 | 1.0 | 2.3 | 1.0 | 1.3 | 1.0 |
| STONEVILLE, MS (A) | 2.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 3.0 | 3.0 | 2.0 | 2.0 | 2.3 | 2.0 |
| JONESBORO, AR | 3.0 | 1.3 | 1.7 | 1.0 | 1.7 | 2.0 |
| | | | WEST | | | |
| PITTSBURG, KS | 3.0 | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 |
| BUSHLAND, TX | 2.0 | 1.5 | 1.5 | 1.7 | 1.5 | 1.2 |
| LUBBOCK, TX | 2.7 | 1.5 | 2.0 | 1.2 | 1.8 | 1.7 |

TABLE 7 - (continued)

| LOCATION | S85-1163 | V83-1357 | LS82-364 | S85-1725 | S86-4499 | V84 484 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 2.7 | 1.0 | 1.0 | 3.5 | 2.2 | 1.8 |
| WARSAW,VA | 2.5 | 1.2 | 1.2 | 1.8 | 2.2 | 2.2 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 | 1.0 |
| KNOXVILLE, TN | 4.5 | 2.3 | 2.7 | 4.5 | 4.2 | 3.0 |
| CARBONDALE, IL | 4.0 | 3.0 | 2.0 | 4.0 | 5.0 | 4.0 |
| VILLA RIDGE, IL | 2.2 | 1.0 | 1.8 | 4.3 | 2.3 | 1.5 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 3.0 | 1.5 | 1.5 | 2.0 | 3.0 | 2.5 |
| PORTAGEVILLE, MO (B) | 3.0 | 2.0 | 2.0 | 2.5 | 3.0 | 3.0 |
| KEISER, AR | 2.5 | 1.0 | 1.0 | 2.5 | 2.5 | 1.5 |
| PINE TREE, AR | 2.7 | 1.3 | 1.3 | 2.3 | 2.3 | 1.3 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.7 | 2.0 | 2.0 | 2.3 | 2.7 | 2.7 |
| JONESBORO, AR | 2.3 | 1.0 | 2.3 | 2.3 | 2.7 | 2.0 |
| | | | WEST | | | |
| PITTSBURG, KS | 2.0 | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 |
| BUSHLAND, TX | 2.0 | 1.7 | 2.0 | 2.0 | 2.2 | 2.5 |
| LUBBOCK, TX | 2.0 | 1.5 | 2.0 | 1.7 | 2.0 | 2.5 |

# PRELIMINARY GROUP IV-S

## 1989

Preliminary Group IV-S nurseries, which included Douglas and Stafford along with 28 experimental lines, were grown at 8 locations. The parentage for each of these lines is reported in Table 8. A general summary of performance is reported in Table 9. The general summary includes mean seed yield, plant height, average maturity, percentage protein and oil, seed quality at Carbondale, IL, percent purple stain, and reaction to SCN Races 3 and 4. Data from individual locations are reported in Tables 10-14.

The mean seed yield for Douglas was 45.9 bu per acre, and for Stafford was 49.7 bushels. Stafford averaged five days later in maturity than Douglas. Two strains had mean seed yield significantly higher than Douglas, but the both of these were considered to be too late in maturity to be included in this group. There were four strains with seed yields significantly below that for Douglas. Seven of the lines were considered to be too late in maturity for this group.

Seed quality has frequently been a problem with material of IV-S maturity. Douglas consistently produces seed of low quality. In the plantings at Carbondale, seven of the lines, which included Douglas, received a quality rating of 5, and three received a quality rating of 4. Several of the lines having low quality seed had Douglas as a parent. There were three lines which received a quality score of 1 and six receiving a quality score of 2. In view of the wide differences in seed quality, it appeared that this was an excellent opportunity to avoid advancing strains showing the low quality seed. At Warsaw, Virginia Douglas seed showed 40% purple stain. Seventeen of the strains were free of any stain.

Fourteen of the lines were resistant to SCN Race 3 and ten of these were also resistant to SCN Race 4.

TABLE 8 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP IV-S, 1989

| | VARIETY OR STRAIN | PARENTAGE |
|---|---|---|
| 1. | DOUGLAS | WILLIAMS X CALLAND |
| 2. | STAFFORD | V66-318 X V68-2331 |
| 3. | D83-3349 | BEDFORD X SEL(FORREST X SEL(PEK X CENT'L)) |
| 4. | D87-3595 | D82-3811 X J81-116 |
| 5. | D87-3103 | D65-2262 X FORREST |
| 6. | D87-3125 | D65-2262 X FORREST |
| 7. | D87-5934 | EPPS X D65-2262 |
| 8. | D87-5951 | EPPS X D65-2262 |
| 9. | K1170 | PERSHING X RIPLEY |
| 10. | K1171 | PERSHING X RIPLEY |
| 11. | K1172 | HW8039 X AGRIPRO AP350 |
| 12. | K1173 | HW8039 X AGRIPRO AP350 |
| 13. | K1174 | HW8039 X AGRIPRO AP350 |
| 14. | LS84-0920 | LS78-W245 X FAYETTE |
| 15. | LS85-3504 | LS78-W445 X WILLIAMS 82 |
| 16. | LS86-0345 | ESSEX X LS78-W124-1 |
| 17. | LS86-0375 | ESSEX X LS78-W124-1 |
| 18. | LS86-0567 | ESSEX X LS78-W124-1 |
| 19. | LS86-0652 | ESSEX X LS78-W124-1 |
| 20. | MD86-5297 | DOUGLAS X MD77-5675 |
| 21. | S86-1344 | DOUGLAS(2) X FAYETTE |
| 22. | S86-2212 | PEKING X ELK |
| 23. | S86-2374 | WILLIAMS X AVERY |
| 24. | S86-4496 | L277-443 X PELLA |
| 25. | V85-1453 | PERSHING X V78-1175 |
| 26. | V85-3336 | ESSEX X R75-576 |
| 27. | V85-3471 | V80-2103 X V77-2016 |
| 28. | V85-3516 | DUOCROP X V77-2011 |

TABLE 9 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP IVS, 1989

| STRAIN | SEED YIELD | MAT. INDEX | HT. | PERCENT OIL | PERCENT PROTEIN | SCN 3 | SCN 4 | %PURPLE STAIN |
|---|---|---|---|---|---|---|---|---|
| DOUGLAS | 45.9 | 09/29 | 32 | 21.2 | 41.6 | S | S | 4.0 |
| STAFFORD | 49.7 | 5+ | 27 | 21.5 | 40.3- | S | S | 1.0 |
| D83-3349 | 47.2 | 5+ | 29 | 20.2- | 40.8 | R | S | 0.0 |
| D87-3595 | 35.6- | 3+ | 36 | 21.0 | 40.7 | h | S | 1.0 |
| D87-3103 | 44.4 | 7+ | 33 | 20.9 | 40.0- | R | S | 0.0 |
| D87-3125 | 42.4 | 4+ | 29 | 20.4- | 40.4- | S | S | 0.0 |
| D87-5934 | 43.6 | 5+ | 30 | 20.2- | 41.4 | R | R | 0.0 |
| D87-5951 | 49.7 | 6+ | 29 | 20.0- | 40.7 | R | R | 0.0 |
| K1170 | 48.3 | 5+ | 25 | 20.8 | 39.8- | S | S | 0.0 |
| K1171 | 46.6 | 6+ | 27 | 20.6- | 40.5- | S | S | 0.0 |
| K1172 | 51.8+ | 8+ | 26 | 20.9 | 40.8 | S | S | 0.5 |
| K1173 | 52.0+ | 8+ | 27 | 20.3- | 41.3 | S | S | 0.0 |
| K1174 | 49.1 | 9+ | 26 | 21.1 | 40.0- | S | S | 0.0 |
| LS84-0920 | 44.1 | 0 | 27 | 20.7- | 41.0 | h | S | 0.0 |
| LS85-3504 | 43.0 | 2+ | 28 | 21.3 | 39.5- | R | S | 0.0 |
| LS86-0345 | 38.5- | 0 | 29 | 21.0 | 40.2- | R | R | 0.0 |
| LS86-0375 | 36.6- | 1+ | 35 | 20.7- | 41.2 | R | R | 0.0 |
| LS86-0567 | 42.8 | 2+ | 29 | 20.7- | 42.1 | R | R | 0.0 |
| LS86-0652 | 39.9- | 2+ | 29 | 21.0 | 40.7 | R | R | 0.0 |
| MD86-5297 | 42.2 | 1- | 26 | 21.0 | 43.2+ | S | S | 1.0 |
| S86-1344 | 43.4 | 0 | 33 | 21.4 | 42.1 | R | R | 5.0 |
| S86-2212 | 47.5 | 2- | 35 | 20.4- | 42.3 | R | R | 5.5 |
| S86-2374 | 45.4 | 3+ | 40 | 21.4 | 41.2 | R | R | 2.5 |
| S86-4496 | 45.7 | 2- | 36 | 21.5 | 40.0- | R | R | 8.5 |
| V85-1453 | 46.8 | 2+ | 34 | 21.6 | 40.9 | S | S | 1.0 |
| V85-3336 | 45.4 | 4+ | 28 | 20.2- | 42.0 | S | S | 0.0 |
| V85-3471 | 42.7 | 8+ | 23 | 21.0 | 39.3- | S | S | 0.0 |
| V85-3516 | 45.1 | 7+ | 28 | 21.9+ | 38.4- | S | S | 0.5 |
| LSD (.05) | 5.8 | | | 0.5 | 0.9 | | | |
| C.V. | 13% | | | 2% | 2% | | | |

+ or - designations refer to differences from Douglas

TABLE 10 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1989

| STRAIN | QUEENS-TOWN, MD | KEISER, AR | PORTAGE-VILLE, MD | WARSAW, VA | CARBON-DALE, IL | OTTAWA, KS | PRINCE-TON, KY | STONE-VILLE, MS (B) |
|---|---|---|---|---|---|---|---|---|
| DOUGLAS | 46.7 | 66.6 | 56.9 | 51.9 | 25.5 | 48.1 | 48.9 | 23.6 |
| STAFFORD | 37.5- | 68.2 | 65.7+ | 49.5 | 44.6+ | 39.0- | 55.3 | 34.4+ |
| D83-3349 | 34.1- | 62.7 | 63.2 | 43.9- | 35.6 | 37.2- | 54.7 | 38.8+ |
| D87-3595 | 33.1- | 38.6- | 52.0 | 41.2- | 26.4 | 27.0- | 38.5- | 30.6 |
| D87-3103 | 29.5- | 56.8- | 60.8 | 43.3- | 33.1 | 25.2- | 42.1 | 48.2+ |
| D87-3125 | 36.0- | 53.8- | 55.5 | 41.7- | 38.5+ | 28.2- | 52.7 | 31.9 |
| D87-5934 | 30.5- | 56.2- | 58.5 | 44.6- | 35.7 | 38.4- | 46.1 | 35.0+ |
| D87-5951 | 38.0- | 64.3 | 63.5 | 44.9- | 34.0 | 24.9- | 48.4 | 57.2+ |
| K1170 | 35.9- | 57.5- | 64.7 | 49.2 | 41.1+ | 39.9- | 52.2 | 42.6+ |
| K1171 | 39.0 | 54.3- | 62.4 | 52.3 | 40.6+ | 37.0- | 54.2 | 36.0+ |
| K1172 | 46.3 | 71.6 | 67.1+ | 50.9 | 42.0+ | 28.0- | 62.2+ | 39.1+ |
| K1173 | 48.1 | 59.7- | 66.2+ | 52.7 | 41.8+ | 41.5- | 60.5+ | 45.0+ |
| K1174 | 38.4 | 59.0- | 62.3 | 52.3 | 48.5+ | 29.5- | 55.4 | 43.1+ |
| LS84-0920 | 32.9- | 58.3- | 63.0 | 49.0 | 38.3+ | 36.9- | 54.4 | 24.7 |
| LS85-3504 | 34.2- | 54.9- | 60.8 | 45.6- | 38.5+ | 34.4- | 54.5 | 26.0 |
| LS86-0345 | 37.3- | 47.9- | 57.5 | 44.8- | 30.8 | 31.4- | 41.7 | 22.8 |
| LS86-0375 | 32.6- | 44.5- | 51.4 | 41.8- | 36.2 | 25.9- | 46.7 | 21.2 |
| LS86-0567 | 39.5 | 49.8- | 59.9 | 46.2 | 32.4 | 35.8- | 53.7 | 30.3 |
| LS86-0652 | 30.0- | 44.8- | 51.9 | 45.5- | 37.0+ | 41.0- | 50.9 | 26.6 |
| MD86-5297 | 49.5 | 62.2 | 53.7 | 49.1 | 23.5 | 47.3 | 46.7 | 13.8- |
| S86-1344 | 42.9 | 62.7 | 57.8 | 53.5 | 23.9 | 46.7 | 46.6 | 18.6 |
| S86-2212 | 33.3- | 65.6 | 57.2 | 50.5 | 37.4+ | 44.9 | 44.8 | 37.9+ |
| S86-2374 | 41.6 | 57.6- | 60.8 | 41.7- | 30.8 | 37.9- | 48.5 | 38.6+ |
| S86-4496 | 40.8 | 64.1 | 56.6 | 48.3 | 36.7 | 38.7- | 54.8 | 26.3 |
| V85-1453 | 36.7- | 53.6- | 53.8 | 44.7- | 39.1+ | 35.1- | 55.0 | 48.2+ |
| V85-3336 | 34.5- | 62.4 | 61.3 | 50.0 | 38.0+ | 35.9- | 51.8 | 29.0 |
| V85-3471 | 31.9- | 60.9- | 53.9 | 42.8- | 44.5+ | 37.0- | 50.5 | 22.3 |
| V85-3516 | 31.5- | 65.7 | 61.9 | 46.2 | 42.1+ | 32.4- | 52.0 | 26.9 |
| LSD (.05) | 8.7 | 5.3 | 8.6 | 6.0 | 11.3 | 5.3 | 7.5 | 9.6 |
| C.V. | 11% | 5% | 7% | 6% | 16% | 7% | 7% | 14% |

TABLE 11 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1989

| STRAIN | QUEENS-TOWN, MD | KEISER, AR | PORTAGE-VILLE, MD | WARSAW, VA | CARBON-DALE, IL |
|---|---|---|---|---|---|
| DOUGLAS | 20.5 | 21.2 | 21.8 | 21.6 | 20.7 |
| STAFFORD | 20.2 | 21.9 | 22.6 | 20.7 | 22.0 |
| D83-3349 | 19.9 | 20.0 | 21.0 | 19.9 | 20.3 |
| D87-3595 | 20.7 | 20.7 | 22.1 | 21.0 | 20.7 |
| D87-3103 | 20.7 | 20.9 | 21.0 | 21.1 | 21.0 |
| D87-3125 | 19.9 | 20.5 | 21.5 | 20.0 | 20.0 |
| D87-5934 | 19.4 | 20.4 | 21.0 | 20.3 | 19.8 |
| D87-5951 | 19.5 | 20.7 | 20.6 | 19.5 | 19.9 |
| K1170 | 20.3 | 21.1 | 21.6 | 20.7 | 20.4 |
| K1171 | 20.2 | 20.8 | 21.1 | 20.6 | 20.1 |
| K1172 | 20.3 | 21.7 | 21.4 | 20.3 | 20.9 |
| K1173 | 19.1 | 21.5 | 20.7 | 20.2 | 20.0 |
| K1174 | 20.4 | 22.0 | 21.5 | 20.8 | 20.7 |
| LS84-0920 | 19.9 | 21.3 | 21.9 | 19.8 | 20.7 |
| LS85-3504 | 20.0 | 22.1 | 22.5 | 20.2 | 21.5 |
| LS86-0345 | 20.2 | 21.7 | 21.4 | 20.9 | 20.9 |
| LS86-0375 | 19.8 | 21.6 | 21.5 | 20.3 | 20.5 |
| LS86-0567 | 20.4 | 20.9 | 21.9 | 21.0 | 19.5 |
| LS86-0652 | 20.1 | 21.3 | 22.6 | 20.5 | 20.7 |
| MD86-5297 | 20.3 | 22.0 | 21.1 | 21.2 | 20.4 |
| S86-1344 | 21.4 | 22.4 | 22.1 | 21.2 | 20.1 |
| S86-2212 | 20.2 | 20.5 | 21.6 | 19.6 | 19.9 |
| S86-2374 | 20.8 | 21.6 | 22.2 | 21.6 | 20.7 |
| S86-4496 | 20.9 | 21.8 | 23.0 | 21.3 | 20.6 |
| V85-1453 | 20.9 | 22.4 | 22.7 | 21.5 | 20.4 |
| V85-3336 | 19.9 | 20.5 | 20.8 | 19.9 | 19.8 |
| V85-3471 | 20.8 | 21.5 | 21.5 | 20.9 | 20.3 |
| V85-3516 | 22.0 | 22.4 | 22.8 | 21.5 | 20.6 |

TABLE 12 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1989

| STRAIN | QUEENS-TOWN, MD | KEISER, AR | PORTAGE-VILLE, MD | WARSAW, VA | CARBON-DALE, IL |
|---|---|---|---|---|---|
| DOUGLAS | 40.1 | 42.2 | 40.2 | 41.9 | 43.6 |
| STAFFORD | 40.3 | 40.6 | 37.6 | 42.0 | 41.1 |
| D83-3349 | 39.4 | 41.9 | 38.8 | 42.6 | 41.1 |
| D87-3595 | 40.0 | 41.3 | 38.3 | 41.8 | 41.9 |
| D87-3103 | 38.8 | 40.8 | 39.1 | 41.3 | 40.0 |
| D87-3125 | 39.6 | 41.9 | 38.8 | 41.3 | 40.4 |
| D87-5934 | 40.7 | 42.5 | 39.8 | 43.0 | 40.8 |
| D87-5951 | 39.6 | 42.2 | 38.7 | 42.6 | 40.6 |
| K1170 | 39.6 | 40.1 | 37.5 | 41.2 | 40.6 |
| K1171 | 40.4 | 41.2 | 38.8 | 41.5 | 40.7 |
| K1172 | 40.4 | 40.6 | 38.9 | 42.8 | 41.4 |
| K1173 | 40.9 | 41.6 | 39.6 | 42.6 | 41.8 |
| K1174 | 39.5 | 40.1 | 38.5 | 41.6 | 40.3 |
| LS84-0920 | 40.3 | 42.0 | 39.2 | 42.4 | 41.1 |
| LS85-3504 | 38.6 | 40.2 | 37.5 | 41.3 | 39.9 |
| LS86-0345 | 39.8 | 42.0 | 38.7 | 41.8 | 38.8 |
| LS86-0375 | 41.3 | 42.3 | 38.6 | 43.1 | 40.6 |
| LS86-0567 | 41.5 | 43.2 | 39.7 | 43.3 | 42.9 |
| LS86-0652 | 41.2 | 40.8 | 37.9 | 42.7 | 40.7 |
| MD86-5297 | 41.9 | 43.4 | 42.0 | 44.0 | 44.8 |
| S86-1344 | 40.3 | 41.3 | 40.2 | 44.2 | 44.5 |
| S86-2212 | 40.5 | 43.2 | 39.5 | 44.7 | 43.8 |
| S86-2374 | 39.9 | 42.1 | 39.5 | 42.4 | 41.9 |
| S86-4496 | 38.0 | 40.8 | 37.9 | 41.9 | 41.5 |
| V85-1453 | 40.3 | 41.3 | 38.2 | 42.2 | 42.6 |
| V85-3336 | 41.2 | 42.9 | 40.2 | 43.4 | 42.2 |
| V85-3471 | 38.8 | 40.3 | 38.2 | 40.4 | 38.9 |
| V85-3516 | 37.0 | 39.5 | 36.1 | 39.6 | 40.0 |

TABLE 13 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1989

| STRAIN | QUEENS-TOWN, MD | KEISER, AR | PORTAGE-VILLE, MD | WARSAW, VA | CARBON-DALE, IL | OTTAWA, KS | PRINCE-TON, KY | STONE-VILLE, MS (B) |
|---|---|---|---|---|---|---|---|---|
| DOUGLAS | 37.0 | 34.0 | 42.0 | 38.0 | 22.0 | 41.0 | 34.0 | 17.0 |
| STAFFORD | 28.0 | 25.0 | 37.0 | 31.0 | 23.0 | 38.0 | 30.0 | 16.0 |
| D83-3349 | 30.0 | 29.0 | 37.0 | 36.0 | 21.0 | 40.0 | 32.0 | 17.0 |
| D87-3595 | 36.0 | 34.0 | 46.0 | 45.0 | 25.0 | 48.0 | 41.0 | 24.0 |
| D87-3103 | 36.0 | 35.0 | 37.0 | 42.0 | 23.0 | 49.0 | 32.0 | 21.0 |
| D87-3125 | 32.0 | 30.0 | 36.0 | 33.0 | 23.0 | 42.0 | 35.0 | 16.0 |
| D87-5934 | 30.0 | 30.0 | 39.0 | 38.0 | 22.0 | 45.0 | 30.0 | 18.0 |
| D87-5951 | 28.0 | 29.0 | 33.0 | 33.0 | 21.0 | 40.0 | 34.0 | 21.0 |
| K1170 | 25.0 | 26.0 | 32.0 | 26.0 | 21.0 | 35.0 | 27.0 | 18.0 |
| K1171 | 25.0 | 28.0 | 33.0 | 30.0 | 22.0 | 36.0 | 28.0 | 18.0 |
| K1172 | 28.0 | 26.0 | 31.0 | 32.0 | 23.0 | 37.0 | 28.0 | 15.0 |
| K1173 | 29.0 | 26.0 | 33.0 | 32.0 | 21.0 | 36.0 | 31.0 | 18.0 |
| K1174 | 29.0 | 27.0 | 31.0 | 32.0 | 23.0 | 39.0 | 26.0 | 15.0 |
| LS84-0920 | 30.0 | 27.0 | 35.0 | 33.0 | 19.0 | 36.0 | 30.0 | 16.0 |
| LS85-3504 | 31.0 | 27.0 | 34.0 | 33.0 | 25.0 | 38.0 | 33.0 | 16.0 |
| LS86-0345 | 31.0 | 30.0 | 36.0 | 33.0 | 22.0 | 40.0 | 32.0 | 16.0 |
| LS86-0375 | 39.0 | 36.0 | 43.0 | 42.0 | 27.0 | 48.0 | 38.0 | 18.0 |
| LS86-0567 | 31.0 | 28.0 | 37.0 | 34.0 | 24.0 | 40.0 | 32.0 | 17.0 |
| LS86-0652 | 31.0 | 29.0 | 40.0 | 34.0 | 23.0 | 40.0 | 34.0 | 13.0 |
| MD86-5297 | 26.0 | 28.0 | 34.0 | 30.0 | 18.0 | 37.0 | 31.0 | 14.0 |
| S86-1344 | 39.0 | 33.0 | 45.0 | 45.0 | 24.0 | 43.0 | 36.0 | 17.0 |
| S86-2212 | 33.0 | 37.0 | 43.0 | 40.0 | 26.0 | 44.0 | 35.0 | 29.0 |
| S86-2374 | 41.0 | 45.0 | 51.0 | 45.0 | 26.0 | 47.0 | 40.0 | 30.0 |
| S86-4496 | 37.0 | 42.0 | 48.0 | 43.0 | 30.0 | 43.0 | 37.0 | 19.0 |
| V85-1453 | 36.0 | 34.0 | 34.0 | 36.0 | 23.0 | 40.0 | 33.0 | 33.0 |
| V85-3336 | 32.0 | 28.0 | 35.0 | 30.0 | 21.0 | 36.0 | 32.0 | 17.0 |
| V85-3471 | 27.0 | 22.0 | 29.0 | 29.0 | 21.0 | 33.0 | 27.0 | 12.0 |
| V85-3516 | 36.0 | 25.0 | 35.0 | 38.0 | 25.0 | 38.0 | 33.0 | 12.0 |

TABLE 14 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP IVS, 1989

| STRAIN | QUEENS-TOWN, MD | KEISER, AR | PORTAGE-VILLE, MD | WARSAW, VA | CARBON-DALE, IL | OTTAWA, KS | STONE-VILLE, MS (B) |
|---|---|---|---|---|---|---|---|
| DOUGLAS | 3.3 | 3.5 | 3.5 | 2.5 | 5.0 | 2.0 | 2.5 |
| STAFFORD | 1.3 | 1.5 | 2.0 | 1.0 | 3.0 | 1.5 | 2.0 |
| D83-3349 | 1.0 | 2.5 | 2.0 | 1.5 | 1.0 | 3.0 | 2.0 |
| D87-3595 | 1.8 | 2.0 | 1.5 | 1.5 | 2.0 | 3.0 | 2.0 |
| D87-3103 | 1.0 | 1.5 | 2.0 | 1.2 | 2.0 | 3.0 | 2.0 |
| D87-3125 | 1.0 | 1.5 | 2.0 | 1.0 | 1.0 | 2.0 | 2.0 |
| D87-5934 | 1.0 | 1.5 | 2.0 | 1.5 | 1.0 | 1.0 | 2.0 |
| D87-5951 | 1.0 | 2.5 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 |
| K1170 | 1.0 | 1.0 | 2.0 | 1.0 | 3.0 | 2.0 | 2.0 |
| K1171 | 1.0 | 1.5 | 2.0 | 1.0 | 3.0 | 1.0 | 2.0 |
| K1172 | 1.3 | 2.0 | 2.0 | 1.5 | 5.0 | 2.0 | 2.0 |
| K1173 | 1.0 | 2.5 | 2.0 | 1.5 | 5.0 | 1.0 | 2.0 |
| K1174 | 1.0 | 1.5 | 2.0 | 1.5 | 5.0 | 2.0 | 2.0 |
| LS84-0920 | 1.5 | 2.0 | 2.0 | 1.8 | 3.0 | 2.0 | 2.0 |
| LS85-3504 | 1.0 | 1.5 | 1.5 | 1.0 | 3.0 | 2.0 | 2.0 |
| LS86-0345 | 1.3 | 2.0 | 2.5 | 2.2 | 3.0 | 2.0 | 2.0 |
| LS86-0375 | 1.0 | 1.5 | 2.0 | 1.2 | 2.0 | 1.0 | 2.0 |
| LS86-0567 | 1.0 | 2.0 | 2.0 | 1.2 | 4.0 | 1.0 | 2.0 |
| LS86-0652 | 1.0 | 1.5 | 2.0 | 1.0 | 3.0 | 2.0 | 2.5 |
| MD86-5297 | 2.3 | 2.5 | 3.0 | 1.2 | 4.0 | 2.0 | 2.5 |
| S86-1344 | 3.5 | 3.0 | 3.5 | 2.8 | 5.0 | 2.0 | 3.0 |
| S86-2212 | 2.5 | 3.0 | 2.0 | 1.8 | 5.0 | 2.0 | 2.0 |
| S86-2374 | 1.0 | 1.5 | 2.0 | 2.2 | 3.0 | 2.0 | 2.5 |
| S86-4496 | 2.0 | 2.0 | 3.0 | 2.2 | 5.0 | 2.0 | 2.0 |
| V85-1453 | 1.3 | 1.0 | 2.0 | 1.5 | 4.0 | 2.0 | 2.0 |
| V85-3336 | 1.0 | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 |
| V85-3471 | 1.0 | 1.5 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 |
| V85-3516 | 1.5 | 1.0 | 2.0 | 1.0 | 3.0 | 3.0 | 2.0 |

UNIFORM GROUP V

1989

| | Variety or strain | Parentage | Generation composited |
|---|---|---|---|
| 1. | Essex | Lee X S5-7075 | $F_5$ |
| 2. | Forrest | Dyer X Bragg | $F_5$ |
| 3. | R83-1342 | Forrest X Narow | $F_6$ |
| 4. | N85-578 | N77-179 X Johnston | $F_6$ |
| 5. | R85-3280 | Narow X R75-579 | $F_5$ |
| 6. | S85-1706 | Bedford X Essex | $F_5$ |
| 7. | D85-7985 | EPPS X D77-5169 | $F_5$ |
| 8. | K81-27-278 | FORREST X ESSEX | $F_5$ |
| 9. | N86-7687 | N77-114 X PIXIE | $F_5$ |
| 10. | RJ84-1822 | (R70-580 X FORREST) X BEDFORD | $F_5$ |
| 11. | S85-1009 | BEDFORD X ESSEX | $F_5$ |
| 12. | Tn85-157 | D72-8927 X Tn80-83 | $F^5$ |

Background of lines used as parents:

S55-7075 is a selection from N48-1248 X Perry which was grown in Uniform Group VI. N48-1248 has the same parentage as Hood.

N77-179 was grown in Uniform Group V in 1980.

R75-579 is a selection from Forrest and Mack.

D77-5169 is a selection from Centennial X J74-47 which was grown in Uniform Group V 1981-1983. J74-47 has the same parentage as Bedford.

N77-114 is a selection from Essex X N70-2173. N70-2173 was grown in Uniform Group VI in 1980.

R70-580 is a selection from Davis X Bragg.

D72-8927 is a selection from D66-12392 X [Hill(2) X PI90763].

Tn80-83 is a selection from Essex X J74-40

# UNIFORM GROUP V

## 1989

Uniform Group V nurseries were grown at 31 locations. Data from these plantings are summarized in Tables 15-21. Table 15 gives a general summary of performance which includes 1, 2 and 3-year seed yield data and oil and proteing percentages, agronomic qualities, and reaction to the two root-knot species, M. incognita and M. arenaria, and to SCN Races 3 and 4. Data from individual locations are reported in Tables 16-21.

One strain, R83-1342 has been evaluated three years. It is being released and given the name "Walters". It's three-year mean seed yield is superior to that of Forrest in the East Coast, Upper and Central South and Delta regions, and similar to Forrest in the West. It's ratings for root-knot nematode and cyst nematode are similar to that of Forrest. It is sensitive to the herbicide metribuzin.

Of the lines in the group, five were rated resistant to M. incognita, six resistant to M. arenaria, and four were rated resistant to both species. Seven lines were rated resistant to SCN Race 3, and three lines were rated resistant to Race 4 also. D85-7985 was rated resistant to both species of root-knot nematode and Races 3 and 4 of SCN.

All strains were rated for seed coat mottling at Orange and Warsaw, VA and at Plymouth, N.C. All had low ratings for mottled seed. Purple seed stain development was low at Orange and Warsaw, VA.

Seed yield for strains grown on clay at Stoneville was very low. As a result of heavy rains in late June and early July, water from the creek backed into a drainage ditch and kept the field flooded for over two weeks. Data from these plantings was not included in the means.

The breeding lines which became Essex and Forrest were first included in Uniform Group V in 1970. Thus we now have 20 years of comparative data for these varieties.

TABLE 15 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP V, 1989

| | NO. OF LOCATIONS | ESSEX | FORREST | R83-1342 | N85-578 | R85-3280 |
|---|---|---|---|---|---|---|
| Seed Yield - 1989 | | | | | | |
| East Coast | 4 | 45.6 | 44.3 | 47.6 | 51.2 | 46.1 |
| Upper and Central South | 9 | 45.3 | 41.3 | 41.3 | 49.6 | 43.3 |
| Delta | 7 | 43.9 | 38.2 | 39.0 | 49.0 | 43.8 |
| West | 8 | 36.7 | 34.4 | 32.3 | 41.1 | 41.6 |
| 1988-89 | | | | | | |
| East Coast | | 41.3 | 40.1 | 41.9 | 47.0 | 41.6 |
| Upper & Central South | | 43.2 | 41.1 | 42.8 | 46.6 | 44.1 |
| Delta | | 44.1 | 41.0 | 43.8 | 49.8 | 46.6 |
| West | | 38.2 | 37.8 | 37.3 | 42.6 | 43.9 |
| 1987-89 | | | | | | |
| East Coast | | 40.5 | 39.8 | 42.1 | | |
| Upper & Central South | | 39.7 | 38.2 | 40.9 | | |
| Delta | | 41.5 | 39.4 | 43.0 | | |
| West | | 38.8 | 38.7 | 38.9 | | |
| Oil Content - 1989 | | 20.3 | 20.2 | 20.1 | 21.6 | 19.5 |
| 1988-89 | | 20.6 | 20.8 | 20.8 | 21.7 | 20.3 |
| 1987-89 | | 20.6 | 20.8 | 20.8 | | |
| Protein Content - 1989 | | 41.7 | 39.5 | 39.9 | 37.9 | 40.9 |
| 1988-89 | | 41.4 | 38.9 | 39.2 | 37.8 | 39.9 |
| 1987-89 | | 41.7 | 39.1 | 39.8 | | |
| Seed size | | 12.4 | 11.4 | 12.2 | 14.3 | 12.6 |
| Maturity index | | 10-7 | +1 | +1 | -3 | +1 |
| Height | | 33 | 36 | 35 | 28 | 31 |
| Seed quality | | 1.8 | 2.0 | 1.8 | 2.0 | 1.7 |
| M. incognita | | 2.8 | 1.5 | 1.5 | 4.2 | 1.5 |
| M. arenaria | | 2.0 | 1.5 | 1.5 | 2.0 | 1.2 |
| SCN race 3 | | S | R | R | S | R |
| SCN race 4 | | S | S | S | S | S |
| Flower color | | P | W | P | P | P |
| Pubescence color | | G | T | T | G | T |
| Pod wall color | | Tn | Tn | Tn | Tn | Tn |

Table 15 - (continued)

| | S85-1706 | D85-7985 | K81-27-278 | N86-7687 | RJ84 1822 | S85-1009 | TN85-157 |
|---|---|---|---|---|---|---|---|
| Seed Yield - 1989 | | | | | | | |
| East Coast | 44.4 | 44.5 | 51.9 | 47.9 | 45.7 | 48.5 | 43.9 |
| Upper and Central South | 43.9 | 42.7 | 45.8 | 46.3 | 35.7 | 43.4 | 44.2 |
| Delta | 46.5 | 46.7 | 44.1 | 48.2 | 38.4 | 43.6 | 42.7 |
| West | 34.8 | 35.9 | 40.4 | 41.6 | 28.8 | 35.1 | 32.6 |
| 1988-89 | | | | | | | |
| East Coast | 42.0 | | | | | | |
| Upper & Central South | 43.0 | | | | | | |
| Delta | 47.4 | | | | | | |
| West | 37.6 | | | | | | |
| 1987-89 | | | | | | | |
| East Coast | | | | | | | |
| Upper & Central South | | | | | | | |
| Delta | | | | | | | |
| West | | | | | | | |
| Oil Content -1989 | 20.3 | 20.1 | 21.5 | 21.8 | 19.0 | 19.8 | 19.9 |
| 1988-89 | 20.5 | | | | | | |
| 1987-89 | | | | | | | |
| Protein Content - | | | | | | | |
| 1989 | 38.6 | 41.9 | 40.4 | 38.9 | 39.0 | 41.2 | 39.2 |
| 1988-89 | 38.1 | | | | | | |
| 1987-89 | | | | | | | |
| Seed size | 14.2 | 12.3 | 11.8 | 13.9 | 13.0 | 12.2 | 10.6 |
| Maturity index | -2 | -2 | -2 | -1 | +5 | +4 | -1 |
| Height | 33 | 34 | 30 | 33 | 40 | 33 | 37 |
| Seed quality | 1.9 | 2.0 | 1.8 | 1.8 | 2.1 | 2.1 | 1.8 |
| M. incognita | 2.7 | 2.2 | 1.5 | 4.0 | 1.2 | 2.5 | 3.8 |
| M. arenaria | 1.0 | 1.5 | 2.5 | 3.5 | 1.8 | 3.8 | 1.4 |
| SCN race 3 | R | R | h | S | h | R | R |
| SCN race 4 | R | R | S | S | h | R | S |
| Flower color | W | P | W | P | W | P | W |
| Pubescence color | G | T | G | G | G | T | G |
| Pod wall color | Tn | Tn | Tn | Tn | Tn | Tn | Tn |

TABLE 16 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN UNIFORM GROUP V, 1989

| LOCATION | ESSEX | FORREST | R83-1342 | N85-578 | R85-3280 | S85-1706 | D85-7985 |
|---|---|---|---|---|---|---|---|
| | | | EAST COAST | | | | |
| QUEENSTOWN, MD | 41.8 | 43.3 | 39.6 | 42.4 | 36.2 | 38.6 | 41.0 |
| WARSAW, VA | 45.7 | 39.4 | 41.8 | 50.5 | 47.8 | 46.3 | 39.9 |
| HOLLAND, VA | 59.8 | 59.4 | 65.0 | 65.3 | 60.4 | 49.0- | 63.0 |
| PLYMOUTH, NC | 35.1 | 34.9 | 44.0 | 46.5 | 40.0 | 43.8 | 34.1 |
| MEAN | 45.6 | 44.3 | 47.6 | 51.2 | 46.1 | 44.4 | 44.5 |
| | | | UPPER AND CENTRAL SOUTH | | | | |
| ORANGE, VA | 37.1 | 33.8 | 27.4- | 44.5+ | 33.6 | 35.0 | 25.6- |
| KNOXVILLE, TN | 47.4 | 41.9 | 38.6 | 51.0 | 39.6 | 49.6 | 51.4 |
| CLEMSON, SC | 46.9 | 43.5 | 48.6 | 54.3+ | 49.2 | 46.4 | 38.0- |
| CALHOUN, GA | 52.4 | 43.1 | 52.3 | 53.0 | 47.9 | 57.5 | 56.2 |
| ATHENS, GA | 38.1 | 40.9 | 37.8 | 43.9+ | 47.3+ | 39.8 | 37.6 |
| PRINCETON, KY | 56.4 | 56.7 | 57.5 | 65.6+ | 54.1 | 54.0 | 53.4 |
| MARTIN, TN | 50.4 | 46.1 | 45.9 | 50.4 | 39.7- | 45.9 | 49.0 |
| TIPTONVILLE, TN | 40.1 | 28.4- | 29.2- | 50.9+ | 34.5 | 32.9- | 34.8 |
| JACKSON, TN | 40.2 | 38.6 | 35.1 | 33.9 | 45.2 | 35.2 | 39.1 |
| MEAN | 45.4 | 41.4 | 41.4 | 49.7 | 43.5 | 44.0 | 42.8 |
| | | | DELTA | | | | |
| PORTAGEVILLE, MO(A) | 46.7 | 47.8 | 49.7 | 55.6+ | 53.3 | 58.7+ | 57.8+ |
| PORTAGEVILLE, MO(B) | 37.9 | 33.0- | 42.4+ | 44.0+ | 40.1 | 43.6+ | 43.5+ |
| KEISER, AR | 53.4 | 36.4 | 35.6 | 56.3 | 42.3 | 44.2 | 49.8 |
| JONESBORO, AR | 32.6 | 28.4 | 27.3 | 36.6 | 30.1 | 35.6 | 34.1 |
| PINE TREE, AR | 47.4 | 40.5- | 38.2- | 49.7 | 45.7 | 50.2 | 46.1 |
| STONEVILLE, MS (A) | 48.7 | 42.0 | 40.7 | 51.3 | 49.5 | 57.6 | 53.5 |
| STONEVILLE, MS (B)* | 7.2 | 12.6 | 13.5 | 4.3 | 14.6 | 17.2 | 9.7 |
| ST. JOSEPH, LA | 40.3 | 39.2 | 39.2 | 49.3+ | 44.8 | 35.4 | 41.9 |
| MEAN | 43.9 | 38.2 | 39.0 | 49.0 | 43.7 | 46.5 | 46.7 |
| | | | WEST | | | | |
| OTTAWA, KS | 28.5 | 30.4 | 15.2- | 34.0 | 16.3- | 22.4- | 24.4 |
| PITTSBURG, KS | 40.5 | 39.4 | 31.0- | 43.2 | 30.4- | 39.9 | 38.0 |
| CHANUTE, KS | 33.0 | 26.9 | 21.7- | 35.8 | 22.5- | 34.3 | 21.9- |
| STUTTGART, AR | 47.6 | 33.6 | 40.2- | 50.5 | 44.8 | 39.0 | 49.5 |
| BOSSIER CITY, LA | 42.5 | 41.0 | 46.8 | 45.7 | 51.5 | 35.6 | 50.6 |
| BIXBY, OK | 40.0 | 40.0 | 40.0 | 46.0+ | 44.0 | 40.0 | 40.0 |
| LUBBOCK, TX | 44.2 | 47.9 | 45.7 | 50.8 | 47.7 | 49.7 | 42.0 |
| BEAUMONT, TX | 17.1 | 16.2 | 17.9 | 23.1 | 30.4+ | 17.1 | 21.0 |
| MEAN | 36.7 | 34.4 | 32.3 | 41.1 | 36.0 | 34.8 | 35.9 |

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

TABLE 16 - (continued)

| LOCATION | K81-27-278 | N86-7687 | RJ84-1822 | S85-1099 | TN85-157 | L.S.D. (.05) | C.V. (%) |
|---|---|---|---|---|---|---|---|
| | | | EAST COAST | | | | |
| QUEENSTOWN, MD | 52.7+ | 41.7 | 35.0- | 42.3 | 39.0 | 6.4 | 9.2 |
| WARSAW, VA | 56.3+ | 52.6+ | 52.6+ | 52.6+ | 45.3 | 6.8 | 8.5 |
| HOLLAND, VA | 65.2 | 57.8 | 53.9 | 59.9 | 51.5- | 7.4 | 7.3 |
| PLYMOUTH, NC | 33.3 | 39.5 | 41.3 | 39.2 | 39.7 | 11.8 | 17.8 |
| Mean | 51.9 | 47.9 | 45.7 | 48.5 | 43.9 | | |
| | | | UPPER AND CENTRAL SOUTH | | | | |
| ORANGE, VA | 44.4+ | 40.2 | 30.6 | 29.8- | 29.3- | 7.0 | 12.1 |
| KNOXVILLE, TN | 54.5 | 43.5 | 31.1- | 49.6 | 47.7 | 9.2 | 11.9 |
| CLEMSON, SC | 46.7 | 53.0 | 43.3 | 46.0 | 45.4 | 7.1 | 8.9 |
| CALHOUN, GA | 42.9 | 40.4 | 34.4 | 28.8 | 52.0 | | |
| ATHENS, GA | 37.7 | 39.5 | 39.7 | 43.8+ | 43.5+ | 5.2 | 7.5 |
| PRINCETON, KY | 62.2 | 73.4 | 49.1 | 56.1 | 49.1 | 8.0 | 8.2 |
| MARTIN, TN | 40.9 | 48.0 | 34.9- | 41.8 | 45.6 | 40.0 | 13.1 |
| TIPTONVILLE, TN | 38.8 | 45.4 | 24.1 | 30.7- | 39.4 | 7.0 | 9.0 |
| JACKSON, TN | 45.4 | 34.5 | 35.5 | 35.2 | 46.9+ | 6.5 | 9.9 |
| MEAN | 45.9 | 46.4 | 35.9 | 43.5 | 44.3 | | |
| | | | DELTA | | | | |
| PORTAGEVILLE, MO(A) | 56.7+ | 49.5 | 43.1 | 53.3 | 56.0+ | 7.1 | 8.1 |
| PORTAGEVILLE,, MO(B) | 33.2- | 40.8+ | 32.7- | 38.7 | 34.9- | 2.7 | 4.1 |
| KEISER, AR | 53.6 | 57.6 | 36.4 | 46.3 | 45.9 | 5.0 | 6.3 |
| JONESBORO, AR | 31.1 | 33.7 | 29.5 | 36.3 | 30.8 | 7.0 | 12.9 |
| PINE TREE, AR | 49.2 | 52.3+ | 40.5- | 41.9- | 43.3 | 4.7 | 6.0 |
| STONEVILLE, MS (A) | 38.7 | 49.3 | 45.2 | 48.3 | 42.6 | 9.0 | 11.2 |
| STONEVILLE, MS (B) | 6.4 | 1.1 | 18.1 | 15.5 | 8.0 | 5.0 | 27.6 |
| ST. JOSEPH, LA | 46.2 | 53.7+ | 41.0 | 40.3 | 45.0 | 7.6 | 12.6 |
| MEAN | 44.1 | 48.1 | 38.3 | 43.6 | 42.6 | | |
| | | | WEST | | | | |
| OTTAWA, KS | 44.1+ | 34.2 | 4.2- | 22.8 | 24.4 | 5.7 | 13.5 |
| PITTSBURG, KS | 47.9 | 46.1 | 28.7- | 41.4 | 34.5 | 8.0 | 12.3 |
| CHANUTE, KS | 40.7+ | 34.9 | 14.6- | 27.9- | 31.5 | 4.5 | 9.2 |
| STUTTGART, AR | 44.3 | 53.8+ | 32.3- | 43.7 | 40.2- | 4.8 | 6.6 |
| BOSSIER CITY, LA | 33.2 | 43.0 | 43.8 | 40.8 | 35.6 | 10.6 | 14.8 |
| BIXBY, OK | 47.0+ | 46.0+ | 39.0 | 43.0 | 40.0 | 4.0 | |
| LUBBOCK, TX | 51.1 | 53.9 | 47.1 | 44.8 | 42.0 | 4.6 | 5.8 |
| BEAUMONT, TX | 15.2 | 20.5 | 20.9 | 16.6 | 12.3 | 9.6 | 29.8 |
| MEAN | 40.4 | 41.6 | 28.8 | 35.1 | 32.6 | | |

TABLE 17 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP V, 1989

| LOCATION | ESSEX | FORREST | R83-1342 | N85-578 | R85-3280 | S85-1706 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| QUEENSTOWN, MD | 19.1 | 18.7 | 18.3 | 20.7 | 18.7 | 19.1 |
| WARSAW, VA | 20.7 | 21.0 | 21.3 | 21.4 | 20.6 | 20.7 |
| PLYMOUTH, NC | 20.3 | 20.5 | 20.7 | 20.7 | 19.5 | 19.8 |
| ORANGE, VA | 19.7 | 20.3 | 19.8 | 20.9 | 19.8 | 19.5 |
| JACKSON, TN | 20.5 | 21.7 | 21.3 | 21.9 | 19.8 | 20.7 |
| PORTAGEVILLE, MO (A) | 21.1 | 21.0 | 20.8 | 21.7 | 19.9 | 20.6 |
| KEISER, AR | 19.8 | 19.3 | 18.5 | 22.7 | 18.7 | 20.9 |
| STONEVILLE, MS (A) | 21.4 | 20.6 | 21.0 | 22.1 | 20.5 | 21.8 |
| STUTTGART, AR | 19.9 | 19.3 | 19.1 | 22.4 | 18.4 | 20.7 |
| ATHENS, GA | 20.2 | 20.0 | 20.2 | 21.7 | 19.5 | 19.4 |
| MEAN | 20.3 | 20.2 | 20.1 | 21.6 | 19.5 | 20.3 |
| | | | PROTEIN PERCENTAGE | | | |
| QUEENSTOWN, MD | 42.0 | 39.5 | 40.5 | 38.0 | 40.3 | 37.2 |
| WARSAW, VA | 42.8 | 39.0 | 39.6 | 38.9 | 41.3 | 41.8 |
| PLYMOUTH, NC | 43.6 | 40.2 | 39.6 | 39.3 | 41.4 | 40.3 |
| ORANGE, VA | 39.0 | 34.9 | 36.2 | 35.8 | 36.4 | 34.3 |
| JACKSON, TN | 41.0 | 39.0 | 39.0 | 38.4 | 41.2 | 39.6 |
| PORTAGEVILLE, MO (A) | 40.2 | 39.1 | 38.6 | 37.8 | 39.9 | 36.2 |
| KEISER, AR | 43.2 | 41.4 | 42.0 | 38.4 | 42.0 | 39.4 |
| STONEVILLE, MS (A) | 40.6 | 40.6 | 40.7 | 37.5 | 41.6 | 37.6 |
| STUTTGART, AR | 41.7 | 39.5 | 41.4 | 35.6 | 42.6 | 37.2 |
| ATHENS, GA | 43.2 | 41.6 | 41.1 | 39.1 | 42.7 | 42.5 |
| MEAN | 41.7 | 39.5 | 39.9 | 37.9 | 40.9 | 38.6 |
| | | | GRAMS PER 100 SEED | | | |
| QUEENSTOWN, MD | 14.5 | 13.4 | 15.1 | 14.3 | 14.0 | 14.7 |
| WARSAW, VA | 14.6 | 12.1 | 13.7 | 16.7 | 14.7 | 16.9 |
| PLYMOUTH, NC | 13.3 | 11.8 | 13.5 | 15.2 | 12.7 | 15.7 |
| ORANGE, VA | 13.5 | 12.1 | 13.1 | 14.6 | 12.9 | 14.3 |
| JACKSON, TN | 12.8 | 12.3 | 12.4 | 13.8 | 12.7 | 13.0 |
| PORTAGEVILLE, MO (A) | 11.2 | 10.8 | 11.5 | 14.5 | 11.4 | 13.3 |
| KEISER, AR | 9.5 | 9.5 | 9.5 | 13.0 | 11.5 | 14.0 |
| STONEVILLE, MS (A) | 11.7 | 11.0 | 11.1 | 14.4 | 12.2 | 14.8 |
| STUTTGART, AR | 11.6 | 9.2 | 10.3 | 14.1 | 11.5 | 12.0 |
| ATHENS, GA | 11.7 | 11.4 | 12.2 | 11.8 | 12.0 | 13.7 |
| MEAN | 12.3 | 11.3 | 12.1 | 14.2 | 12.5 | 14.2 |

TABLE 17 - (continued)

| LOCATION | D85-7985 | K81-27-278 | N86-7687 | RJ84-1822 | S85-1099 | TN85-157 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| QUEENSTOWN, MD | 19.5 | 20.7 | 21.0 | 17.3 | 19.4 | 18.6 |
| WARSAW, VA | 20.8 | 21.4 | 22.1 | 20.4 | 20.5 | 20.6 |
| PLYMOUTH, NC | 20.3 | 20.9 | 21.0 | 19.4 | 19.8 | 19.4 |
| ORANGE, VA | 20.1 | 21.5 | 21.1 | 19.4 | 19.3 | 19.8 |
| JACKSON, TN | 21.2 | 21.7 | 22.3 | 20.6 | 20.7 | 20.5 |
| PORTAGEVILLE,MO (A) | 20.9 | 21.7 | 22.3 | 19.0 | 20.4 | 20.0 |
| KEISER, AR | 20.3 | 21.7 | 22.4 | 17.8 | 19.8 | 20.1 |
| STONEVILLE, MS (A) | 21.1 | 22.1 | 22.3 | 18.9 | 20.0 | 20.1 |
| STUTTGART, AR | 19.9 | 21.6 | 22.1 | 17.6 | 18.4 | 19.6 |
| ATHENS, GA | 20.2 | 21.8 | 21.8 | 19.9 | 19.9 | 20.3 |
| MEAN | 20.4 | 20.5 | 21.8 | 19.0 | 19.8 | 19.9 |
| | | | PROTEIN PERCENTAGE | | | |
| QUEENSTOWN, MD | 41.6 | 40.0 | 37.9 | 37.7 | 41.6 | 38.5 |
| WARSAW, VA | 42.1 | 41.1 | 39.4 | 38.3 | 38.5 | 40.0 |
| PLYMOUTH, NC | 42.6 | 42.1 | 40.5 | 39.3 | 43.0 | 39.6 |
| ORANGE, VA | 37.6 | 37.0 | 35.9 | 34.1 | 39.7 | 37.0 |
| JACKSON, TN | 14.6 | 40.7 | 38.5 | 38.6 | 40.2 | 40.0 |
| PORTAGEVILLE,MO (A) | 40.7 | 39.2 | 38.7 | 39.5 | 40.9 | 38.6 |
| KEISER, AR | 43.3 | 41.6 | 39.7 | 41.0 | 42.9 | 40.9 |
| STONEVILLE,MS (A) | 42.2 | 40.4 | 38.9 | 41.1 | 41.7 | 39.7 |
| STUTTGART, AR | 43.8 | 40.5 | 38.6 | 40.1 | 43.4 | 38.1 |
| ATHENS, GA | 43.9 | 41.6 | 40.6 | 40.6 | 40.1 | 39.7 |
| MEAN | 41.9 | 40.4 | 38.9 | 39.0 | 41.2 | 39.2 |
| | | | GRAMS PER 100 SEED | | | |
| QUEENSTOWN, MD | 13.9 | 12.9 | 14.2 | 16.0 | 13.4 | 11.3 |
| WARSAW, VA | 14.1 | 12.5 | 14.9 | 14.5 | 14.7 | 12.3 |
| PLYMOUTH, NC | 12.2 | 11.8 | 14.2 | 13.9 | 13.4 | 10.9 |
| ORANGE, VA | 13.5 | 12.1 | 13.1 | 14.6 | 12.9 | 14.3 |
| JACKSON, TN | 12.0 | 12.4 | 13.0 | 14.5 | 12.4 | 12.1 |
| PORTAGEVILLE,MO (A) | 11.5 | 12.2 | 12.5 | 11.9 | 11.7 | 10.6 |
| KEISER, AR | 11.5 | 10.0 | 14.5 | 9.5 | 9.5 | 9.5 |
| STONEVILLE, MS (A) | 12.7 | 12.5 | 14.4 | 11.4 | 11.3 | 9.7 |
| STUTTGART, AR | 11.5 | 10.9 | 13.9 | 10.3 | 10.5 | 9.7 |
| ATHENS, GA | 12.1 | 10.8 | 13.5 | 14.4 | 12.2 | 10.0 |
| Mean | 12.4 | 11.8 | 13.9 | 12.9 | 12.1 | 10.7 |

TABLE 18 - RELATIVE MATURITY DATA, DAYS EARLIER (-) OR LATER (+) THAN ESSEX, FOR THE STRAINS IN UNIFORM GROUP V, 1989

| LOCATION | ESSEX | FORREST | R83-1342 | N85-578 | R85-3280 | S85-1706 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 10-29 | +3 | +2 | -7 | -2 | -4 |
| WARSAW, VA | 10-15 | -1 | +2 | -4 | +2 | -1 |
| HOLLAND, VA | 10-15 | -2 | +1 | -3 | -1 | -2 |
| PLYMOUTH, NC | 10-16 | -2 | 0 | -8 | -2 | -2 |
| MEAN | 10-18 | -1 | +1 | -6 | -1 | -2 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 10-20 | +2 | +2 | -4 | -1 | 0 |
| KNOXVILLE, TN | 10-03 | +5 | +5 | +2 | +7 | +3 |
| CLEMSON, SC | 10-04 | -3 | -3 | -4 | +1 | -2 |
| CALHOUN, GA | 10-03 | +1 | -2 | -2 | +4 | +1 |
| ATHENS, GA | 10-03 | +1 | +2 | -3 | +2 | -1 |
| PRINCETON, KY | 10-19 | 0 | 0 | -1 | -2 | -1 |
| JACKSON, TN | 10-04 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 10-08 | +1 | +1 | -2 | +2 | 0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO(A) | 10-08 | +3 | +4 | -1 | +2 | +1 |
| PORTAGEVILLE, MO(B) | 10-12 | +1 | +4 | -2 | +2 | -3 |
| KEISER, AR | 10-07 | +2 | +1 | 0 | +1 | -3 |
| JONESBORO, AR | 09-27 | +7 | +3 | -2 | +6 | +1 |
| PINE TREE, AR | 10-07 | +1 | +1 | +1 | 0 | -1 |
| STONEVILLE, MS (A) | 09-24 | +5 | +1 | -5 | +4 | -3 |
| STONEVILLE, MS (B) | 09-30 | 0 | -9 | -12 | -11 | -8 |
| ST. JOSEPH, LA | 09-10 | -4 | -2 | -3 | 0 | -7 |
| MEAN | 10-01 | +2 | 0 | -3 | +1 | -3 |
| | | | WEST | | | |
| STUTTGART, AR | 10-02 | +1 | +1 | -2 | +1 | -7 |
| BOSSIER CITY, LA | 09-14 | +1 | +1 | +1 | +1 | +1 |
| BIXBY, OK | 10-20 | 0 | 0 | 0 | 0 | 0 |
| LUBBOCK, TX | 10-15 | +1 | 0 | -3 | 0 | +1 |
| BEAUMONT, TX | 09-19 | 0 | 0 | -4 | +2 | 0 |
| MEAN | 10-02 | +1 | 0 | -2 | +1 | -1 |

TABLE 18 - (continued)

| LOCATION | D85-7985 | K81-27-278 | N86 7687 | RJ84-1822 | S85-1099 | TN85-157 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | -2 | -3 | -6 | +7 | +1 | -3 |
| WARSAW, VA | -2 | -2 | -1 | +12 | +12 | -1 |
| HOLLAND, VA | -2 | -4 | -2 | +8 | +4 | -2 |
| PLYMOUTH, NC | -6 | -2 | -2 | 0 | +4 | -6 |
| MEAN | -3 | -3 | -3 | +7 | +5 | -3 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | -3 | -1 | -3 | +6 | +3 | -3 |
| KNOXVILLE, TN | +2 | +3 | +2 | +7 | +6 | +4 |
| CLEMSON, SC | -5 | -1 | -1 | +1 | +2 | -5 |
| CALHOUN, GA | -4 | -1 | -1 | +8 | +3 | +1 |
| ATHENS, GA | 0 | 0 | -2 | +6 | +4 | 0 |
| PRINCETON,, KY | -1 | 0 | 0 | +2 | -1 | 0 |
| JACKSON, TN | 0 | 0 | 0 | +8 | 0 | 0 |
| MEAN | -2 | 0 | -2 | +5 | +2 | -0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO(A) | +2 | +1 | 0 | +12 | +4 | +3 |
| PORTAGEVILLE, MO(B) | -1 | -2 | 0 | +5 | +9 | 0 |
| KEISER, AR | -2 | -1 | 0 | +4 | +2 | 0 |
| JONESBORO, AR | +1 | 0 | 0 | +8 | +5 | +6 |
| PINE TREE, AR | 0 | +1 | +2 | +3 | +1 | -1 |
| STONEVILLE, MS (A) | 0 | -4 | +1 | +6 | +4 | -1 |
| STONEVILLE, MS (B) | -6 | -11 | -13 | 0 | +3 | -6 |
| ST. JOSEPH, LA | -2 | -3 | +1 | +7 | +1 | -1 |
| MEAN | -1 | -2 | -1 | +6 | +4 | 0 |
| | | | WEST | | | |
| STUTTGART, AR | -2 | -8 | +1 | +2 | +1 | 0 |
| BOSSIER CITY, LA | +1 | +2 | +2 | +5 | +11 | +6 |
| BIXBY, OK | 0 | 0 | 0 | 0 | 0 | 0 |
| LUBBOCK, TX | -3 | +2 | +2 | +5 | +5 | 0 |
| BEAUMONT, TX | +1 | -2 | 0 | +7 | +6 | -3 |
| MEAN | -1 | -1 | +1 | +4 | +5 | +1 |

TABLE 19 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP V, 1989

| LOCATION | ESSEX | FORREST | R83-1342 | N85-578 | R85-3280 | S85-1706 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, VA | 35 | 32 | 33 | 28 | 36 | 32 |
| WARSAW, VA | 42 | 45 | 47 | 31 | 40 | 40 |
| HOLLAND, VA | 34 | 33 | 35 | 25 | 26 | 27 |
| PLYMOUTH, VA | 33 | 37 | 34 | 30 | 32 | 33 |
| MEAN | 37 | 37 | 29 | 34 | 33 | |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 41 | 44 | 40 | 38 | 10 | 40 |
| KNOXVILLE, TN | 37 | 39 | 38 | 33 | 33 | 36 |
| CLEMSON, SC | 37 | 40 | 40 | 31 | 36 | 38 |
| CALHOUN, GA | 28 | 34 | 35 | 25 | 29 | 34 |
| ATHENS, GA | 30 | 33 | 31 | 23 | 29 | 30 |
| PRINCETON, TN | 33 | 41 | 37 | 28 | 34 | 33 |
| JACKSON, TN | 38 | 41 | 39 | 32 | 37 | 42 |
| MEAN | 35 | 39 | 37 | 30 | 34 | 36 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO(A) | 37 | 45 | 41 | 30 | 34 | 37 |
| PORTAGEVILLE, MO(B) | 23 | 26 | 24 | 19 | 22 | 27 |
| KEISER, AR | 32 | 35 | 34 | 32 | 33 | 32 |
| JONESBORO, AR | 33 | 31 | 30 | 27 | 28 | 25 |
| PINE TREE, AR | 30 | 32 | 30 | 22 | 23 | 27 |
| STONEVILLE, MS (A) | 32 | 31 | 31 | 23 | 25 | 31 |
| STONEVILLE, MS (B)* | 17 | 21 | 21 | 15 | 14 | 19 |
| ST. JOSEPH, LA | 31 | 34 | 33 | 27 | 29 | 28 |
| MEAN | 29 | 32 | 31 | 24 | 26 | 28 |
| | | | WEST | | | |
| OTTAWA, KS | 38 | 44 | 48 | 33 | 41 | 43 |
| PITTSBURG, KS | 40 | 45 | 39 | 36 | 38 | 39 |
| CHANUTE, KS | 38 | 44 | 42 | 35 | 37 | 43 |
| STUTTGART, AR | 25 | 24 | 27 | 19 | 22 | 24 |
| BOSSIER CITY, LA | 22 | 24 | 23 | 20 | 23 | 22 |
| BIXBY, OK | 35 | 38 | 36 | 34 | 32 | 34 |
| LUBBOCK, TX | 28 | 31 | 30 | 25 | 31 | 30 |
| BEAUMONT, TX | 22 | 27 | 23 | 18 | 26 | 21 |
| MEAN | 31 | 35 | 34 | 28 | 31 | 32 |

* Not included in Mean.

TABLE 19 - (continued)

| LOCATION | D85-7985 | K81-27-278 | N86-7687 | RJ84-1822 | S85-1099 | TN85-157 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 33 | 36 | 34 | 43 | 35 | 39 |
| WARSAW, VA | 42 | 34 | 39 | 52 | 37 | 44 |
| HOLLAND, VA | 37 | 28 | 34 | 43 | 32 | 39 |
| PLYMOUTH, NC | 35 | 32 | 37 | 37 | 34 | 37 |
| MEAN | 37 | 33 | 36 | 44 | 35 | 40 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 49 | 37 | 41 | 48 | 39 | 45 |
| KNOXVILLE, TN | 34 | 34 | 37 | 52 | 38 | 41 |
| CLEMSON, SC | 37 | 33 | 35 | 43 | 35 | 42 |
| CALHOUN, GA | 32 | 29 | 28 | 36 | 36 | 33 |
| ATHENS, GA | 32 | 26 | 28 | 37 | 28 | 33 |
| PRINCETON, KY | 37 | 34 | 38 | 42 | 36 | 41 |
| JACKSON, TN | 39 | 36 | 40 | 47 | 38 | 43 |
| MEAN | 37 | 33 | 35 | 44 | 36 | 40 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO(A) | 39 | 36 | 35 | 50 | 36 | 44 |
| PORTAGEVILLE, MO(B) | 28 | 22 | 26 | 31 | 25 | 28 |
| KEISER, AR | 36 | 32 | 33 | 40 | 34 | 36 |
| JONESBORO, AR | 21 | 27 | 32 | 33 | 33 | 30 |
| PINE TREE, AR | 28 | 27 | 27 | 35 | 26 | 29 |
| STONEVILLE, MS (A) | 31 | 21 | 26 | 37 | 34 | 35 |
| STONEVILLE, MS (B) | 20 | 17 | 16 | 22 | 23 | 23 |
| ST. JOSEPH, LA | 33 | 26 | 24 | 34 | 34 | 35 |
| MEAN | 30 | 26 | 27 | 35 | 31 | 33 |
| | | | WEST | | | |
| OTTAWA, KS | 43 | 41 | 43 | 49 | 40 | 46 |
| PITTSBURG, KS | 42 | 39 | 41 | 47 | 38 | 44 |
| CHANUTE, KS | 43 | 38 | 43 | 47 | 39 | 45 |
| STUTTGART, AR | 20 | 20 | 23 | 29 | 27 | 26 |
| BOSSIER CITY, LA | 24 | 19 | 20 | 30 | 24 | 23 |
| BIXBY, OK | 36 | 33 | 34 | 37 | 31 | 35 |
| LUBBOCK, TX | 29 | 26 | 29 | 36 | 30 | 34 |
| BEAUMONT, TX | 27 | 20 | 19 | 29 | 19 | 23 |
| MEAN | 34 | 30 | 32 | 38 | 31 | 35 |

TABLE 20 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP V, 1989

| LOCATION | ESSEX | FORREST | R83-1342 | N85-578 | R85-3280 | S85-1706 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 3.3 | 3.3 | 3.5 | 3.0 | 3.5 | 2.5 |
| WARSAW, VA | 2.5 | 3.0 | 3.7 | 2.2 | 2.8 | 3.2 |
| HOLLAND, VA | 1.8 | 1.8 | 2.7 | 1.5 | 1.5 | 1.8 |
| PLYMOUTH, NC | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 3.3 | 4.0 | 5.0 | 3.7 | 4.3 | 4.0 |
| KNOXVILLE, TN | 3.2 | 3.3 | 3.8 | 1.8 | 4.2 | 3.5 |
| CLEMSON, SC | 1.8 | 2.0 | 1.5 | 1.0 | 1.2 | 1.8 |
| ATHENS, GA | 1.7 | 2.2 | 1.7 | 1.5 | 1.5 | 2.2 |
| CALHOUN, GA | 1.3 | 1.7 | 2.5 | 1.2 | 1.0 | 1.8 |
| PRINCETON, KY | 1.7 | 2.3 | 3.0 | 1.0 | 2.0 | 2.0 |
| JACKSON, TN | 2.0 | 2.0 | 3.0 | 1.0 | 4.0 | 3.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO(A) | 1.5 | 2.0 | 3.0 | 1.0 | 1.5 | 1.5 |
| PORTAGEVILLE, MO(B) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| KEISER, AR | 2.0 | 1.7 | 2.0 | 1.0 | 1.7 | 2.0 |
| JONESBORO, AR | 2.0 | 1.3 | 2.0 | 1.0 | 1.3 | 1.0 |
| PINE TREE, AR | 1.7 | 1.3 | 2.3 | 1.0 | 1.0 | 1.7 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.3 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| ST. JOSEPH, LA | 1.5 | 2.5 | 2.8 | 1.0 | 1.3 | 1.5 |
| | | | WEST | | | |
| OTTAWA, KS | 3.3 | 3.0 | 4.0 | 2.3 | 3.7 | 4.7 |
| PITTSBURG, KS | 4.0 | 4.3 | 4.3 | 3.7 | 3.7 | 3.7 |
| CHANUTE, KS | 2.3 | 3.7 | 3.0 | 2.0 | 2.7 | 2.3 |
| STUTTGART, AR | 1.1 | 1.1 | 1.3 | 1.0 | 1.1 | 1.0 |
| BOSSIER CITY, LA | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.5 |
| BIXBY, OK | 2.0 | 2.0 | 4.0 | 0.0 | 1.0 | 4.0 |
| LUBBOCK, TX | 2.2 | 2.0 | 2.2 | 1.2 | 2.0 | 1.5 |
| BEAUMONT, TX | 1.0 | 1.2 | 1.0 | 1.0 | 1.0 | 1.2 |

TABLE 20 - (continued)

| LOCATION | D85-7985 | K81-27-278 | N86-7687 | RJ84-1822 | S85-1099 | TN85-157 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 3.7 | 3.0 | 3.3 | 3.5 | 3.2 | 3.0 |
| WARSAW, VA | 3.7 | 2.7 | 2.2 | 3.0 | 2.8 | 2.2 |
| HOLLAND, VA | 3.5 | 1.5 | 1.7 | 2.7 | 1.5 | 2.2 |
| PLYMOUTH, NC | 4.0 | 2.0 | 3.0 | 4.0 | 4.0 | 2.0 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 5.0 | 2.7 | 3.3 | 4.0 | 3.3 | 3.0 |
| KNOXVILLE, TN | 3.8 | 1.3 | 2.3 | 5.0 | 3.2 | 3.5 |
| CLEMSON, SC | 3.3 | 1.0 | 1.3 | 2.2 | 1.8 | 1.5 |
| ATHENS, GA | 2.7 | 1.5 | 1.7 | 2.5 | 2.2 | 1.8 |
| CALHOUN, GA | 2.8 | 1.2 | 1.2 | 2.0 | 1.3 | 1.5 |
| PRINCETON, KY | 5.0 | 1.0 | 1.3 | 3.3 | 1.3 | 1.0 |
| JACKSON, TN | 3.0 | 1.0 | 2.0 | 4.0 | 2.0 | 3.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO(A) | 4.0 | 1.0 | 1.0 | 2.0 | 1.0 | 2.0 |
| PORTAGEVILLE, MO(B) | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| KEISER, AR | 4.0 | 1.0 | 2.0 | 1.3 | 1.3 | 1.3 |
| JONESBORO, AR | 2.7 | 1.0 | 1.0 | 1.3 | 1.0 | 1.0 |
| PINE TREE, AR | 3.0 | 1.0 | 1.0 | 2.0 | 1.3 | 1.7 |
| STONEVILLE, MS (A) | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| ST. JOSEPH, LA | 2.7 | 1.0 | 1.0 | 1.8 | 2.0 | 1.0 |
| | | | WEST | | | |
| OTTAWA, KS | 4.7 | 2.3 | 2.7 | 4.3 | 3.0 | 3.0 |
| PITTSBURG, KS | 4.7 | 3.7 | 4.0 | 5.0 | 4.0 | 3.0 |
| CHANUTE, KS | 3.7 | 1.3 | 1.7 | 3.7 | 2.7 | 2.0 |
| STUTTGART, AR | 1.5 | 1.0 | 1.0 | 1.1 | 1.3 | 1.1 |
| BOSSIER CITY, LA | 2.3 | 1.0 | 1.3 | 1.3 | 1.7 | 1.0 |
| BIXBY, OK | 4.0 | 1.0 | 1.0 | 2.0 | 2.0 | 1.0 |
| LUBBOCK, TX | 3.5 | 1.5 | 2.2 | 2.2 | 2.0 | 1.7 |
| BEAUMONT, TX | 1.7 | 1.0 | 1.0 | 1.2 | 1.2 | 1.0 |

TABLE 21 - SEED QUALITY FOR THE STRAINS IN UNIFORM GROUP V, 1989

| LOCATION | ESSEX | FORREST | R83-1342 | N85-578 | R85-3280 | S85-1706 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 1.0 | 1.0 | 1.0 | 1.2 | 1.0 | 1.0 |
| WARSAW, VA | 1.8 | 1.2 | 1.5 | 1.8 | 1.5 | 1.8 |
| HOLLAND, VA | 1.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| PLYMOUTH, NC | 2.0 | 1.5 | 1.5 | 2.0 | 1.5 | 1.5 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 1.0 | 2.0 | 2.0 | 1.0 | 2.0 | 1.0 |
| KNOXVILLE, TN | 2.2 | 2.0 | 1.8 | 2.5 | 1.8 | 2.8 |
| ATHENS, GA | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| CALHOUN, GA | 2.0 | 3.5 | 2.0 | 2.5 | 2.5 | 2.5 |
| JACKSON, TN | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 2.0 | 2.5 | 2.5 | 2.5 | 2.0 | 2.0 |
| PORTAGEVILLE, MO (B) | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 |
| KEISER, AR | 2.5 | 2.0 | 2.0 | 2.0 | 1.5 | 2.0 |
| JONESBORO, AR | 1.3 | 2.0 | 1.7 | 2.3 | 1.0 | 1.3 |
| PINE TREE, AR | 1.7 | 1.3 | 1.0 | 2.7 | 1.0 | 2.0 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.0 | 2.0 | 2.3 | 2.0 | 2.0 | 2.3 |
| | | | WEST | | | |
| PITTSBURG, KS | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STUTTGART, AR | 2.5 | 2.5 | 2.0 | 2.5 | 2.0 | 2.5 |
| LUBBOCK, TX | 1.5 | 2.0 | 2.5 | 2.2 | 1.7 | 2.0 |
| BEAUMONT, TX | 2.2 | 3.7 | 3.0 | 2.0 | 2.7 | 3.3 |

TABLE 21 - (continued)

| LOCATION | D85-7985 | K81-27-278 | N86-7687 | RJ84-1822 | S85-1099 | TN85-157 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| QUEENSTOWN, MD | 1.0 | 1.0 | 1.0 | 1.2 | 1.0 | 1.0 |
| WARSAW, VA | 1.3 | 1.6 | 1.6 | 1.4 | 1.2 | 1.5 |
| HOLLAND, VA | 1.3 | 1.3 | 1.7 | 1.0 | 1.0 | 1.0 |
| PLYMOUTH, NC | 2.0 | 2.0 | 2.0 | 1.5 | 2.0 | 1.5 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ORANGE, VA | 2.0 | 1.0 | 1.0 | 2.0 | 2.0 | 1.0 |
| KNOXVILLE, TN | 2.5 | 2.0 | 2.3 | 2.2 | 2.5 | 2.8 |
| ATHENS, GA | 1.5 | 1.5 | 1.5 | 1.8 | 1.5 | 1.5 |
| CALHOUN, GA | 2.3 | 2.8 | 2.5 | 3.5 | 3.0 | 2.5 |
| JACKSON, TN | 2.0 | 2.0 | 2.0 | 3.0 | 3.0 | 3.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 1.5 | 2.0 | 2.0 | 2.5 | 2.0 | 2.0 |
| PORTAGEVILLE, MO (B) | 2.0 | 2.0 | 2.0 | 2.5 | 2.5 | 2.5 |
| KEISER, AR | 2.5 | 1.5 | 1.5 | 2.5 | 2.0 | 1.5 |
| JONESBORO, AR | 2.0 | 1.3 | 1.0 | 2.0 | 2.3 | 1.3 |
| PINE TREE, AR | 1.7 | 2.0 | 1.3 | 1.7 | 2.7 | 1.3 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.3 | 2.0 | 2.7 | 2.0 | 2.0 | 2.0 |
| | | | WEST | | | |
| PITTSBURG, KS | 2.0 | 2.0 | 2.0 | 3.0 | 2.0 | 1.0 |
| STUTTGART, AR | 2.0 | 2.2 | 2.7 | 2.5 | 2.5 | 2.2 |
| LUBBOCK, TX | 2.2 | 1.2 | 1.5 | 2.0 | 2.0 | 1.2 |
| BEAUMONT, TX | 2.8 | 2.8 | 2.5 | 2.3 | 3.3 | 2.7 |

# PRELIMINARY GROUP V

## 1989

Preliminary Group V nurseries, which included Forrest and Stafford along with 34 experimental lines, were grown at 7 locations. The parentage for each of the lines is reported in Table 22. A general summary of performance is reported in Table 23. This includes mean seed yield maturity, plant height, percent protein and oil, ratings for SCN Races 3 and 4, and percent mottled seed. Data from individual locations are reported in Tables 24-28.

Lines included in the group fit well with maturity. Four lines equalled Stafford in maturity, and the latest maturing line averaged three days later than Forrest. N87-733 segregated for flower color.

Sixteen lines were rated resistant to SCN Race 3 and twelve of these were also resistant to SCN Race 4. Forrest had 10% mottled seed at Warsaw. There were 31 strains with 5% or less mottled seed.

Plantings on clay at Stoneville were flooded for the first half of July. Data are not included in location means.

TABLE 22 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP V, 1989

| | VARIETY OR STRAIN | PARENTAGE |
|---|---|---|
| 1. | FORREST | DYER X BRAGG |
| 2. | STAFFORD | V66-318 X V66-2331 |
| 3. | D85-4097 | FORREST(2) X D79-5304 |
| 4. | D86-7548 | EPPS X D82-2901 |
| 5. | D86-7934 | EPPS X D82-9621 |
| 6. | D87-3121 | D65-2262 X FORREST |
| 7. | D87-5963 | EPPS X D65-2262 |
| 8. | D87-5967 | EPPS X D65-2262 |
| 9. | K1175 | PERSHING X RIPLEY |
| 10. | K1176 | K1092 X PERSHING |
| 11. | K1177 | ESSEX X WILLIAMS 82 |
| 12. | K1178 | ESSEX X WILLIAMS 82 |
| 13. | K1179 | PERSHING X RIPLEY |
| 14. | KY85-01039 | ESSEX X ELF |
| 15. | KY85-11020 | ESSEX X ELF |
| 16. | LS84-5541 | LS78-W245 X LS79-W220 |
| 17. | LS85-1604 | FAYETTE X LS78-W218 |
| 18. | LS85-5623 | FORREST X TS76-989 |
| 19. | MD86-5788 | PROTEIN INTERMATING POP. X F |
| 20. | N87-303 | N77-114 X N77-179 |
| 21. | N87-325 | N77-114 X N77-179 |
| 22. | N87-539 | N79-491 X GASOY 17 |
| 23. | N87-733 | N79-491 X GASOY 17 |
| 24. | R85-3614 | BEDFORD X (R75-579 X R76-717) |
| 25. | R87-4 | R77-2385 X (R78-781 X BEDFORD) |
| 26. | R87-170 | BEDFORD X PI 417263 |
| 27. | R87-751 | (R76-717 X R75-579) X (JEFF X DAVIS) |
| 28. | R87-853 | (R76-717 X R75-579) X (JEFF X DAVIS) |
| 29. | S85-1708 | BEDFORD X ESSEX |
| 30. | S86-2471 | EPPS X D77-5169 |
| 31. | S86-1419 | PERSHING X D71-6166 |
| 32. | S86-1773 | BRADLEY X D77-5169 |
| 33. | S86-2567 | BEDFORD X ESSEX |
| 34. | V85-135 | (EPPS X TOANO) X (EPPS X L77-1110) |
| 35. | V85-155 | ESSEX X (EPPS X R75-579) |
| 36. | V85-3508 | DUOCROP X V77-2011 |

TABLE 23 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP V, 1989

| STRAIN | SEED YIELD* | MAT. INDEX | HT. | PERCENT OIL | PERCENT PROTEIN | SCN 3 | SCN 4 | %MOTTLED SEED |
|---|---|---|---|---|---|---|---|---|
| FORREST | 43.2 | 10/08 | 40 | 20.6 | 40.2 | R | S | 10.0 |
| STAFFORD | 45.1 | 7- | 30 | 22.2+ | 39.9 | S | S | 3.0 |
| D85-4097 | 46.2 | 0 | 44 | 20.5 | 39.1 | S | S | 11.0 |
| D86-7548 | 46.8 | 0 | 35 | 20.4 | 40.6 | R | h | 4.0 |
| D86-7934 | 42.7 | 3+ | 36 | 19.9- | 41.1 | R | R | 2.0 |
| D87-3121 | 45.4 | 5- | 37 | 21.3 | 39.5 | h | S | 5.0 |
| D87-5963 | 45.8 | 1- | 35 | 20.2 | 40.9 | R | h | 0.0 |
| D87-5967 | 48.0 | 2- | 35 | 20.7 | 41.8+ | R | h | 0.0 |
| K1175 | 43.4 | 7- | 26 | 21.2 | 39.0- | S | S | 1.0 |
| K1176 | 46.6 | 8- | 31 | 20.8 | 40.4 | S | S | 0.0 |
| K1177 | 47.1 | 2- | 48 | 22.0+ | 40.8 | S | S | 2.0 |
| K1178 | 45.8 | 6- | 32 | 21.1 | 40.9 | S | S | 0.0 |
| K1179 | 51.0 | 1- | 30 | 20.4 | 39.6 | S | S | 0.0 |
| KY85-01039 | 44.4 | 7- | 28 | 22.2+ | 40.0 | S | S | 2.0 |
| KY85-11020 | 51.2+ | 5- | 30 | 22.0+ | 40.8 | S | S | 1.0 |
| LS84-5541 | 39.6 | 6- | 36 | 22.3+ | 38.0- | R | S | 0.0 |
| LS85-1604 | 47.7 | 6- | 34 | 21.8+ | 40.1 | R | R | 3.0 |
| LS85-5623 | 39.8 | 4- | 35 | 22.6+ | 38.9- | R | h | 6.0 |
| MD86-5788 | 38.5 | 6- | 27 | 19.5- | 44.4+ | S | S | 0.0 |
| N87-303 | 49.8 | 0 | 33 | 22.3+ | 39.8 | R | h | 0.0 |
| N87-325 | 54.2+ | 2- | 34 | 21.9+ | 40.1 | S | S | 0.0 |
| N87-539 | 51.3+ | 1+ | 37 | 22.0+ | 39.4 | R | S | 0.0 |
| N87-733 | 46.7 | 0 | 32 | 21.2 | 40.3 | S | S | 0.0 |
| R85-3614 | 46.4 | 2- | 34 | 20.8 | 40.4 | R | R | 4.0 |
| R87-4 | 46.4 | 1+ | 39 | 21.0 | 39.3 | S | S | 1.0 |
| R87-170 | 48.4 | 1+ | 39 | 21.9+ | 39.0- | R | R | 4.0 |
| R87-751 | 49.6 | 4+ | 39 | 18.0- | 41.9+ | R | S | 8.0 |
| R87-853 | 23.5- | 4- | 38 | 19.8- | 39.2 | S | S | 0.0 |
| S85-1708 | 46.0 | 4- | 36 | 21.2 | 39.1 | S | R | 0.0 |
| S86-2471 | 47.8 | 2- | 39 | 21.2 | 40.7 | R | S | 1.0 |
| S86-1419 | 47.1 | 3- | 33 | 20.0 | 40.7 | R | h | 8.0 |
| S86-1773 | 46.8 | 3- | 34 | 20.5 | 41.3 | R | R | 3.0 |
| S86-2567 | 46.3 | 4- | 36 | 21.0 | 39.0- | R | R | 0.0 |
| V85-135 | 50.3 | 5- | 29 | 21.5+ | 40.3 | S | S | 2.0 |
| V85-155 | 44.4 | 4- | 31 | 20.6 | 41.2 | S | S | 0.0 |
| V85-3508 | 44.5 | 7- | 29 | 22.7+ | 38.2- | S | S | 0.0 |
| LSD (.05) | 7.9 | | | 0.7 | 1.2 | | | |
| C.V. | 16% | | | 3% | 2% | | | |

* STONEVILLE,MS(B) is not included in means
+ or - designations refer to differences from Forrest

TABLE 24 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP V, 1989

| STRAIN | WARSAW, VA | PLY-MOUTH, NC | PORTAGE-VILLE, MO (A) | KEISER, AR | STONE-VILLE, MS (A) | STONE-VILLE, MS (B) | PITTS-BURGH, KS |
|---|---|---|---|---|---|---|---|
| FORREST | 42.0 | 45.3 | 49.9 | 35.7 | 49.3 | 14.9 | 38.1 |
| STAFFORD | 40.7 | 33.9- | 55.2 | 52.7+ | 39.6- | 9.0 | 46.4 |
| D85-4097 | 42.2 | 41.4 | 53.9 | 47.1+ | 47.9 | 23.3+ | 41.7 |
| D86-7548 | 38.0 | 30.3- | 59.0 | 57.2+ | 54.0 | 13.4 | 25.1- |
| D86-7934 | 36.6 | 34.1- | 54.3 | 46.3+ | 47.5 | 16.6 | 29.0 |
| D87-3121 | 38.7 | 35.8 | 49.5 | 56.1+ | 47.6 | 21.8 | 32.0 |
| D87-5963 | 39.7 | 25.0- | 57.4 | 53.0+ | 54.2 | 22.8+ | 30.1 |
| D87-5967 | 40.2 | 30.8- | 61.1+ | 52.9+ | 54.4 | 8.2 | 37.2 |
| K1175 | 45.3 | 38.7 | 51.6 | 49.7+ | 32.6- | 5.8- | 47.1 |
| K1176 | 43.1 | 29.7- | 52.1 | 52.9+ | 48.4 | 8.7 | 45.5 |
| K1177 | 47.9 | 12.9- | 58.2 | 49.9+ | 55.1 | 24.3+ | 47.5 |
| K1178 | 42.6 | 48.6 | 48.2 | 45.0+ | 46.1 | 14.0 | 44.6 |
| K1179 | 45.3 | 38.9 | 55.4 | 52.6+ | 58.7+ | 14.9 | 45.8 |
| KY85-0103 | 46.7 | 18.1- | 52.9 | 46.6+ | 46.2 | 6.2- | 52.4+ |
| KY85-1102 | 51.7+ | 15.0- | 61.4+ | 58.8+ | 56.2 | 6.4- | 51.7+ |
| LS84-5541 | 33.2- | 29.5- | 47.4 | 40.4 | 43.2 | 8.2 | 39.3 |
| LS85-1604 | 43.1 | 38.2 | 55.3 | 48.1+ | 54.8 | 5.0- | 39.5 |
| LS85-5623 | 43.8 | 27.7- | 45.0 | 31.5 | 48.3 | 4.8- | 42.6 |
| MD86-5788 | 41.1 | 11.2- | 41.0 | 42.1 | 44.3 | 8.7 | 41.7 |
| N87-303 | 40.1 | 28.9- | 55.0 | 50.5+ | 62.5+ | 18.9 | 48.7+ |
| N87-325 | 50.5+ | 46.5 | 58.2 | 53.7+ | 60.2+ | 13.2 | 50.7+ |
| N87-539 | 53.1+ | 38.4 | 70.6+ | 56.0+ | 46.7 | 19.4 | 43.0 |
| N87-733 | 49.4+ | 41.9 | 42.2 | 43.4 | 51.1 | 14.9 | 50.9+ |
| R85-3614 | 43.2 | 37.6 | 51.4 | 44.5+ | 53.9 | 16.5 | 42.6 |
| R87-4 | 41.1 | 32.5- | 53.8 | 52.5+ | 52.7 | 26.3+ | 33.5 |
| R87-170 | 45.2 | 41.1 | 52.8 | 46.0+ | 56.9 | 22.9+ | 42.0 |
| R87-751 | 48.3 | 38.5 | 68.3+ | 54.7+ | 50.7 | 19.4 | 31.1 |
| R87-853 | 42.7 | 22.6- | 20.5- | 2.3- | 31.8- | 20.2 | 34.4 |
| S85-1708 | 46.1 | 37.6 | 53.7 | 42.0 | 53.0 | 14.6 | 40.5 |
| S86-2471 | 40.3 | 40.6 | 49.7 | 53.4+ | 55.9 | 18.8 | 33.4 |
| S86-1419 | 44.9 | 36.0 | 53.9 | 49.0+ | 50.0 | 9.4 | 43.8 |
| S86-1773 | 37.9 | 32.8- | 58.2 | 51.9+ | 50.0 | 11.3 | 42.1 |
| S86-2567 | 42.5 | 41.8 | 60.4+ | 39.7 | 55.3 | 17.7 | 35.5 |
| V85-135 | 47.2 | 37.8 | 55.2 | 56.0+ | 52.4 | 14.6 | 45.2 |
| V85-155 | 47.1 | 24.2- | 54.3 | 52.0+ | 41.6 | 5.3- | 42.7 |
| V85-3508 | 39.6 | 37.4 | 55.4 | 53.3+ | 40.8- | 0.8- | 35.7 |
| LSD (.05) | 7.1 | 11.1 | 10.1 | 8.4 | 8.5 | 7.3 | 9.6 |
| C.V. | 8% | 16% | 9% | 9% | 8% | 26% | 12% |

TABLE 25 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP V, 1989

| STRAIN | WARSAW, VA | PLY-MOUTH, NC | PORTAGE-VILLE, MO (A) | KEISER, AR | STONE-VILLE, MS (A) |
|---|---|---|---|---|---|
| FORREST | 21.1 | 20.9 | 21.4 | 19.5 | 20.0 |
| STAFFORD | 21.8 | 21.8 | 22.3 | 21.6 | 23.5 |
| D85-4097 | 21.0 | 20.5 | 20.4 | 19.8 | 21.0 |
| D86-7548 | 20.4 | 20.5 | 20.3 | 19.5 | 21.2 |
| D86-7934 | 21.8 | 19.6 | 19.3 | 18.1 | 20.5 |
| D87-3121 | 21.2 | 20.6 | 21.2 | 21.1 | 22.6 |
| D87-5963 | 20.0 | 20.3 | 20.0 | 19.2 | 21.3 |
| D87-5967 | 21.7 | 20.0 | 20.4 | 19.4 | 22.0 |
| K1175 | 20.5 | 20.5 | 22.2 | 20.3 | 22.3 |
| K1176 | 20.7 | 20.7 | 20.5 | 20.2 | 22.0 |
| K1177 | 21.4 | 22.0 | 22.2 | 21.7 | 22.9 |
| K1178 | 21.4 | 20.5 | 20.9 | 21.5 | 21.2 |
| K1179 | 21.5 | 20.7 | 20.1 | 18.7 | 21.1 |
| KY85-0103 | 21.3 | 21.9 | 22.4 | 21.7 | 23.6 |
| KY85-1102 | 20.7 | 22.0 | 22.2 | 21.9 | 23.0 |
| LS84-5541 | 21.1 | 22.3 | 22.3 | 22.3 | 23.6 |
| LS85-1604 | 21.7 | 21.8 | 21.9 | 21.4 | 22.1 |
| LS85-5623 | 22.4 | 22.5 | 22.3 | 21.9 | 23.8 |
| MD86-5788 | 19.5 | 19.1 | 19.9 | 17.8 | 21.1 |
| N87-303 | 22.0 | 22.1 | 21.9 | 21.6 | 23.8 |
| N87-325 | 21.3 | 21.1 | 22.6 | 21.4 | 23.3 |
| N87-539 | 22.3 | 21.8 | 21.9 | 20.9 | 23.2 |
| N87-733 | 21.9 | 21.6 | 21.2 | 20.2 | 20.9 |
| R85-3614 | 20.4 | 20.9 | 20.9 | 20.3 | 21.4 |
| R87-4 | 20.9 | 20.8 | 20.9 | 20.5 | 22.0 |
| R87-170 | 21.5 | 22.1 | 21.8 | 20.7 | 23.5 |
| R87-751 | 18.5 | 16.8 | 18.1 | 17.2 | 19.2 |
| R87-853 | 19.1 | 20.4 | 20.1 | 17.9 | 21.6 |
| S85-1708 | 20.7 | 20.2 | 21.3 | 20.8 | 22.8 |
| S86-2471 | 21.0 | 21.4 | 21.0 | 19.3 | 23.3 |
| S86-1419 | 21.0 | 19.4 | 20.1 | 19.4 | 20.2 |
| S86-1773 | 20.5 | 20.2 | 21.4 | 19.3 | 21.2 |
| S86-2567 | 20.7 | 20.0 | 21.0 | 20.5 | 22.6 |
| V85-135 | 21.7 | 20.7 | 21.6 | 20.8 | 22.9 |
| V85-155 | 20.2 | 20.9 | 20.3 | 20.3 | 21.3 |
| V85-3508 | 22.3 | 21.9 | 23.1 | 22.4 | 23.6 |

TABLE 26 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP V, 1989

| STRAIN | WARSAW, VA | PLY-MOUTH, NC | PORTAGE-VILLE, MO (A) | KEISER, AR | STONE-VILLE, MS (A) |
|---|---|---|---|---|---|
| FORREST | 38.6 | 39.7 | 38.8 | 41.7 | 42.3 |
| STAFFORD | 39.7 | 42.2 | 38.6 | 40.3 | 38.5 |
| D85-4097 | 38.0 | 39.5 | 36.9 | 40.3 | 40.6 |
| D86-7548 | 40.0 | 39.5 | 40.4 | 42.2 | 40.7 |
| D86-7934 | 37.3 | 41.6 | 41.3 | 42.9 | 42.4 |
| D87-3121 | 40.1 | 40.4 | 38.0 | 39.7 | 39.3 |
| D87-5963 | 41.0 | 41.1 | 40.2 | 41.8 | 40.2 |
| D87-5967 | 39.5 | 42.9 | 41.0 | 43.5 | 41.9 |
| K1175 | 39.9 | 40.0 | 36.1 | 40.1 | 39.0 |
| K1176 | 40.7 | 41.1 | 39.4 | 41.3 | 39.4 |
| K1177 | 41.7 | 41.4 | 39.9 | 41.7 | 39.4 |
| K1178 | 40.7 | 41.7 | 39.9 | 41.2 | 41.1 |
| K1179 | 37.8 | 40.0 | 38.8 | 41.9 | 39.4 |
| KY85-0103 | 40.7 | 40.6 | 38.9 | 40.9 | 39.0 |
| KY85-1102 | 41.7 | 42.1 | 38.9 | 41.2 | 40.1 |
| LS84-5541 | 39.5 | 37.1 | 36.5 | 38.9 | 38.1 |
| LS85-1604 | 39.8 | 40.1 | 38.6 | 41.3 | 40.5 |
| LS85-5623 | 39.2 | 39.3 | 37.8 | 39.4 | 38.8 |
| MD86-5788 | 42.5 | 45.8 | 43.2 | 46.1 | 44.3 |
| N87-303 | 40.0 | 39.6 | 39.3 | 41.7 | 38.4 |
| N87-325 | 40.9 | 40.9 | 38.5 | 40.8 | 39.2 |
| N87-539 | 39.1 | 38.7 | 38.0 | 41.1 | 40.0 |
| N87-733 | 39.6 | 38.6 | 39.4 | 41.3 | 42.5 |
| R85-3614 | 40.6 | 40.3 | 38.9 | 41.1 | 41.1 |
| R87-4 | 39.6 | 38.8 | 37.8 | 40.4 | 40.1 |
| R87-170 | 39.4 | 38.3 | 37.5 | 40.5 | 39.2 |
| R87-751 | 42.2 | 42.4 | 40.8 | 42.8 | 41.3 |
| R87-853 | 41.4 | 37.2 | 37.2 | 42.0 | 38.2 |
| S85-1708 | 39.6 | 39.7 | 38.2 | 39.9 | 38.2 |
| S86-2471 | 41.0 | 40.1 | 39.8 | 43.4 | 39.3 |
| S86-1419 | 40.0 | 41.2 | 39.9 | 42.0 | 40.5 |
| S86-1773 | 41.7 | 41.6 | 38.8 | 42.8 | 41.6 |
| S86-2567 | 39.1 | 40.1 | 38.6 | 39.6 | 37.8 |
| V85-135 | 39.3 | 42.0 | 38.8 | 41.8 | 39.5 |
| V85-155 | 41.0 | 41.7 | 40.5 | 42.1 | 40.8 |
| V85-3508 | 37.9 | 39.9 | 36.2 | 39.4 | 37.6 |

TABLE 27 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP V, 1989

| STRAIN | WARSAW, VA | PLY-MOUTH, NC | PORTAGE-VILLE, MO (A) | KEISER, AR | STONE-VILLE, MS (A) | STONE-VILLE, MS (B) | PITTS-BURGH, KS |
|---|---|---|---|---|---|---|---|
| FORREST | 43.0 | 39.0 | 46.0 | 39.0 | 34.0 | 21.0 | 44.0 |
| STAFFORD | 35.0 | 27.0 | 38.0 | 31.0 | 21.0 | 15.0 | 39.0 |
| D85-4097 | 55.0 | 42.0 | 48.0 | 42.0 | 35.0 | 24.0 | 50.0 |
| D86-7548 | 38.0 | 30.0 | 36.0 | 34.0 | 32.0 | 26.0 | 46.0 |
| D86-7934 | 39.0 | 29.0 | 38.0 | 35.0 | 32.0 | 21.0 | 47.0 |
| D87-3121 | 37.0 | 36.0 | 43.0 | 35.0 | 33.0 | 25.0 | 41.0 |
| D87-5963 | 36.0 | 31.0 | 35.0 | 34.0 | 33.0 | 27.0 | 41.0 |
| D87-5967 | 45.0 | 30.0 | 39.0 | 34.0 | 30.0 | 19.0 | 40.0 |
| K1175 | 28.0 | 28.0 | 32.0 | 26.0 | 18.0 | 13.0 | 33.0 |
| K1176 | 32.0 | 29.0 | 36.0 | 31.0 | 24.0 | 14.0 | 37.0 |
| K1177 | 53.0 | 27.0 | 56.0 | 49.0 | 51.0 | 27.0 | 50.0 |
| K1178 | 39.0 | 33.0 | 37.0 | 32.0 | 24.0 | 17.0 | 37.0 |
| K1179 | 36.0 | 30.0 | 36.0 | 31.0 | 21.0 | 15.0 | 36.0 |
| KY85-0103 | 31.0 | 24.0 | 31.0 | 29.0 | 20.0 | 14.0 | 36.0 |
| KY85-1102 | 33.0 | 23.0 | 37.0 | 30.0 | 26.0 | 15.0 | 38.0 |
| LS84-5541 | 38.0 | 33.0 | 45.0 | 39.0 | 25.0 | 15.0 | 41.0 |
| LS85-1604 | 40.0 | 33.0 | 45.0 | 34.0 | 25.0 | 14.0 | 38.0 |
| LS85-5623 | 42.0 | 31.0 | 37.0 | 37.0 | 29.0 | 16.0 | 39.0 |
| MD86-5788 | 31.0 | 22.0 | 31.0 | 28.0 | 19.0 | 12.0 | 34.0 |
| N87-303 | 34.0 | 29.0 | 40.0 | 33.0 | 29.0 | 17.0 | 35.0 |
| N87-325 | 38.0 | 33.0 | 40.0 | 34.0 | 28.0 | 15.0 | 40.0 |
| N87-539 | 41.0 | 32.0 | 46.0 | 36.0 | 31.0 | 19.0 | 42.0 |
| N87-733 | 37.0 | 31.0 | 34.0 | 31.0 | 27.0 | 19.0 | 39.0 |
| R85-3614 | 44.0 | 27.0 | 38.0 | 33.0 | 29.0 | 17.0 | 40.0 |
| R87-4 | 48.0 | 29.0 | 39.0 | 41.0 | 33.0 | 24.0 | 45.0 |
| R87-170 | 42.0 | 37.0 | 44.0 | 40.0 | 35.0 | 28.0 | 43.0 |
| R87-751 | 44.0 | 34.0 | 45.0 | 38.0 | 34.0 | 23.0 | 49.0 |
| R87-853 | 55.0 | 31.0 | 43.0 | 34.0 | 34.0 | 23.0 | 39.0 |
| S85-1708 | 44.0 | 36.0 | 41.0 | 35.0 | 29.0 | 19.0 | 41.0 |
| S86-2471 | 55.0 | 36.0 | 41.0 | 36.0 | 33.0 | 21.0 | 41.0 |
| S86-1419 | 37.0 | 29.0 | 44.0 | 31.0 | 27.0 | 19.0 | 37.0 |
| S86-1773 | 35.0 | 31.0 | 42.0 | 35.0 | 26.0 | 18.0 | 39.0 |
| S86-2567 | 44.0 | 34.0 | 41.0 | 35.0 | 30.0 | 20.0 | 41.0 |
| V85-135 | 31.0 | 28.0 | 32.0 | 31.0 | 22.0 | 14.0 | 34.0 |
| V85-155 | 35.0 | 26.0 | 43.0 | 31.0 | 23.0 | 13.0 | 40.0 |
| V85-3508 | 33.0 | 31.0 | 37.0 | 31.0 | 18.0 | 10.0 | 34.0 |

TABLE 28 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP V, 1989

| STRAIN | WARSAW, VA | PLY-MOUTH, NC | PORTAGE-VILLE, MO (A) | KEISER, AR | STONE-VILLE, MS (A) | STONE-VILLE, MS (B) | PITTS-BURGH, KS |
|---|---|---|---|---|---|---|---|
| FORREST | 1.7 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 |
| STAFFORD | 1.5 | 2.5 | 1.5 | 1.5 | 2.0 | 3.0 | 2.0 |
| D85-4097 | 1.4 | 1.5 | 1.5 | 1.0 | 2.0 | 2.0 | 2.0 |
| D86-7548 | 1.7 | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 |
| D86-7934 | 1.5 | 1.5 | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 |
| D87-3121 | 1.8 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 |
| D87-5963 | 1.8 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| D87-5967 | 1.6 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 |
| K1175 | 1.8 | 1.5 | 1.5 | 1.5 | 2.0 | 2.5 | 2.0 |
| K1176 | 1.9 | 2.0 | 2.0 | 1.5 | 2.0 | 2.5 | 1.0 |
| K1177 | 1.6 | 2.5 | 2.0 | 1.5 | 2.0 | 2.5 | 1.0 |
| K1178 | 1.7 | 1.5 | 2.0 | 1.5 | 2.0 | 2.5 | 2.0 |
| K1179 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 |
| KY85-0103 | 1.7 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| KY85-1102 | 1.5 | 2.5 | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 |
| LS84-5541 | 1.8 | 2.0 | 2.0 | 2.5 | 2.0 | 2.0 | 1.0 |
| LS85-1604 | 1.6 | 1.5 | 2.0 | 2.0 | 2.0 | 2.5 | 2.0 |
| LS85-5623 | 1.4 | 1.5 | 2.0 | 2.5 | 2.0 | 3.0 | 1.0 |
| MD86-5788 | 1.6 | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 |
| N87-303 | 1.1 | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 1.0 |
| N87-325 | 1.6 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 |
| N87-539 | 1.4 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| N87-733 | 1.3 | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 |
| R85-3614 | 1.3 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 |
| R87-4 | 1.7 | 1.5 | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 |
| R87-170 | 1.4 | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 |
| R87-751 | 1.2 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| R87-853 | 1.7 | 2.0 | 2.0 | 3.5 | 2.5 | 2.0 | 2.0 |
| S85-1708 | 1.5 | 2.0 | 2.0 | 2.5 | 2.0 | 2.5 | 2.0 |
| S86-2471 | 1.4 | 2.0 | 2.0 | 2.0 | 2.0 | 2.5 | 2.0 |
| S86-1419 | 1.6 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| S86-1773 | 1.4 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| S86-2567 | 1.5 | 2.0 | 2.0 | 2.5 | 2.0 | 2.5 | 2.0 |
| V85-135 | 1.4 | 2.5 | 1.5 | 1.5 | 2.0 | 2.0 | 1.0 |
| V85-155 | 1.7 | 2.5 | 2.0 | 2.0 | 2.0 | 3.0 | 2.0 |
| V85-3508 | 1.8 | 2.0 | 2.0 | 1.5 | 2.0 | 3.0 | 2.0 |

UNIFORM GROUP VI

1989

| | Variety or strain | Parentage | Generation composited |
|---|---|---|---|
| 1. | Leflore | Centennial X J74-47 | $F_5$ |
| 2. | Sharkey | Tracy X Centennial | $F_5$ |
| 3. | Au82-589 | N74-1572 X F76-8846 | $F_6$ |
| 4. | D84-7174 | D77-12 X D77-6057 | $F_5$ |
| 5. | G83-198 | D74-7741 X Young | $F_6$ |
| 6. | N85-492 | N77-179 X Johnston | $F_6$ |
| 7. | S84-1876 | Bedford X Essex | $F_5$ |
| 8. | SC84-1531 | Braxton X Young | $F_5$ |
| 9. | D86-8870 | SHARKEY X LEFLORE | $F_5$ |
| 10. | N86-397 | YOUNG(2) X D76-9665 | $F_5$ |
| 11. | N86-491 | N77-1602 X F77-1797 | $F_5$ |
| 12. | S83-1205 | BEDFORD X N77-347 | $F_5$ |

Background of lines used as parents:

J74-47 is a SCN race 4 selection of the same parentage as Bedford.

N74-1572 is a selection from Govan X Davis.

F76-8846 is a selection from Centennial X [Forrest X (Cobb X D68-216)].

D77-12 is a selection from Forrest(2) X Tracy.

D77-6057 is a selection from Centennial X J74-47. J74-47 is a SCN race 4 selection. Parentage same as Bedford.

D74-7741 is a selection from Forrest X D70-3001 which was grown in Uniform Group VI 1977-1979. D77-3001 is of the same parentage as Centennial.

N77-179 was grown in Uniform Group V in 1980.

D76-9665 is a selection from Forrest X Centennial grown in Uniform Group VI 1979-1981.

F77-1797 is a selection from Centennial X [Forrest X (Cobb X D68-216)].

N77-347 is a selection from N70-1549 X Centennial grown in Uniform Group VI in 1980.

# UNIFORM GROUP VI

## 1989

Uniform Group VI nurseries were grown at 30 locations. A general summary of performance of the lines is reported in Table 29. This includes 1,2 and 3-year data for seed yield, protein percentage and oil percentage, along with agronomic characteristics and reaction to the two root-knot species M. incognita and M. arenaria, SCN Races 3 and 4 and reaction to frogeye leaf spot. Data from individual locations are reported in Tables 30-35.

Ratings for the two root-knot species were made in the greenhouse at the University of Georgia, Athens. Ratings for reaction to SCN Races 3 and 4 were made in the greenhouse at Jackson, TN. Six of the lines were rated resistant to the root knot nematode M. incognita, and three of these were also resistant to M. arenaria. Seven lines were rated resistant to SCN Race 3 and five of these were rated resistant to both SCN Races 3 and 4. D84-7174 and S84-1876 were rated resistant to both species of root knot nematode and both races of SCN. Lines were rated for frogeye leaf spot development at Tallassee, AL. Leflore received a rating of 2.7. Six lines had a rating of 1 and two a rating of 1.3.

Seed yields on clay at Stoneville were very low. These plots were in water 6-8 inches deep for the last few days in June until mid-July. These data were not included in means.

The line N82-1198, included in Uniform Group VI in 1985-1987 is being released and named Brim. It is a selection from Young X N73-1102.

TABLE 29 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP VI, 1989

| | NO. OF LOCATIONS | LEFLORE | SHARKEY | AU82-589 | D84-7174 | G83-198 |
|---|---|---|---|---|---|---|
| Seed Yield - 1989 | | | | | | |
| East Coast | 5 | 41.6 | 43.5 | 39.5 | 42.1 | 41.4 |
| Southeast | 7 | 37.4 | 33.2 | 35.8 | 33.2 | 39.1 |
| Upper and Central South | 4 | 40.1 | 44.4 | 44.8 | 46.8 | 44.3 |
| Delta | 8 | 36.4 | 42.0 | 41.4 | 44.3 | 42.9 |
| West | 4 | 34.3 | 39.5 | 39.3 | 33.0 | 33.8 |
| 1987-89 | | | | | | |
| East Coast | | 38.8 | 38.8 | 37.4 | 39.2 | 41.1 |
| Southeast | | 41.1 | 37.0 | 40.0 | 39.5 | 42.0 |
| Upper & Central South | | 46.2 | 46.7 | 48.0 | 49.2 | 49.6 |
| Delta | | 38.2 | 42.0 | 41.0 | 43.8 | 45.8 |
| West | | 34.2 | 37.3 | 40.5 | 35.7 | 36.0 |
| 1987-89 | | | | | | |
| East Coast | | 38.4 | 37.8 | 37.2 | | |
| Southeast | | 40.3 | 38.4 | 39.9 | | |
| Upper & Central South | | 42.6 | 42.4 | 44.6 | | |
| Delta | | 37.0 | 39.8 | 39.9 | | |
| West | | 36.7 | 40.3 | 42.7 | | |
| Oil Content -1989 | | 18.7 | 19.6 | 19.7 | 19.5 | 20.5 |
| 1988-89 | | 19.3 | 19.4 | 19.9 | 19.7 | 21.1 |
| 1987-89 | | 19.0 | 18.9 | 19.5 | | |
| Protein Content - 1989 | | 41.3 | 42.8 | 41.0 | 40.7 | 41.2 |
| 1988-89 | | 41.3 | 42.8 | 41.2 | 41.0 | 41.3 |
| 1987-89 | | 41.4 | 42.6 | 41.4 | | |
| Seed size | | 11.7 | 13.7 | 10.1 | 11.4 | 11.0 |
| Maturity index | | 10-15 | 0 | 0 | +3 | -1 |
| Height | | 36 | 40 | 34 | 34 | 31 |
| Seed quality | | 1.9 | 2.0 | 1.7 | 2.0 | 1.8 |
| Stem canker | | 1 | 1 | 1 | 1 | 2 |
| M. incognita | | 2.0 | 2.5 | 2.0 | 1.2 | 1.5 |
| M. arenaria | | 2.5 | 2.8 | 2.5 | 1.5 | 3.2 |
| SCN race 3 | | R | R | S | R | R |
| SCN race 4 | | R | S | S | R | S |
| Flower color | | P | W | P | W | P |
| Pubescence color | | T | T | G | T | T |
| Pod wall color | | Tn | Tn | Tn | Tn | Tn |
| Frogeye | | 2.1 | 1.3 | 1.0 | 1.3 | 1.0 |

Table 29 - (continued)

| | N85-492 | S84-1876 | SC84-1531 | D86-8870 | N86-397 | N86-491 | S83-1205 |
|---|---|---|---|---|---|---|---|
| Seed Yield - 1989 | | | | | | | |
| East Coast | 44.2 | 41.3 | 40.8 | 41.0 | 45.4 | 42.0 | 40.7 |
| Southeast | 38.5 | 29.6 | 36.1 | 31.9 | 35.7 | 41.3 | 33.7 |
| Upper & Central South | 44.8 | 46.5 | 47.5 | 46.1 | 48.0 | 50.0 | 46.4 |
| Delta | 42.8 | 44.4 | 46.1 | 40.4 | 43.8 | 44.6 | 42.3 |
| West | 38.4 | 39.0 | 40.3 | 35.7 | 37.3 | 37.6 | 35.9 |
| 1988-89 | | | | | | | |
| East Coast | 41.4 | 41.4 | 38.3 | 39.2 | | | |
| Southeast | 40.4 | 35.6 | 39.6 | | | | |
| Upper & Central South | 48.5 | 47.6 | 49.5 | | | | |
| Delta | 45.7 | 46.6 | 48.1 | | | | |
| West | 40.7 | 39.3 | 40.8 | | | | |
| 1987-89 | | | | | | | |
| East Coast | | | | | | | |
| Southeast | | | | | | | |
| Upper & Central South | | | | | | | |
| Delta | | | | | | | |
| West | | | | | | | |
| Oil Content - 1989 | 22.5 | 20.5 | 19.6 | 19.1 | 20.3 | 19.8 | 21.4 |
| 1988-89 | 22.6 | 20.8 | 19.7 | | | | |
| 1987-89 | | | | | | | |
| Protein Content - 1989 | 39.6 | 40.8 | 41.1 | 43.0 | 41.9 | 40.3 | 41.0 |
| 1988-89 | 39.5 | 40.3 | 41.2 | | | | |
| 1987-89 | | | | | | | |
| Seed size | 13.6 | 10.9 | 13.7 | 11.6 | 10.6 | 13.3 | 12.3 |
| Maturity index | -6 | -9 | +3 | 0 | -3 | +1 | -9 |
| Height | 28 | 30 | 37 | 33 | 34 | 36 | 30 |
| Seed quality | 2.0 | 2.1 | 1.9 | 2.0 | 1.7 | 1.9 | 2.5 |
| Stem canker | 2 | 2 | 1 | 1 | 2 | 1 | 2 |
| M. incognita | 3.2 | 1.8 | 4.2 | 4.8 | 2.8 | 1.2 | 2.5 |
| M. arenaria | 2.8 | 1.3 | 2.8 | 2.8 | 3.4 | 1.8 | 3.3 |
| SCN race 3 | S | R | S | R | S | S | R |
| SCN race 4 | S | R | S | R | S | S | R |
| Flower color | P | W | P | P | W | W | W |
| Pubescence color | T | G | T | T | G | T | T |
| Pod wall color | Tn | T | T | T | Tn | Tn | Tn |
| Frogeye | 1.0 | 1.7 | 1.0 | 2.0 | 1.0 | 1.0 | 1.7 |

TABLE 30 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN UNIFORM GROUP VI, 1989

| LOCATION | LEFLORE | SHARKEY | AU82-589 | D84-7174 | G83-198 | N85-492 | S84-1876 |
|---|---|---|---|---|---|---|---|
| | | | EAST COAST | | | | |
| WARSAW, VA | 41.7 | 46.8 | 43.1 | 43.8 | 46.1 | 46.5 | 46.4 |
| HOLLAND, VA | 54.2 | 57.9 | 50.3 | 54.3 | 50.3 | 59.5 | 50.4 |
| PLYMOUTH, NC | 45.8 | 47.5 | 43.3 | 45.5 | 46.4 | 50.5 | 45.5 |
| KINSTON, NC | 30.5 | 26.6 | 26.5 | 33.1 | 31.4 | 29.1 | 32.2 |
| FLORENCE, SC | 36.0 | 38.6 | 34.2 | 33.8 | 33.0 | 35.2 | 33.4 |
| MEAN | 41.6 | 43.5 | 39.5 | 42.1 | 41.4 | 44.2 | 41.6 |
| | | | SOUTHEAST | | | | |
| BLACKVILLE, SC | 28.0 | 27.2 | 32.1 | 29.4 | 34.1 | 37.6+ | 31.9 |
| TIFTON, GA | 32.6 | 37.5 | 39.1 | 36.1 | 43.6 | 47.0 | 38.9 |
| QUINCY, FL | 30.1 | 21.7- | 37.4+ | 32.6 | 31.7 | 23.2- | 32.0 |
| FAIRHOPE, AL | 67.5 | 40.5 | 35.4 | 32.1 | 46.3 | 45.7 | 31.5 |
| TALLASSEE, AL | 25.9 | 34.5 | 31.8 | 27.9 | 40.1+ | 28.1 | 17.5 |
| JAY, FL | 40.1 | 37.7 | 38.9 | 41.2 | 38.9 | 49.5+ | 25.9- |
| MEAN | 32.4 | 33.2 | 35.8 | 33.2 | 39.1 | 38.5 | 29.6 |
| | | | UPPER AND CENTRAL SOUTH | | | | |
| ATHENS, GA | 38.7 | 39.3 | 32.9- | 39.5 | 41.8 | 37.3 | 34.8 |
| CALHOUN, GA | 36.6 | 56.7 | 53.4 | 54.1 | 48.7 | 49.0 | 57.3 |
| CLEMSON, SC | 45.3 | 37.2- | 48.2 | 46.7 | 42.4 | 48.2 | 47.5 |
| JACKSON, TN | 43.0 | 47.7 | 36.6 | 41.4 | 44.7 | 35.6 | 33.4- |
| MEAN | 40.8 | 45.2 | 42.8 | 45.4 | 44.4 | 42.5 | 43.3 |
| | | | DELTA | | | | |
| PORTAGEVILLE, MO (A) | 39.5 | 52.5+ | 40.3 | 50.9+ | 50.9 | 51.9+ | 55.1+ |
| PORTAGEVILLE, MO (B) | 29.8 | 35.4 | 36.3 | 37.7 | 38.6 | 39.9 | 40.7 |
| KEISER, AR | 39.6 | 46.4+ | 46.9+ | 57.3+ | 58.1+ | 55.1+ | 44.6 |
| JONESBORO, AR | 29.3 | 33.0 | 35.9 | 29.6 | 37.7 | 39.0+ | 44.2+ |
| PINE TREE, AR | 33.8 | 43.8+ | 44.5+ | 42.6 | 45.9+ | 47.6+ | 44.9+ |
| STONEVILLE, MS (A) | 40.3 | 44.9+ | 43.1 | 47.0+ | 38.9 | 50.4+ | 44.2 |
| STONEVILLE, MS (B)* | 13.3 | 5.2- | 17.8 | 12.6 | 13.8 | 7.4 | 8.3 |
| ST. JOSEPH, LA | 41.3 | 42.6 | 44.8 | 47.7+ | 41.9 | 46.8+ | 41.0 |
| ROHWER, AR | 37.5 | 36.9 | 39.0 | 41.6 | 30.6 | 35.1 | 34.8 |
| MEAN | 36.4 | 41.9 | 41.4 | 44.3 | 42.8 | 45.7 | 43.7 |
| | | | WEST | | | | |
| STUTTGART, AR | 36.8 | 49.0+ | 44.8+ | 36.3 | 46.5+ | 47.2+ | 43.6+ |
| BOSSIER CITY, LA | 39.4 | 41.6 | 44.6 | 39.6 | 39.0 | 42.1 | 48.3+ |
| BEAUMONT, TX | 26.1 | 32.5 | 27.9 | 24.9 | 18.8 | 24.3 | 16.2- |
| BIXBY, OK | 35.0 | 35.0 | 40.0 | 31.0 | 31.0 | 40.0 | 48.0+ |
| MEAN | 34.3 | 39.5 | 39.3 | 33.0 | 33.8 | 38.4 | 39.0 |

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

TABLE 30 - (continued)

| LOCATION | Sc84-1531 | D86-8870 | N86-397 | N86-491 | S83-1205 | L.S.D. (.05) | C.V. (%) |
|---|---|---|---|---|---|---|---|
| | | | EAST COAST | | | | |
| WARSAW, VA | 48.5 | 43.2 | 52.0 | 47.6 | 45.1 | 5.5 | 7.1 |
| HOLLAND, VA | 47.7 | 48.6 | 52.4 | 48.3 | 56.1 | 11.3 | 12.8 |
| PLYMOUTH, NC | 49.9 | 46.6 | 46.6 | 45.4 | 43.5 | 8.0 | 10.2 |
| KINSTON, NC | 29.2 | 29.9 | 33.2 | 34.6 | 25.1 | 4.2 | 8.4 |
| FLORENCE, SC | 28.8 | 36.9 | 42.6 | 34.2 | 33.9 | | 13.1 |
| MEAN | 40.8 | 41.0 | 45.4 | 42.0 | 40.7 | | |
| | | | SOUTHEAST | | | | |
| BLACKVILLE, SC | 30.5 | 35.2+ | 36.9+ | 40.9+ | 32.9 | 6.1 | 10.9 |
| TIFTON, GA | 47.7 | 38.7 | 43.2 | 46.9 | 41.2 | | |
| QUINCY, FL | 33.0 | 23.7- | 26.4 | 39.3+ | 28.7 | 6.1 | 12.0 |
| FAIRHOPE, AL | 36.9 | 32.7 | 40.5 | 37.5 | 37.2 | 10.0 | 15.7 |
| TALLASSEE, AL | 25.9 | 24.5 | 24.5 | 37.0 | 30.6 | 12.1 | 24.7 |
| JAY, FL | 42.4 | 36.5 | 42.4 | 46.0 | 31.8 | 5.9 | 9.1 |
| MEAN | 36.1 | 31.9 | 35.7 | 41.3 | 33.7 | | |
| | | | UPPER AND CENTRAL SOUTH | | | | |
| ATHENS, GA | 38.6 | 38.1 | 40.7 | 36.7 | 41.3 | 5.4 | 8.3 |
| CALHOUN, GA | 58.2 | 59.0 | 59.3 | 63.3 | 54.9 | | |
| CLEMSON, SC | 45.7 | 41.3 | 43.9 | 49.9 | 42.9 | 5.7 | 7.5 |
| JACKSON, TN | 42.2 | 43.9 | 28.8- | 40.1 | 35.2 | 7.8 | 11.7 |
| MEAN | 46.2 | 45.6 | 43.2 | 47.5 | 43.6 | | |
| | | | DELTA | | | | |
| PORTAGEVILLE, MO (A) | 50.5+ | 46.3 | 45.7 | 49.3+ | 47.2+ | 7.4 | 9.1 |
| PORTAGEVILLE, MO (B) | 40.1 | 34.0 | 39.3 | 43.2 | 47.2 | 3.2 | 5.0 |
| KEISER, AR | 56.0+ | 45.5 | 41.4 | 48.7+ | 42.8 | 6.7 | 8.1 |
| JONESBORO, AR | 36.0 | 38.6+ | 38.9+ | 43.0+ | 50.1+ | 7.4 | 11.6 |
| PINE TREE, AR | 52.3+ | 40.8 | 43.9+ | 47.3+ | 37.4 | 8.9 | 12.1 |
| STONEVILLE, MS (A) | 49.6+ | 38.9 | 49.5+ | 45.8+ | 52.7+ | 4.1 | 5.3 |
| STONEVILLE, MS (B) | 20.8+ | 8.8 | 14.4 | 15.3 | 15.5 | 6.2 | 28.6 |
| ST. JOSEPH, LA | 46.8+ | 39.5 | 47.5+ | 41.7 | 38.4 | 5.4 | 8.8 |
| ROHWER, AR | 37.3 | 39.6 | 39.9 | 37.9 | 32.7 | 5.0 | 8.1 |
| MEAN | 46.1 | 40.4 | 43.3 | 44.6 | 42.3 | | |
| | | | WEST | | | | |
| STUTTGART, AR | 53.5+ | 38.9 | 45.6+ | 41.3 | 37.0 | 5.0 | 6.8 |
| BOSSIER CITY, LA | 43.9 | 36.6 | 46.6 | 43.2 | 43.5 | 7.2 | 10.1 |
| BEAUMONT, TX | 26.9 | 29.2 | 17.0 | 29.0 | 19.0 | 9.3 | 22.5 |
| BIXBY, OK | 37.0 | 38.0 | 40.0 | 37.0 | 44.0+ | 5.8 | |
| MEAN | 40.3 | 35.7 | 37.3 | 37.6 | 35.9 | | |

TABLE 31 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP VI, 1989

| LOCATION | LEFLORE | SHARKEY | AU82-589 | D84-7174 | G83-198 | S84-1876 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| PLYMOUTH, NC | 18.8 | 18.9 | 19.2 | 18.4 | 20.5 | 22.0 |
| KINSTON, NC | 18.9 | 18.8 | 19.4 | 18.4 | 20.3 | 21.3 |
| TALLASSEE, AL | 19.4 | 19.6 | 19.9 | 19.8 | 21.5 | 22.6 |
| JAY, FL | 20.8 | 22.5 | 22.3 | 21.2 | 22.1 | 24.9 |
| JACKSON, TN | 19.1 | 19.2 | 20.2 | 19.8 | 21.1 | 22.0 |
| PORTAGEVILLE, MO (A) | 18.4 | 17.9 | 18.9 | 18.4 | 19.9 | 21.8 |
| KEISER, AR | 16.9 | 19.3 | 19.3 | 18.4 | 20.3 | 21.3 |
| STONEVILLE, MS (A) | 19.0 | 20.1 | 19.5 | 19.5 | 20.8 | 23.4 |
| STUTTGART, AR | 15.7 | 19.5 | 18.1 | 19.2 | 18.6 | 22.0 |
| ATHENS, GA | 20.4 | 20.3 | 19.9 | 20.2 | 20.8 | 23.2 |
| MEAN | 18.7 | 19.6 | 19.7 | 19.3 | 20.6 | 22.5 |
| | | | PROTEIN PERCENTAGE | | | |
| PLYMOUTH, NC | 40.7 | 43.6 | 40.5 | 42.1 | 41.1 | 39.2 |
| KINSTON, NC | 40.9 | 44.4 | 41.4 | 41.8 | 41.8 | 39.9 |
| TALLASSEE, AL | 42.7 | 45.4 | 42.3 | 42.3 | 42.5 | 42.5 |
| JAY, FL | 41.1 | 41.6 | 40.0 | 40.3 | 40.7 | 38.2 |
| JACKSON, TN | 40.2 | 41.6 | 39.3 | 39.5 | 39.5 | 39.3 |
| PORTAGEVILLE, MO (A) | 40.0 | 41.9 | 40.6 | 41.6 | 40.7 | 39.1 |
| KEISER, AR | 42.8 | 43.2 | 42.4 | 42.6 | 41.9 | 40.9 |
| STONEVILLE, MS (A) | 41.0 | 42.2 | 41.3 | 39.7 | 41.9 | 38.1 |
| STUTTGART, AR | 43.9 | 42.6 | 42.3 | 37.8 | 42.4 | 39.7 |
| ATHENS, GA | 39.9 | 41.5 | 39.9 | 39.7 | 39.4 | 39.1 |
| MEAN | 41.3 | 42.8 | 41.0 | 40.7 | 41.2 | 39.6 |
| | | | GRAMS PER 100 SEED | | | |
| PLYMOUTH, NC | 12.8 | 15.5 | 10.8 | 11.8 | 12.1 | 15.0 |
| KINSTON, NC | 12.5 | 15.2 | 10.9 | 11.6 | 12.4 | 13.8 |
| TALLASSEE, AL | 11.0 | 12.4 | 10.0 | 11.2 | 10.5 | 12.4 |
| JAY, FL | 10.0 | 10.0 | 10.0 | 11.0 | 10.0 | 13.0 |
| JACKSON, TN | 16.1 | 17.2 | 12.6 | 13.9 | 13.9 | 14.7 |
| PORTAGEVILLE, MO (A) | 11.9 | 14.3 | 9.0 | 11.3 | 11.4 | 14.5 |
| KEISER, AR | 11.0 | 14.0 | 10.0 | 12.0 | 11.0 | 12.5 |
| STONEVILLE, MS (A) | 9.8 | 11.7 | 9.1 | 9.6 | 9.4 | 13.0 |
| STUTTGART, AR | 10.8 | 14.0 | 10.3 | 11.1 | 10.6 | 13.7 |
| ATHENS, GA | 12.1 | 14.2 | 9.4 | 11.1 | 10.3 | 13.8 |
| MEAN | 11.8 | 13.9 | 10.2 | 11.5 | 11.2 | 13.6 |

TABLE 31 - (continued)

| LOCATION | S84-1876 | SC84-1531 | D86-8870 | N86-397 | N86-491 | S83-1205 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| PLYMOUTH, NC | 20.3 | 19.0 | 19.4 | 21.0 | 19.4 | 21.6 |
| KINSTON, NC | 20.2 | 18.8 | 18.3 | 20.3 | 19.2 | 20.1 |
| TALLASSEE, AL | 21.1 | 20.7 | 19.2 | 19.0 | 19.1 | 21.6 |
| JAY, FL | 21.8 | 21.5 | 20.8 | 22.9 | 22.0 | 24.5 |
| JACKSON, TN | 20.4 | 19.8 | 19.5 | 20.4 | 20.4 | 20.7 |
| PORTAGEVILLE, MO (A) | 19.4 | 19.0 | 19.4 | 21.0 | 19.4 | 21.6 |
| KEISER, AR | 19.4 | 19.3 | 18.5 | 19.6 | 19.9 | 19.9 |
| STONEVILLE, MS (A) | 20.7 | 19.9 | 18.8 | 20.3 | 19.8 | 21.0 |
| STUTTGART, AR | 20.5 | 18.3 | 16.9 | 19.8 | 18.8 | 21.0 |
| ATHENS, GA | 21.4 | 19.6 | 20.5 | 20.5 | 20.5 | 22.4 |
| MEAN | 20.4 | 19.4 | 19.1 | 20.5 | 19.9 | 21.4 |
| | | | PROTEIN PERCENTAGE | | | |
| PLYMOUTH, NC | 40.1 | 41.9 | 43.7 | 41.6 | 41.0 | 39.6 |
| KINSTON, NC | 40.6 | 42.2 | 44.9 | 42.3 | 42.1 | 43.1 |
| TALLASSEE, AL | 42.4 | 42.4 | 43.5 | 45.8 | 41.8 | 43.6 |
| JAY, FL | 42.8 | 40.4 | 43.0 | 40.2 | 41.0 | 41.4 |
| JACKSON, TN | 40.0 | 40.4 | 41.8 | 40.7 | 38.7 | 40.6 |
| PORTAGEVILLE,MO (A) | 40.1 | 40.6 | 41.8 | 42.1 | 39.8 | 38.6 |
| KEISER, AR | 41.3 | 41.5 | 43.6 | 42.5 | 41.4 | 41.9 |
| STONEVILLE, MS (A) | 40.4 | 40.1 | 420 | 41.1 | 39.2 | 41.3 |
| STUTTGART, AR | 39.4 | 41.4 | 45.0 | 41.4 | 38.8 | 40.2 |
| ATHENS, GA | 40.5 | 39.8 | 40.7 | 41.2 | 39.6 | 39.8 |
| MEAN | 40.6 | 41.0 | 43.1 | 41.5 | 40.3 | 40.7 |
| | | | GRAMS PER 100 SEED | | | |
| PLYMOUTH, NC | 13.1 | 16.4 | 12.4 | 15.1 | 13.3 | 14.7 |
| KINSTON,NC | 11.0 | 14.5 | 12.2 | 15.1 | 14.5 | 12.4 |
| TALLASSEE, AL | 10.2 | 12.0 | 10.5 | 12.5 | 13.1 | 11.8 |
| JAY, FL | 10.0 | 12.0 | 10.0 | 13.0 | 14.0 | 9.0 |
| JACKSON, TN | 13.1 | 16.5 | 15.1 | 15.1 | 15.6 | 14.6 |
| PORTAGEVILLE, MO (A) | 11.0 | 14.5 | 11.6 | 13.2 | 14.1 | 12.6 |
| KEISER, AR | 9.5 | 15.0 | 10.5 | 13.0 | 13.0 | 11.0 |
| STONEVILLE, MS (A) | 10.2 | 12.2 | 11.4 | 11.6 | 11.0 | 12.8 |
| STUTTGART, AR | 10.7 | 13.2 | 10.8 | 12.9 | 12.7 | 11.1 |
| ATHENS, GA | 11.1 | 12.9 | 12.7 | 13.2 | 12.6 | 13.3 |
| MEAN | 11.0 | 13.9 | 11.7 | 13.5 | 13.4 | 12.3 |

TABLE 32 - RELATIVE MATURITY DATA, DAYS EARLIER (-) OR LATER (+) THAN LEFLORE, FOR THE STRAINS IN UNIFORM GROUP VI, 1989

| LOCATION | LEFLORE | SHARKEY | AU82-589 | D84-7174 | G83-198 | N85-492 |
|---|---|---|---|---|---|---|
| | | EAST COAST | | | | |
| WARSAW, VA | 10-28 | +1 | +1 | +4 | +4 | -2 |
| HOLLAND, VA | 10-26 | +1 | 0 | +1 | +1 | -2 |
| PLYMOUTH, NC | 10-30 | 0 | 0 | +2 | +2 | -3 |
| KINSTON, NC | 10-30 | -9 | -1 | -1 | -2 | -3 |
| FLORENCE, SC | 10-14 | -5 | +1 | +2 | 0 | -5 |
| MEAN | 10-25 | -2 | 0 | +2 | +1 | -3 |
| | | SOUTHEAST | | | | |
| BLACKVILLE, SC | 10-13 | 0 | +2 | +7 | -2 | -2 |
| TIFTON, GA | 10-06 | +1 | +2 | +6 | -3 | -13 |
| FAIRHOPE, AL | 10-13 | -5 | +2 | +4 | -5 | -11 |
| TALLASSEE, AL | 10-10 | -1 | 0 | +8 | -2 | -8 |
| JAY, FL | 10-10 | -1 | 0 | +6 | +2 | +1 |
| MEAN | 10-10 | -1 | +1 | +6 | -2 | -7 |
| | | UPPER AND CENTRAL SOUTH | | | | |
| ATHENS, GA | 10-11 | 0 | -1 | +6 | +4 | -4 |
| CALHOUN, GA | 10-16 | 0 | -1 | +2 | -3 | -5 |
| CLEMSON, SC | 10-13 | +4 | +3 | +5 | +1 | -7 |
| JACKSON, TN | 10-19 | +3 | +3 | +3 | 0 | -10 |
| MEAN | 10-14 | +2 | +1 | +$ | +1 | -7 |
| | | DELTA | | | | |
| PORTAGEVILLE, MO (A) | 10-26 | +3 | +2 | +3 | +1 | -4 |
| PORTAGEVILLE, MO (B) | 10-27 | +5 | +1 | +5 | 0 | -5 |
| KEISER, AR | 10-16 | +2 | +2 | +6 | -2 | -4 |
| JONESBORO, AR | 10-15 | +1 | -6 | 0 | 0 | -8 |
| PINE TREE, AR | 10-16 | +1 | -5 | +1 | 0 | -6 |
| STONEVILLE, MS (A) | 10-10 | +1 | -1 | +1 | -3 | -7 |
| STONEVILLE, MS (B) | 10-08 | +4 | 0 | +5 | -5 | -5 |
| ST. JOSEPH, LA | 10-06 | -2 | +2 | +5 | -3 | -7 |
| ROHWER, AR | 10-11 | -2 | 0 | +4 | -2 | -13 |
| MEAN | 10-15 | +1 | -1 | +3 | -2 | -6 |
| | | WEST | | | | |
| STUTTGART, AR | 10-15 | +2 | +6 | +6 | -2 | -9 |
| BOSSIER CITY, LA | 10-01 | -2 | +1 | +1 | 0 | -5 |
| BEAUMONT, TX | 10-05 | +2 | +1 | +1 | -2 | -9 |
| BIXBY, OK | 10-20 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 10-10 | +1 | +2 | +2 | -1 | -6 |

TABLE 32 - (continued)

| LOCATION | S84-1876 | SC84-1531 | D86-8870 | N86-397 | N86-491 | S83-1205 |
|---|---|---|---|---|---|---|
| | | EAST COAST | | | | |
| WARSAW, VA | -4 | +4 | -2 | +4 | 0 | -11 |
| HOLLAND, VA | -4 | +2 | 0 | 0 | +1 | -4 |
| PLYMOUTH, NC | -6 | +2 | 0 | 0 | 0 | -6 |
| KINSTON, NC | -15 | +7 | | | | |
| FLORENCE, SC | -7 | 0 | +1 | 0 | +1 | -6 |
| MEAN | -7 | +3 | -1 | +1 | 0 | -8 |
| | | SOUTHEAST | | | | |
| BLACKVILLE, SC | -6 | +10 | -2 | -4 | +3 | -4 |
| TIFTON, GA | -15 | +3 | 0 | -3 | +3 | -16 |
| FAIRHOPE, AL | -15 | +4 | +2 | -10 | +1 | -16 |
| TALLASSEE, AL | -7 | +6 | +2 | -4 | +3 | -5 |
| JAY, FL | -9 | +3 | 0 | -1 | +4 | -9 |
| MEAN | -10 | +5 | 0 | -4 | +3 | -10 |
| | | UPPER AND CENTRAL SOUTH | | | | |
| ATHENS, GA | -4 | +1 | 0 | -1 | 0 | -5 |
| CALHOUN, GA | -9 | +2 | 0 | -5 | +1 | -11 |
| CLEMSON, SC | -7 | +4 | 0 | -4 | +4 | -8 |
| JACKSON, TN | -10 | +4 | +1 | -10 | 0 | -15 |
| MEAN | -8 | +3 | 0 | -5 | +1 | -10 |
| | | DELTA | | | | |
| PORTAGEVILLE, MO (A) | -8 | +3 | 0 | +1 | +2 | -12 |
| PORTAGEVILLE, MO (B) | -8 | +4 | +2 | -5 | +3 | -11 |
| KEISER, AR | -5 | +1 | -1 | +1 | +3 | -7 |
| JONESBORO, AR | -8 | 0 | -2 | 0 | -1 | -9 |
| PINE TREE, AR | -6 | +2 | -1 | +1 | -1 | -6 |
| STONEVILLE, MS (A) | -9 | +1 | -1 | -4 | 0 | -11 |
| STONEVILLE, MS (B) | -12 | +1 | +1 | -6 | +3 | -7 |
| ST. JOSEPH, LA | -17 | +2 | 0 | -5 | +3 | -18 |
| ROHWER, AR | -10 | 0 | -4 | -8 | +3 | -12 |
| MEAN | -9 | +2 | -1 | -3 | +2 | -10 |
| | | WEST | | | | |
| STUTTGART, AR | -10 | +3 | -1 | -6 | 0 | -11 |
| BOSSIER CITY, LA | -6 | +4 | -3 | -6 | +4 | -8 |
| BEAUMONT, TX | -13 | +1 | 0 | +22 | +1 | +20 |
| BIXBY, OK | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN | -7 | +2 | -1 | +3 | +1 | 0 |

TABLE 33 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP VI, 1989

| LOCATION | LEFLORE | SHARKEY | AU82-589 | D84-7174 | G83-198 | N85-492 |
|---|---|---|---|---|---|---|
| | | EAST COAST | | | | |
| WARSAW, VA | 44 | 52 | 40 | 41 | 37 | 34 |
| HOLLAND, VA | 38 | 55 | 44 | 41 | 39 | 30 |
| PLYMOUTH, NC | 42 | 37 | 36 | 38 | 36 | 36 |
| KINSTON, NC | 40 | 48 | 42 | 38 | 40 | 35 |
| FLORENCE, SC | 38 | 45 | 33 | 37 | 30 | 26 |
| MEAN | 40 | 47 | 39 | 39 | 36 | 32 |
| | | SOUTHEAST | | | | |
| BLACKVILLE, SC | 38 | 38 | 34 | 35 | 31 | 26 |
| TIFTON, GA | 26 | 33 | 29 | 22 | 24 | 22 |
| FAIRHOPE, AL | 24 | 30 | 23 | 22 | 23 | 21 |
| TALLASSEE, AL | 20 | 30 | 21 | 20 | 19 | 18 |
| JAY, FL | 32 | 34 | 28 | 29 | 25 | 24 |
| MEAN | 28 | 33 | 27 | 26 | 24 | 22 |
| | | UPPER AND CENTRAL SOUTH | | | | |
| ATHENS, GA | 37 | 37 | 31 | 34 | 32 | 24 |
| CALHOUN, GA | 38 | 38 | 36 | 34 | 27 | 30 |
| CLEMSON, SC | 43 | 44 | 41 | 40 | 41 | 37 |
| JACKSON, TN | 46 | 49 | 43 | 41 | 41 | 36 |
| MEAN | 41 | 42 | 38 | 37 | 35 | 32 |
| | | DELTA | | | | |
| PORTAGEVILLE, MO (A) | 51 | 50 | 49 | 48 | 35 | 35 |
| PORTAGEVILLE, MO (B) | 34 | 44 | 36 | 37 | 32 | 24 |
| KEISER, AR | 44 | 41 | 40 | 38 | 39 | 35 |
| JONESBORO, AR | 38 | 45 | 43 | 39 | 31 | 29 |
| PINE TREE, AR | 41 | 42 | 37 | 33 | 35 | 32 |
| STONEVILLE, MS (A) | 33 | 39 | 30 | 32 | 29 | 23 |
| STONEVILLE, MS (B) | 25 | 23 | 23 | 23 | 23 | 16 |
| ST. JOSEPH, LA | 40 | 43 | 34 | 36 | 33 | 28 |
| ROHWER, AR | 27 | 25 | 24 | 27 | 21 | 24 |
| MEAN | 37 | 39 | 35 | 35 | 31 | 27 |
| | | WEST | | | | |
| STUTTGART, AR | 34 | 42 | 34 | 30 | 31 | 26 |
| BOSSIER CITY, LA | 29 | 34 | 25 | 27 | 25 | 20 |
| BEAUMONT, TX | 28 | 32 | 25 | 26 | 19 | 20 |
| BIXBY, OK | 40 | 40 | 38 | 38 | 36 | 34 |
| MEAN | 33 | 37 | 31 | 30 | 28 | 25 |

TABLE 33 - (continued)

| LOCATION | S84-1876 | SC84-1531 | D86-8870 | N86-397 | N86-491 | S83-1205 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| WARSAW, VA | 37 | 49 | 44 | 40 | 41 | 42 |
| HOLLAND, VA | 35 | 49 | 40 | 42 | 46 | 29 |
| PLYMOUTH, NC | 36 | 44 | 39 | 35 | 40 | 31 |
| KINSTON, NC | 36 | 44 | 40 | 41 | 47 | 38 |
| FLORENCE, SC | 32 | 38 | 33 | 33 | 34 | 31 |
| MEAN | 35 | 45 | 39 | 38 | 42 | 34 |
| | | | SOUTHEAST | | | |
| BLACKVILLE, SC | 27 | 35 | 32 | 32 | 33 | 29 |
| TIFTON, GA | 24 | 31 | 29 | 31 | 32 | 25 |
| FAIRHOPE, AL | 20 | 24 | 21 | 23 | 22 | 21 |
| TALLASSEE, AL | 16 | 21 | 19 | 20 | 24 | 20 |
| JAY, FL | 21 | 26 | 30 | 31 | 29 | 26 |
| MEAN | 22 | 27 | 26 | 27 | 28 | 24 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ATHENS, GA | 25 | 35 | 31 | 32 | 32 | 31 |
| CALHOUN, GA | 36 | 39 | 38 | 36 | 37 | 33 |
| CLEMSON, SC | 41 | 44 | 39 | 40 | 42 | 37 |
| JACKSON, TN | 40 | 47 | 44 | 40 | 41 | 38 |
| MEAN | 36 | 41 | 38 | 37 | 38 | 35 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 43 | 52 | 38 | 50 | 50 | 40 |
| PORTAGEVILLE, MO (B) | 27 | 38 | 32 | 34 | 37 | 26 |
| KEISER, AR | 34 | 41 | 37 | 42 | 45 | 37 |
| JONESBORO, AR | 33 | 41 | 43 | 39 | 44 | 36 |
| PINE TREE, AR | 38 | 42 | 37 | 38 | 42 | 34 |
| STONEVILLE, MS (A) | 25 | 34 | 30 | 30 | 34 | 26 |
| STONEVILLE, MS (B) | 17 | 27 | 21 | 26 | 21 | 20 |
| ST. JOSEPH, LA | 32 | 37 | 34 | 36 | 38 | 30 |
| ROHWER, AR | 21 | 26 | 28 | 27 | 29 | 21 |
| MEAN | 30 | 38 | 33 | 36 | 38 | 30 |
| | | | WEST | | | |
| STUTTGART, AR | 24 | 36 | 32 | 35 | 34 | 27 |
| BOSSIER CITY, LA | 25 | 29 | 24 | 33 | 26 | 22 |
| BEAUMONT, TX | 24 | 25 | 22 | 25 | 29 | 25 |
| BIXBY, OK | 35 | 40 | 34 | 34 | 38 | 36 |
| MEAN | 27 | 33 | 28 | 32 | 32 | 28 |

TABLE 34 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP VI, 1989

| LOCATION | LEFLORE | SHARKEY | AU82-589 | D84-7174 | G83-198 | N85-492 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| WARSAW, VA | 2.8 | 3.7 | 2.5 | 3.3 | 2.3 | 2.8 |
| HOLLAND, VA | 3.2 | 3.3 | 3.0 | 3.0 | 3.0 | 2.5 |
| PLYMOUTH, NC | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| KINSTON, NC | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| FLORENCE, SC | 2.0 | 2.7 | 2.3 | 1.8 | 2.3 | 1.8 |
| | | | SOUTHEAST | | | |
| BLACKVILLE, SC | 1.7 | 3.7 | 1.3 | 1.0 | 2.3 | 1.0 |
| TIFTON, GA | 1.0 | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| FAIRHOPE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| TALLASSEE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| JAY, FL | 1.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ATHENS, GA | 2.5 | 3.0 | 1.8 | 2.5 | 2.2 | 1.7 |
| CALHOUN, GA | 1.8 | 2.5 | 1.5 | 1.5 | 1.5 | 1.3 |
| CLEMSON, SC | 3.2 | 3.8 | 2.3 | 2.7 | 3.5 | 1.7 |
| JACKSON, TN | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 2.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 2.5 | 3.5 | 2.0 | 2.5 | 1.5 | 1.5 |
| PORTAGEVILLE, MO (B) | 1.5 | 2.0 | 1.0 | 1.5 | 1.0 | 1.0 |
| KEISER, AR | 2.0 | 3.0 | 1.7 | 2.0 | 2.3 | 1.3 |
| JONESBORO, AR | 2.3 | 4.0 | 2.0 | 3.3 | 2.3 | 1.0 |
| PINE TREE, AR | 2.0 | 2.7 | 2.3 | 3.3 | 3.0 | 1.7 |
| STONEVILLE, MS (A) | 2.0 | 2.4 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.3 | 4.0 | 2.7 | 2.7 | 3.0 | 2.7 |
| ST. JOSEPH, LA | 2.5 | 2.4 | 1.8 | 2.1 | 2.0 | 1.2 |
| ROHWER, AR | 1.0 | 2.4 | 1.0 | 1.0 | 1.0 | 1.0 |
| | | | WEST | | | |
| STUTTGART, AR | 2.0 | 3.7 | 2.5 | 1.6 | 2.0 | 1.0 |
| BOSSIER CITY, LA | 1.5 | 2.0 | 1.5 | 1.0 | 1.5 | 1.0 |
| BEAUMONT, TX | 1.0 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 |
| BIXBY, OK | 3.0 | 5.0 | 3.0 | 4.0 | 3.0 | 2.0 |

TABLE 34 - (continued)

| LOCATION | LEFLORE | SHARKEY | AU82-589 | D84-7174 | G83-198 | N85-492 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| WARSAW, VA | 2.2 | 2.8 | 3.2 | 2.8 | 2.7 | 3.0 |
| HOLLAND, VA | 2.3 | 2.8 | 2.8 | 2.8 | 3.2 | 2.5 |
| PLYMOUTH, NC | 3.0 | 2.0 | 3.0 | 4.0 | 3.0 | 4.0 |
| KINSTON, NC | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 |
| FLORENCE, SC | 1.7 | 1.8 | 1.8 | 2.3 | 1.8 | 2.0 |
| | | | SOUTHEAST | | | |
| BLACKVILLE, SC | 1.0 | 1.0 | 1.7 | 1.3 | 1.0 | 1.0 |
| TIFTON, GA | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.0 |
| FAIRHOPE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| TALLASSEE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| JAY, FL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ATHENS, GA | 1.5 | 1.7 | 2.3 | 2.5 | 2.2 | 2.8 |
| CALHOUN, GA | 1.3 | 1.5 | 2.2 | 1.5 | 1.8 | 1.3 |
| CLEMSON, SC | 1.8 | 3.0 | 3.2 | 3.7 | 3.3 | 4.3 |
| JACKSON, TN | 2.0 | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 2.5 | 2.0 | 2.0 | 3.0 | 2.0 | 2.5 |
| PORTAGEVILLE, MO (B) | 1.0 | 1.5 | 1.5 | 1.0 | 2.0 | 1.0 |
| KEISER, AR | 1.0 | 1.7 | 1.7 | 3.0 | 2.3 | 2.0 |
| JONESBORO, AR | 1.3 | 2.7 | 2.7 | 3.7 | 3.0 | 2.0 |
| PINE TREE, AR | 1.0 | 2.3 | 2.0 | 2.3 | 2.0 | 3.0 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 | 2.0 |
| STONEVILLE, MS (B) | 2.3 | 2.7 | 2.7 | 2.3 | 2.7 | 2.7 |
| ST. JOSEPH, LA | 1.5 | 1.3 | 1.6 | 1.4 | 1.7 | 2.2 |
| ROHWER, AR | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| | | | WEST | | | |
| STUTTGART, AR | 1.1 | 2.4 | 2.0 | 2.0 | 1.4 | 1.0 |
| BOSSIER CITY, LA | 1.5 | 1.0 | 2.0 | 1.5 | 1.5 | 1.5 |
| BEAUMONT, TX | 1.0 | 1.0 | 1.0 | 1.3 | 1.0 | 1.0 |
| BIXBY, OK | 0.0 | 1.0 | 2.0 | 4.0 | 4.0 | 3.0 |

TABLE 35 - SEED QUALITY SCORES FOR THE STRAINS IN UNIFORM GROUP VI, 1989

| LOCATION | LEFLORE | SHARKEY | AU82-589 | D84-7174 | G83-198 | N85-492 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| WARSAW, VA | 1.4 | 1.1 | 1.4 | 1.4 | 1.2 | 1.5 |
| HOLLAND, VA | 1.0 | 1.0 | 1.3 | 1.0 | 1.0 | 1.2 |
| PLYMOUTH, NC | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| KINSTON, NC | 1.5 | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 |
| | | | SOUTHEAST | | | |
| TIFTON, GA | 2.0 | 2.7 | 1.8 | 2.3 | 1.8 | 2.7 |
| TALLASSEE, AL | 1.5 | 2.0 | 1.0 | 1.5 | 1.5 | 2.0 |
| JAY, FL | 4.0 | 1.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ATHENS, GA | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| CALHOUN, GA | 1.5 | 1.8 | 1.3 | 2.3 | 1.8 | 2.2 2.0 |
| JACKSON, TN | 2.0 | 2.0 | 3.0 | 3.0 | 2.0 | 2.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| PORTAGEVILLE, MO (B) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| KEISER, AR | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 |
| JONESBORO, AR | 1.7 | 2.0 | 1.0 | 1.7 | 1.3 | 1.0 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.7 | 2.3 | 2.0 | 2.0 | 2.3 | 3.0 |
| ROHWER, AR | 2.5 | 2.0 | 2.0 | 2.0 | 2.5 | 3.2 |
| | | | WEST | | | |
| STUTTGART, AR | 2.7 | 2.0 | 1.5 | 2.0 | 2.0 | 2.7 |
| BEAUMONT, TX | 2.2 | 3.2 | 1.7 | 2.2 | 2.2 | 2.0 |

TABLE 35 - (continued)

| LOCATION | S84-1876 | SC84-1531 | D86-8870 | N86-397 | N86-491 | S83-1205 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| WARSAW, VA | 1.6 | 1.2 | 1.5 | 1.0 | 1.3 | 1.6 |
| HOLLAND, VA | 1.3 | 1.3 | 1.3 | 1.0 | 1.0 | 1.0 |
| PLYMOUTH, NC | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| KINSTON, NC | 2.0 | 1.5 | 1.5 | 1.5 | 1.5 | 2.0 |
| | | | SOUTHEAST | | | |
| TIFTON, GA | 2.3 | 1.7 | 1.7 | 1.5 | 1.7 | 2.2 |
| TALLASSEE, AL | 1.0 | 1.5 | 1.5 | 2.0 | 1.5 | 2.0 |
| JAY, FL | 5.0 | 3.0 | 4.0 | 2.0 | 3.0 | 5.0 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ATHENS, GA | 1.8 | 1.5 | 1.5 | 1.5 | 1.5 | 2.3 |
| CALHOUN, GA | 2.0 | 1.8 | 2.3 | 2.0 | 1.6 | 2.8 |
| JACKSON, TN | 3.0 | 2.0 | 3.0 | 2.0 | 3.0 | 2.0 |
| | | | DELTA | | | |
| PORTAGEVILLE, MO (B) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.5 |
| PORTAGEVILLE, MO (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.5 |
| KEISER, AR | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | 3.5 |
| JONESBORO, AR | 1.0 | 1.3 | 1.0 | 1.3 | 2.3 | 2.0 |
| PINE TREE, AR | 2.0 | 1.7 | 1.7 | 1.3 | 1.0 | 2.0 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.3 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 |
| ROHWER, AR | 2.5 | 2.5 | 2.2 | 2.0 | 2.8 | 3.3 |
| | | | WEST | | | |
| STUTTGART, AR | 2.0 | 2.0 | 2.3 | 2.0 | 2.0 | 3.5 |
| BEAUMONT, TX | 2.3 | 2.0 | 1.7 | 2.2 | 1.7 | 3.0 |

# PRELIMINARY GROUP VI

## 1989

Preliminary Group VI nurseries, which included Leflore and Bedford along with 34 experimental lines, were grown at 7 locations. Parentage for each of the lines is reported in Table 36. A general summary of performance is reported in Table 37. Data included are mean seed yield, average maturity, plant height, percent protein, percent oil, ratings for SCN Rces 3 and 4, and percent mottled seed. Data from individual locations are reported in Tables 38-42.

Leflore had a mean seed yield of 37.4 bu per acre and Bedford a mean seed yield of 39.2 bu per acre. There were no strains with a mean seed yield significantly higher than that for Leflore. There was one strain which had a mean seed yield significantly below that for Bedford. There were three strains equal to Bedford or earlier in maturity than Bedford. One strain averaged 8 days later in maturity than Leflore. Three of the lines were rated susceptible to bacterial pustule at Stoneville. These were R87-165S, Tn85-162 and G85-547. N87-1049 was segregating for pubescence and maturity while N87-298 was segregating for pubescence.

Twenty-three lines were rated resistant to SCN Race 3 with three additional lines appearing to be segregating in reaction. Nine lines were rated resistant to both Races 3 and 4.

Leflore had a mean seed yield of 423 bu per acre and Bedford 41.7.

Seed yields were low and variable for Stoneville clay as a result of flooding. Data are not included in means.

TABLE 36 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP VI, 1989

| | VARIETY OR STRAIN | PARENTAGE |
|---|---|---|
| 1. | LEFLORE | CENTENNIAL X J74-47 |
| 2. | BEDFORD | FORREST(2) X D68-18 X PI 88788 |
| 3. | AU86-14 | N77-117 X N79-471 |
| 4. | AU86-29 | N77-117 X N79-491 |
| 5. | AU86-379 | N77-117 X N79-491 |
| 6. | AU86-888 | CO79-760 X N77-114 |
| 7. | D86-8473 | SHARKEY X D79-10158 |
| 8. | D86-8807 | TRACY-M X D81-4012 |
| 9. | D87-4461 | SHARKEY X LEFLORE |
| 10. | D87-4637 | SHARKEY X D81-9753 |
| 11. | D87-5509 | TRACY X D72-8707 |
| 12. | D87-5870 | D82-2218 X LAMAR |
| 13. | G85-324 | GORDON X CO 237 |
| 14. | G85-328 | GORDON X BRAXTON |
| 15. | G85-368 | GORDON X BRAXTON |
| 16. | G85-547 | JEFF X G82-SCN71 |
| 17. | G85-1178 | D76-9665 X BRAXTON |
| 18. | G85-1610 | GORDON X BRAXTON |
| 19. | N86-7459 | GASOY X PIXIE |
| 20. | N87-298 | N77-114 X N77-179 |
| 21. | N87-411 | DAVIS X N73-1102 |
| 22. | N87-1025 | RS4 CYCLE 0 X F |
| 23. | N87-1049 | RS4 CYCLE 0 X F |
| 24. | R87-40 | CENTENNIAL X (NAROW X R75-579) |
| 25. | R87-57 | CENTENNIAL X (NAROW X R75-579) |
| 26. | R87-488 | R80-753 X R80-437 |
| 27. | R87-100S | JEFF X CENTENNIAL X JEFF |
| 28. | R87-165S | JEFF X DUOCROP |
| 29. | S85-1008 | BEDFORD X ESSEX |
| 30. | S86-1892 | FORREST X EPPS |
| 31. | SC85-272 | BRAXTON X D76-9665 |
| 32. | SC85-372 | BRAXTON X D76-9665 |
| 33. | SC85-384 | BRAXTON X D76-9665 |
| 34. | TN85-162 | FAYETTE X TN80-57 |
| 35. | TN87-198 | A5474 X TN82-74 |
| 36. | V86-815 | HUTCHESON X V78-1335 |

TABLE 37 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP VI, 1989

| STRAIN | SEED YIELD* | MAT. INDEX | -----PERCENT------ HT. | OIL | PROTEIN | SCN 3 | SCN 4 | %MOTTLED SEED |
|---|---|---|---|---|---|---|---|---|
| LEFLORE | 42.3 | 10/13 | 35 | 18.5 | 41.6 | R | R | 2.0 |
| BEDFORD | 41.7 | 7- | 35 | 20.9+ | 40.8 | R | R | 14.0 |
| AU86-14 | 48.0 | 6- | 28 | 21.9+ | 39.7 | S | S | 0.0 |
| AU86-29 | 45.5 | 7- | 26 | 21.2+ | 40.9 | S | S | 0.0 |
| AU86-379 | 48.1 | 6- | 21 | 21.8+ | 40.6 | S | S | 1.0 |
| AU86-888 | 46.2 | 0 | 32 | 21.9+ | 39.3- | S | S | 0.0 |
| D86-8473 | 34.6 | 7+ | 40 | 19.4 | 42.6 | R | S | 1.0 |
| D86-8807 | 38.8 | 2+ | 38 | 18.7 | 44.1+ | S | S | 1.0 |
| D87-4461 | 45.9 | 0 | 40 | 20.6+ | 42.3 | R | R | 0.0 |
| D87-4637 | 39.4 | 7- | 36 | 20.3+ | 41.8 | R | S | 2.0 |
| D87-5509 | 39.8 | 1- | 33 | 17.8 | 43.2 | R | S | 3.0 |
| D87-5870 | 44.8 | 4- | 31 | 20.4+ | 41.2 | R | R | 9.0 |
| G85-324 | 42.4 | 3- | 34 | 19.3 | 41.6 | R | S | 0.0 |
| G85-328 | 35.1 | 0 | 34 | 18.7 | 40.9 | R | S | 3.0 |
| G85-368 | 42.0 | 1+ | 36 | 20.5+ | 39.6- | R | S | 5.0 |
| G85-547 | 33.4- | 2- | 33 | 18.0 | 42.1 | R | R | 15.0 |
| G85-1178 | 38.4 | 0 | 36 | 20.4+ | 40.1 | R | S | 5.0 |
| G85-1610 | 40.3 | 2+ | 36 | 20.6+ | 39.6- | R | S | 4.0 |
| N86-7459 | 44.4 | 1+ | 35 | 20.0+ | 39.5- | S | S | 0.0 |
| N87-298 | 50.1+ | 5- | 29 | 21.5+ | 40.5 | S | S | 5.0 |
| N87-411 | 44.5 | 2- | 28 | 21.9+ | 40.9 | S | S | 0.0 |
| N87-1025 | 44.9 | 6- | 34 | 20.7+ | 43.1 | S | S | 4.0 |
| N87-1049 | 38.6 | 3- | 35 | 20.4+ | 42.1 | S | S | 2.0 |
| R87-40 | 40.1 | 1- | 37 | 19.9+ | 41.2 | R | S | 12.0 |
| R87-57 | 42.7 | 1- | 35 | 19.6+ | 40.9 | R | S | 5.0 |
| R87-488 | 41.9 | 4- | 29 | 20.1+ | 42.0 | R | S | 7.0 |
| R87-100S | 33.1- | 0 | 39 | 20.0+ | 41.3 | h | S | 3.0 |
| R87-165S | 44.2 | 1- | 37 | 18.8 | 42.4 | h | S | 2.0 |
| S85-1008 | 44.6 | 4- | 32 | 20.6+ | 42.4 | R | R | 7.0 |
| S86-1892 | 40.0 | 9- | 31 | 19.6+ | 41.8 | h | R | 2.0 |
| SC85-272 | 38.8 | 1+ | 37 | 19.7+ | 41.3 | h | S | 2.0 |
| SC85-372 | 37.2 | 1+ | 37 | 19.6+ | 41.2 | R | S | 3.0 |
| SC85-384 | 38.9 | 2+ | 36 | 19.4 | 40.7 | h | S | 3.0 |
| TN85-162 | 36.2 | 7- | 32 | 20.3+ | 40.6 | R | R | 0.0 |
| TN87-198 | 46.8 | 1- | 36 | 19.6+ | 41.7 | R | R | 0.0 |
| V86-815 | 43.4 | 6- | 29 | 20.3+ | 43.2 | S | S | 0.0 |
| LSD (.05) | 7.8 | | | 1.1 | 2.0 | | | |
| C.V. | 17% | | | 4% | 3% | | | |

* STONEVILLE,MS(B) is not included in means
+ or - designations refer to differences from Leflore

TABLE 38 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP VI, 1989

| STRAIN | PLY-MOUTH, NC | ATHENS, GA | TALLAS-SEE, AL | JAY, FL | KEISER, AR | STONE-VILLE, MS (A) | STONE-VILLE, MS (B) |
|---|---|---|---|---|---|---|---|
| LEFLORE | 42.8 | 50.8 | 41.5 | 38.9 | 41.3 | 40.7 | 17.8 |
| BEDFORD | 33.1- | 47.8 | 22.7- | 33.0 | 49.9+ | 48.7+ | 28.9+ |
| AU86-14 | 37.9 | 57.9 | 28.0 | 41.2 | 57.3+ | 52.0+ | 16.2 |
| AU86-29 | 37.8 | 49.7 | 6.4- | 28.3 | 67.9+ | 53.2+ | 11.6 |
| AU86-379 | 29.8- | 54.9 | 18.6- | 46.0 | 69.6+ | 48.3+ | 12.2 |
| AU86-888 | 38.6 | 55.7 | 39.8 | 36.5 | 56.2+ | 43.1 | 19.7 |
| D86-8473 | 38.8 | 36.5- | 26.4 | 37.7 | 37.0 | 31.8- | 27.4+ |
| D86-8807 | 46.8 | 47.8 | 16.9- | 35.4 | 45.4 | 36.3 | 19.8 |
| D87-4461 | 46.6 | 47.0 | 35.9 | 42.4 | 52.2+ | 45.3 | 24.2 |
| D87-4637 | 37.8 | 42.9 | 38.7 | 27.1- | 46.6 | 37.9 | 16.7 |
| D87-5509 | 41.7 | 49.8 | 31.5 | 33.0 | 45.0 | 36.2 | 14.5 |
| D87-5870 | 41.6 | 52.5 | 31.0 | 31.8 | 52.7+ | 48.2+ | 22.2 |
| G85-324 | 38.0 | 53.9 | 41.3 | 33.0 | 43.3 | 43.1 | 19.7 |
| G85-328 | 40.1 | 46.6 | 30.2 | 38.9 | 32.8- | 29.6- | 14.8 |
| G85-368 | 45.0 | 55.9 | 36.6 | 41.2 | 41.9 | 36.5 | 22.4 |
| G85-547 | 37.1 | 45.5 | 17.5- | 34.2 | 33.8- | 32.8- | 7.8- |
| G85-1178 | 42.8 | 56.1 | 35.9 | 37.7 | 33.6- | 33.6- | 21.1 |
| G85-1610 | 40.2 | 48.9 | 44.5 | 46.0 | 39.9 | 31.7- | 21.4 |
| N86-7459 | 36.1 | 54.7 | 30.7 | 48.3 | 50.2+ | 42.4 | 25.1 |
| N87-298 | 37.8 | 51.0 | 43.0 | 40.1 | 60.0+ | 54.5+ | 18.3 |
| N87-411 | 43.2 | 48.2 | 30.6 | 34.2 | 57.3+ | 42.8 | 18.1 |
| N87-1025 | 42.9 | 50.3 | 38.2 | 42.4 | 50.5+ | 42.0 | 24.0 |
| N87-1049 | 45.3 | 45.4 | 35.9 | 31.8 | 38.0 | 37.2 | 20.5 |
| R87-40 | 37.0 | 45.5 | 35.5 | 36.5 | 43.6 | 39.4 | 23.2 |
| R87-57 | 40.2 | 49.0 | 41.4 | 40.1 | 44.4 | 41.0 | 18.6 |
| R87-488 | 43.1 | 44.0 | 36.0 | 34.2 | 46.6 | 42.3 | 15.2 |
| R87-100S | 34.3- | 38.2- | 36.3 | 41.2 | 23.3- | 34.3 | 17.4 |
| R87-165S | 42.7 | 49.2 | 37.9 | 36.5 | 51.3+ | 42.2 | 24.0 |
| S85-1008 | 40.5 | 57.7 | 32.7 | 17.7- | 54.2+ | 49.9+ | 24.6 |
| S86-1892 | 39.3 | 51.4 | 29.2 | 25.9- | 40.5 | 46.5 | 24.6 |
| SC85-272 | 41.8 | 48.5 | 40.7 | 37.7 | 35.7 | 35.3 | 18.3 |
| SC85-372 | 43.8 | 51.0 | 40.6 | 42.4 | 29.6- | 30.1- | 19.3 |
| SC85-384 | 36.3 | 49.1 | 38.3 | 41.2 | 36.7 | 36.5 | 20.0 |
| TN85-162 | 39.4 | 45.4 | 15.6- | 27.1- | 42.5 | 38.6 | 12.6 |
| TN87-198 | 45.8 | 48.7 | 38.0 | 41.2 | 50.3+ | 50.2+ | 28.1+ |
| V86-815 | 47.4 | 53.1 | 31.0 | 30.6 | 48.7+ | 43.7 | 21.6 |
| LSD (.05) | 8.0 | 10.7 | 17.0 | 10.6 | 7.0 | 6.6 | 8.4 |
| C.V. | 10% | 11% | 23% | 15% | 8% | 8% | 21% |

TABLE 39 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1989

| STRAIN | PLY-MOUTH, NC | TALLAS-SEE, AL | JAY FL | KEISER, AR | STONE-VILLE, MS (A) |
|---|---|---|---|---|---|
| LEFLORE | 18.6 | 18.1 | 21.3 | 16.8 | 17.6 |
| BEDFORD | 20.8 | 19.9 | 23.3 | 20.7 | 19.7 |
| AU86-14 | 21.9 | 21.6 | 25.3 | 18.6 | 22.1 |
| AU86-29 | 20.6 | 21.6 | 23.8 | 18.7 | 21.3 |
| AU86-379 | 21.0 | 21.7 | 23.9 | 20.3 | 22.3 |
| AU86-888 | 20.4 | 21.9 | 24.4 | 21.1 | 21.7 |
| D86-8473 | 19.4 | 19.2 | 21.8 | 19.5 | 17.1 |
| D86-8807 | 19.1 | 18.0 | 21.8 | 17.7 | 17.1 |
| D87-4461 | 19.9 | 18.9 | 23.8 | 20.5 | 19.8 |
| D87-4637 | 20.7 | 18.3 | 24.8 | 19.4 | 18.2 |
| D87-5509 | 17.2 | 16.9 | 20.6 | 18.1 | 16.0 |
| D87-5870 | 20.4 | 19.5 | 22.7 | 20.0 | 19.5 |
| G85-324 | 19.0 | 18.3 | 23.0 | 17.0 | 19.2 |
| G85-328 | 18.7 | 18.9 | 22.3 | 16.7 | 17.0 |
| G85-368 | 21.3 | 21.2 | 22.9 | 15.8 | 21.2 |
| G85-547 | 17.9 | 17.6 | 19.6 | 18.5 | 16.2 |
| G85-1178 | 21.1 | 19.6 | 21.7 | 20.0 | 19.6 |
| G85-1610 | 20.3 | 20.3 | 23.5 | 19.9 | 19.2 |
| N86-7459 | 21.0 | 18.9 | 22.6 | 18.5 | 19.0 |
| N87-298 | 21.3 | 21.3 | 23.9 | 18.9 | 22.0 |
| N87-411 | 21.3 | 21.4 | 23.5 | 21.4 | 21.8 |
| N87-1025 | 20.9 | 20.9 | 22.5 | 18.6 | 20.5 |
| N87-1049 | 20.7 | 19.5 | 21.8 | 20.9 | 19.0 |
| R87-40 | 20.0 | 19.3 | 22.2 | 19.3 | 18.6 |
| R87-57 | 18.9 | 20.0 | 22.0 | 18.3 | 18.7 |
| R87-488 | 19.6 | 19.6 | 22.5 | 19.0 | 19.9 |
| R87-100S | 19.6 | 20.1 | 21.7 | 20.4 | 18.4 |
| R87-165S | 18.1 | 18.4 | 20.0 | 19.6 | 17.7 |
| S85-1008 | 20.3 | 19.9 | 23.5 | 19.1 | 20.3 |
| S86-1892 | 19.8 | 19.3 | 22.1 | 18.7 | 18.2 |
| SC85-272 | 19.9 | 19.2 | 21.8 | 19.0 | 18.4 |
| SC85-372 | 20.3 | 18.9 | 21.3 | 18.9 | 18.8 |
| SC85-384 | 20.1 | 19.2 | 21.2 | 18.5 | 18.0 |
| TN85-162 | 20.0 | 20.2 | 22.4 | 19.2 | 19.9 |
| TN87-198 | 19.1 | 19.0 | 21.4 | 19.1 | 19.2 |
| V86-815 | 19.1 | 20.3 | 23.6 | 18.6 | 20.0 |

TABLE 40 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1989

| STRAIN | PLY-MOUTH, NC | TALLAS-SEE, AL | JAY FL | KEISER, AR | STONE-VILLE, MS (A) |
|---|---|---|---|---|---|
| LEFLORE | 40.6 | 43.0 | 40.6 | 43.2 | 40.6 |
| BEDFORD | 38.5 | 43.8 | 40.9 | 41.1 | 39.9 |
| AU86-14 | 38.8 | 43.1 | 37.6 | 40.5 | 38.7 |
| AU86-29 | 40.3 | 41.0 | 39.6 | 44.1 | 39.3 |
| AU86-379 | 40.7 | 42.8 | 39.4 | 42.0 | 37.9 |
| AU86-888 | 39.7 | 40.3 | 38.2 | 40.5 | 37.8 |
| D86-8473 | 42.1 | 44.2 | 42.0 | 43.5 | 41.4 |
| D86-8807 | 43.8 | 46.1 | 41.0 | 45.6 | 44.0 |
| D87-4461 | 42.8 | 44.4 | 41.9 | 41.3 | 40.9 |
| D87-4637 | 40.8 | 45.6 | 39.8 | 41.1 | 41.6 |
| D87-5509 | 42.5 | 44.8 | 42.7 | 42.1 | 44.0 |
| D87-5870 | 40.6 | 43.3 | 41.6 | 39.9 | 40.8 |
| G85-324 | 40.6 | 44.2 | 41.6 | 43.0 | 38.7 |
| G85-328 | 39.7 | 42.0 | 38.4 | 43.6 | 40.7 |
| G85-368 | 37.8 | 40.1 | 39.4 | 42.6 | 38.1 |
| G85-547 | 41.9 | 42.1 | 40.9 | 44.0 | 41.4 |
| G85-1178 | 37.6 | 42.9 | 41.6 | 41.5 | 36.9 |
| G85-1610 | 40.6 | 41.9 | 37.8 | 39.4 | 38.2 |
| N86-7459 | 37.1 | 42.3 | 38.5 | 40.9 | 38.5 |
| N87-298 | 40.5 | 41.9 | 38.9 | 42.4 | 38.9 |
| N87-411 | 39.8 | 43.7 | 40.8 | 40.0 | 40.0 |
| N87-1025 | 42.4 | 45.5 | 43.2 | 41.3 | 43.3 |
| N87-1049 | 41.2 | 45.1 | 43.5 | 41.3 | 39.5 |
| R87-40 | 40.6 | 44.3 | 40.0 | 41.8 | 39.5 |
| R87-57 | 40.7 | 41.7 | 39.3 | 41.6 | 41.2 |
| R87-488 | 42.3 | 44.5 | 43.3 | 40.6 | 39.3 |
| R87-100S | 40.9 | 41.7 | 39.6 | 44.0 | 40.2 |
| R87-165S | 41.9 | 44.5 | 42.2 | 41.1 | 42.1 |
| S85-1008 | 40.7 | 44.8 | 41.4 | 43.7 | 41.4 |
| S86-1892 | 39.6 | 44.7 | 41.4 | 41.5 | 41.6 |
| SC85-272 | 39.6 | 43.1 | 42.1 | 41.1 | 40.6 |
| SC85-372 | 39.4 | 43.2 | 40.7 | 41.9 | 40.8 |
| SC85-384 | 39.6 | 42.5 | 40.5 | 42.4 | 38.3 |
| TN85-162 | 39.8 | 42.2 | 40.6 | 41.4 | 38.8 |
| TN87-198 | 41.2 | 42.8 | 40.5 | 44.1 | 40.1 |
| V86-815 | 41.1 | 45.9 | 43.3 | 42.0 | 43.5 |

TABLE 41 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1989

| STRAIN | PLY-MOUTH, NC | ATHENS, GA | TALLAS-SEE, AL | JAY, FL | KEISER, AR | STONE-VILLE, MS (A) | STONE-VILLE, MS (B) |
|---|---|---|---|---|---|---|---|
| LEFLORE | 41.0 | 38.0 | 22.0 | 32.0 | 39.0 | 35.0 | 24.0 |
| BEDFORD | 39.0 | 43.0 | 21.0 | 29.0 | 38.0 | 37.0 | 25.0 |
| AU86-14 | 29.0 | 33.0 | 20.0 | 23.0 | 32.0 | 26.0 | 17.0 |
| AU86-29 | 27.0 | 31.0 | 13.0 | 15.0 | 36.0 | 24.0 | 15.0 |
| AU86-379 | 23.0 | 20.0 | 14.0 | 18.0 | 25.0 | 23.0 | 13.0 |
| AU86-888 | 39.0 | 36.0 | 19.0 | 23.0 | 38.0 | 33.0 | 21.0 |
| D86-8473 | 43.0 | 45.0 | 35.0 | 31.0 | 43.0 | 40.0 | 34.0 |
| D86-8807 | 46.0 | 40.0 | 29.0 | 29.0 | 41.0 | 39.0 | 29.0 |
| D87-4461 | 44.0 | 43.0 | 27.0 | 35.0 | 44.0 | 43.0 | 30.0 |
| D87-4637 | 41.0 | 42.0 | 32.0 | 31.0 | 36.0 | 33.0 | 23.0 |
| D87-5509 | 38.0 | 34.0 | 27.0 | 22.0 | 37.0 | 34.0 | 23.0 |
| D87-5870 | 36.0 | 31.0 | 24.0 | 27.0 | 35.0 | 32.0 | 22.0 |
| G85-324 | 38.0 | 39.0 | 27.0 | 23.0 | 37.0 | 35.0 | 24.0 |
| G85-328 | 37.0 | 36.0 | 26.0 | 26.0 | 38.0 | 34.0 | 22.0 |
| G85-368 | 40.0 | 35.0 | 25.0 | 30.0 | 41.0 | 39.0 | 26.0 |
| G85-547 | 38.0 | 40.0 | 21.0 | 25.0 | 36.0 | 32.0 | 26.0 |
| G85-1178 | 41.0 | 39.0 | 26.0 | 25.0 | 41.0 | 37.0 | 27.0 |
| G85-1610 | 38.0 | 37.0 | 31.0 | 31.0 | 41.0 | 34.0 | 26.0 |
| N86-7459 | 36.0 | 36.0 | 27.0 | 27.0 | 41.0 | 36.0 | 25.0 |
| N87-298 | 35.0 | 34.0 | 19.0 | 23.0 | 34.0 | 27.0 | 18.0 |
| N87-411 | 33.0 | 34.0 | 20.0 | 20.0 | 34.0 | 26.0 | 19.0 |
| N87-1025 | 41.0 | 40.0 | 29.0 | 28.0 | 35.0 | 32.0 | 26.0 |
| N87-1049 | 39.0 | 36.0 | 32.0 | 27.0 | 41.0 | 33.0 | 23.0 |
| R87-40 | 42.0 | 40.0 | 24.0 | 28.0 | 42.0 | 38.0 | 24.0 |
| R87-57 | 38.0 | 38.0 | 22.0 | 29.0 | 38.0 | 37.0 | 24.0 |
| R87-488 | 37.0 | 31.0 | 24.0 | 23.0 | 33.0 | 27.0 | 16.0 |
| R87-100S | 42.0 | 40.0 | 35.0 | 32.0 | 44.0 | 38.0 | 26.0 |
| R87-165S | 41.0 | 42.0 | 30.0 | 32.0 | 40.0 | 37.0 | 27.0 |
| S85-1008 | 39.0 | 36.0 | 21.0 | 20.0 | 36.0 | 33.0 | 21.0 |
| S86-1892 | 36.0 | 38.0 | 24.0 | 26.0 | 32.0 | 30.0 | 25.0 |
| SC85-272 | 39.0 | 44.0 | 27.0 | 32.0 | 41.0 | 37.0 | 29.0 |
| SC85-372 | 40.0 | 40.0 | 30.0 | 32.0 | 40.0 | 37.0 | 30.0 |
| SC85-384 | 40.0 | 40.0 | 28.0 | 31.0 | 39.0 | 35.0 | 27.0 |
| TN85-162 | 36.0 | 40.0 | 23.0 | 25.0 | 34.0 | 31.0 | 20.0 |
| TN87-198 | 40.0 | 40.0 | 30.0 | 32.0 | 38.0 | 35.0 | 26.0 |
| V86-815 | 34.0 | 31.0 | 17.0 | 23.0 | 37.0 | 26.0 | 19.0 |

TABLE 42 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1989

| STRAIN | PLY-MOUTH, NC | ATHENS, GA | TALLAS-SEE, AL | JAY, FL | KEISER, AR | STONE-VILLE, MS (A) | STONE-VILLE, MS (B) |
|---|---|---|---|---|---|---|---|
| LEFLORE | 1.5 | 1.5 | 1.0 | 3.0 | 2.0 | 2.0 | 2.5 |
| BEDFORD | 2.0 | 2.0 | 2.5 | 4.0 | 2.5 | 2.0 | 2.0 |
| AU86-14 | 1.5 | 2.0 | 2.5 | 2.0 | 1.5 | 2.0 | 2.5 |
| AU86-29 | 1.5 | 2.2 | 1.0 | 3.0 | 1.5 | 2.0 | 2.5 |
| AU86-379 | 1.5 | 2.0 | 2.5 | 3.0 | 1.0 | 2.0 | 2.5 |
| AU86-888 | 1.5 | 2.5 | 1.0 | 3.0 | 1.5 | 2.0 | 2.5 |
| D86-8473 | 2.0 | 2.0 | 2.0 | 3.0 | 3.0 | 2.0 | 2.0 |
| D86-8807 | 1.5 | 1.5 | 1.5 | 3.0 | 1.5 | 2.0 | 2.0 |
| D87-4461 | 1.5 | 2.2 | 2.5 | 5.0 | 2.5 | 2.0 | 2.0 |
| D87-4637 | 2.0 | 1.5 | 2.0 | 4.0 | 1.5 | 2.5 | 2.5 |
| D87-5509 | 2.0 | 1.5 | 1.0 | 2.0 | 1.5 | 2.0 | 2.5 |
| D87-5870 | 1.5 | 1.5 | 1.5 | 4.0 | 2.0 | 2.0 | 2.0 |
| G85-324 | 1.5 | 1.8 | 2.0 | 5.0 | 2.5 | 2.0 | 2.5 |
| G85-328 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 2.5 |
| G85-368 | 2.0 | 1.8 | 2.5 | 4.0 | 1.5 | 2.0 | 2.0 |
| G85-547 | 1.5 | 2.0 | 2.0 | 4.0 | 2.0 | 2.0 | 3.0 |
| G85-1178 | 1.5 | 1.5 | 1.5 | 4.0 | 2.5 | 2.0 | 2.0 |
| G85-1610 | 1.5 | 1.5 | 2.0 | 3.0 | 2.0 | 2.0 | 2.5 |
| N86-7459 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 |
| N87-298 | 2.0 | 2.0 | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 |
| N87-411 | 2.0 | 2.5 | 2.5 | 4.0 | 2.0 | 2.0 | 2.5 |
| N87-1025 | 1.5 | 2.0 | 1.5 | 4.0 | 2.0 | 2.0 | 2.0 |
| N87-1049 | 1.5 | 2.0 | 1.5 | 4.0 | 3.0 | 2.0 | 2.5 |
| R87-40 | 2.0 | 1.5 | 1.5 | 3.0 | 2.0 | 2.0 | 2.5 |
| R87-57 | 1.5 | 1.8 | 1.0 | 2.0 | 2.5 | 2.0 | 2.0 |
| R87-488 | 2.0 | 2.5 | 1.5 | 5.0 | 2.0 | 2.0 | 2.5 |
| R87-100S | 1.5 | 1.8 | 1.5 | 4.0 | 2.5 | 2.0 | 2.5 |
| R87-165S | 2.0 | 1.8 | 2.0 | 3.0 | 1.5 | 2.0 | 2.5 |
| S85-1008 | 2.0 | 2.0 | 3.0 | 5.0 | 1.5 | 2.0 | 2.5 |
| S86-1892 | 2.0 | 2.5 | 2.0 | 4.0 | 3.0 | 2.5 | 2.5 |
| SC85-272 | 1.5 | 1.5 | 1.5 | 4.0 | 2.5 | 2.0 | 3.0 |
| SC85-372 | 1.5 | 1.5 | 1.0 | 4.0 | 2.0 | 2.0 | 2.0 |
| SC85-384 | 1.5 | 1.8 | 1.0 | 2.0 | 2.0 | 2.0 | 2.5 |
| TN85-162 | 2.0 | 1.8 | 1.5 | 5.0 | 2.5 | 2.0 | 2.5 |
| TN87-198 | 1.5 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 |
| V86-815 | 1.5 | 2.2 | 2.0 | 5.0 | 1.5 | 2.0 | 2.5 |

UNIFORM GROUP VII

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| | Variety or strain | Parentage | Generation composited |
|---|---|---|---|
| 1. | Thomas | Centennial X F71-1138 | $F_6$ |
| 2. | Stonewall | N73-693 X F76-8757 | $F_6$ |
| 3. | Au82-211 | N73-693 X F76-8757 | $F_6$ |
| 4. | N85-574 | N77-179 X Johnston | $F_6$ |
| 5. | R85-140S | Wright X Jeff | $F_5$ |
| 6. | SC84-818 | Centennial X Young | $F_5$ |
| 7. | Au85-1088 | WRIGHT X Co79-501 | |
| 8. | Au85-1814 | D77-6103 X BRAXTON | $F_6$ |
| 9. | D86-9845 | Kirby x D82-9973 | $F_5$ |
| 10. | G84-3185 | Johnston X Braxton | $F_6$ |
| 11. | N86-452 | N77-940 X N79-856 | $F_5$ |
| 12. | Sc84-583 | D76-9665 X Johnston | $F_5$ |

Background of lines used as parents:

F71-1138 is a selection from the same cross as Braxton and was grown in Uniform Group VII 1975-1978.

N73-693 is a selection from D68-216 X Ransom which was grown in Uniform Group VI in 1977. D68-216 is a SCN race 3 resistant selection of the same parentage as Forrest.

F76-8758 is a SCN race 3 resistant line from Centennial X [Forrest X (Cobb X D68-216)].

N77-179 was grown in Uniform Group V in 1980.

Co79-501 is a selection from Co71-211 X Centennial.

D77-6103 is a selection from Centennial X J74-57.

D82-9973 is a selection from J74-39 X D75-10169.

N77-940 is a selection from N77-1540 X Centennial grown in Uniform Group VII in 1980.

N79-856 is a selection from Essex X N70-3037.

D77-966J is a selection from Forrest X Centennial.

# UNIFORM GROUP VII

## 1989

Uniform Group VII nurseries were grown at 25 locations. A general summary of performance is report in Table 43. Information included is 1, 2 and 3-year seed yield, 1, 2 and 3-year protein and oil percentages, general agronomic characteristics, reaction to the root-knot nematodes M. arenaria and M. incognita, SCN Races 3 and 4, and reaction to frogeye leaf spot. Data from individual locations are reported in Tables 44-49.

Ratings for the two root-knot species M. incognita and M. arenaria were obtained from plantings in the greenhouse at the University of Georgia, Athens. Information on reaction to SCN Races 3 and 4 was obtained in the greenhouse at Jackson, TN. Five lines were rated resistant to M. incognita, three resistant to M. arenaria, and two resistant to both species. Six lines were rated resistant to SCN Race 3 and three lines were resistant to both 3 and 4. Ratings were made at Tallassee, AL for frogeye leaf spot. Au85-1814 received a rating of 3.3. Seven lines were rated resistant.

The plantings on clay at Stoneville stood in water 6-8 inches deep from the last few days of June to mid-July. Seed yields were low, and data from these plantings are not included in any means.

TABLE 43 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP VII, 1989

| | NO. OF LOCATIONS | THOMAS | STONE-WALL | AU82 211 | N85-574 | R85 140S |
|---|---|---|---|---|---|---|
| Seed Yield - 1988 | | | | | | |
| East Coast | 5 | 38.0 | 44.1 | 40.9 | 38.6 | 36.5 |
| Southeast | 9 | 35.4 | 34.2 | 34.1 | 37.4 | 36.6 |
| Upper and Central South | 3 | 43.2 | 50.5 | 49.1 | 46.1 | 41.2 |
| Delta & West | 7 | 35.9 | 43.2 | 42.9 | 42.8 | 38.0 |
| 1987-88 | | | | | | |
| East Coast | | 33.8 | 38.6 | 37.5 | 34.7 | 34.3 |
| Southeast | | 39.8 | 39.0 | 39.7 | 40.9 | 40.4 |
| Upper and Central South | | 47.5 | 53.5 | 48.8 | 50.9 | 45.0 |
| Delta & West | | 36.7 | 44.0 | 44.7 | 45.4 | 39.1 |
| 1986-88 | | | | | | |
| East Coast | | 33.4 | 37.8 | 36.9 | | |
| Southeast | | 38.9 | 39.5 | 40.1 | | |
| Upper & Central South | | 42.1 | 45.4 | 43.9 | | |
| Delta & West | | 36.8 | 42.9 | 44.3 | | |
| Oil Content - 1988 | | 19.1 | 20.5 | 20.6 | 21.4 | 20.7 |
| 1987-88 | | 19.7 | 21.0 | 21.7 | 21.7 | 21.0 |
| 1986-88 | | 19.0 | 21.0 | 21.4 | | |
| Protein Content - 1988 | | 40.9 | 41.2 | 41.6 | 40.2 | 39.2 |
| 1987-88 | | 40.9 | 41.0 | 41.4 | 40.3 | 39.5 |
| 1986-88 | | 41.2 | 41.0 | 41.3 | | |
| Seed size | | 14.9 | 15.2 | 15.9 | 14.2 | 13.4 |
| Maturity index | | 10-21 | -1 | -4 | +1 | -3 |
| Height | | 33 | 32 | 32 | 32 | 36 |
| Seed quality | | 1.9 | 20. | 2.1 | 1.9 | 1.9 |
| *M. incognita* | | 1.8 | 4.5 | 3.8 | 4.5 | 1.9 |
| *M. arenaria* | | 3.2 | 4.0 | 4.5 | 3.5 | 1.7 |
| SCN race 3 | | R | R | R | S | R |
| SCN race 4 | | S | S | S | S | R |
| Flower color | | P | W | W | P | P |
| Pubescence color | | T | T | T | G | T |
| Pod wall color | | Tn | Tn | Tn | Br | Tn |
| Frogeye | | 2.0 | 1.0 | 1.0 | 1.0 | 2.3 |

Table 43 - (continued)

| | Sc84-818 | Au85-1088 | Au85-1814 | D86-9845 | G84-3185 | N86-452 | Sc84-583 |
|---|---|---|---|---|---|---|---|
| Seed Yield - 1988 | | | | | | | |
| East Coast | 41.6 | 39.9 | 37.7 | 38.0 | 42.1 | 40.2 | 42.7 |
| Southeast | 38.7 | 37.4 | 39.3 | 32.5 | 39.9 | 38.3 | 37.1 |
| Upper and Central South | 48.9 | 43.8 | 43.5 | 49.3 | 41.5 | 48.8 | 46.6 |
| Delta & West | 39.4 | 37.3 | 37.9 | 34.5 | 45.0 | 41.0 | 38.5 |
| 1987-88 | | | | | | | |
| East Coast | 37.3 | | | | | | |
| Southeast | 42.6 | | | | | | |
| Upper and Central South | 49.2 | | | | | | |
| Delta & West | 40.3 | | | | | | |
| 1986-88 | | | | | | | |
| East Coast | | | | | | | |
| Southeast | | | | | | | |
| Upper & Central South | | | | | | | |
| Delta & West | | | | | | | |
| Oil Content - 1988 | 19.7 | 20.2 | 19.6 | 20.3 | 20.7 | 19.2 | 20.5 |
| 1987-88 | 20.2 | | | | | | |
| 1986-88 | | | | | | | |
| Protein Conten - 1988 | 42.1 | 40.4 | 42.4 | 41.6 | 39.5 | 41.7 | 39.3 |
| 1987-88 | 42.1 | | | | | | |
| 1986-88 | | | | | | | |
| Seed size | 13.7 | 13.4 | 13.9 | 12.9 | 15.3 | 13.5 | 13.1 |
| Maturity index | +2 | +1 | +2 | +2 | +1 | -2 | +2 |
| Height | 38 | 31 | 36 | 36 | 33 | 26 | 34 |
| Seed quality | 1.7 | 1.8 | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 |
| M.incognita | 1.8 | 1.0 | 2.5 | 2.0 | 3.2 | 4.8 | 2.0 |
| M. arenaria | 3.3 | 2.5 | 1.5 | 2.2 | 1.0 | 3.2 | |
| SCN race 3 | h | S | R | R | S | S | h |
| SCN race 4 | S | S | R | R | S | S | S |
| Flower Color | W | P | P | P | P | W | P |
| Pubescence color | G | G | T | T | T | T | T |
| Pod wall color | Tn | Tn | Tn | Tn | Tn | Tn | Tn |
| Frogeye | 1.0 | 2.7 | 3.3 | 2.3 | 1.3 | 1.0 | 1.0 |

TABLE 44 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN UNIFORM GROUP VII, 1989

| LOCATION | THOMAS | STONE-WALL | AU82-211 | N85-574 | R85-140S | SC84-818 | AU85-1088 |
|---|---|---|---|---|---|---|---|
| | | | EAST COAST | | | | |
| HOLLAND, VA | 52.4 | 61.9 | 50.9 | 47.9 | 47.3 | 54.5 | 52.4 |
| KINSTON, NC | 30.7 | 32.6 | 31.9 | 31.1 | 27.7 | 26.1 | 30.4 |
| CLINTON, NC | 47.7 | 56.2 | 58.1 | 55.8 | 51.5 | 56.0 | 53.2 |
| FLORENCE, SC (A) | 28.6 | 39.9 | 37.2 | 26.3 | 29.7 | 34.5 | 35.9 |
| FLORENCE, SC (B) | 30.5 | 30.7 | 26.2 | 32.0 | 26.3 | 37.0+ | 27.5 |
| MEAN | 38.0 | 44.1 | 40.9 | 38.6 | 36.5 | 41.6 | 39.9 |
| | | | SOUTHEAST | | | | |
| BLACKVILLE, SC (A) | 37.2 | 36.3 | 34.6 | 44.8+ | 39.7 | 37.8 | 43.9+ |
| BLACKVILLE, SC (B) | 21.3 | 25.4 | 32.7+ | 30.0+ | 24.4 | 29.5+ | 27.9+ |
| TALLASSEE, AL | 33.7 | 25.4 | 22.4 | 29.5 | 39.0 | 38.1 | 34.4 |
| TIFTON, GA | 36.7 | 41.8 | 42.6 | 50.1 | 37.9 | 39.0 | 37.4 |
| GAINESVILLE, FL | 37.7 | 38.4 | 37.5 | 36.4 | 40.0 | 46.0+ | 33.9 |
| QUINCY, FL | 31.2 | 27.7 | 27.1 | 32.1 | 38.4+ | 29.2 | 38.5+ |
| JAY, FL | 47.1 | 42.4 | 44.8 | 42.4 | 40.1 | 44.8 | 35.4- |
| FAIRHOPE, AL | 30.9 | 29.3 | 29.9 | 35.7 | 38.4+ | 42.0+ | 30.9 |
| BATON ROUGE, LA | 42.6 | 41.1 | 35.3- | 35.9- | 33.1- | 42.3 | 48.9- |
| MEAN | 35.4 | 34.2 | 34.1 | 37.3 | 36.6 | 38.7 | 37.4 |
| | | | UPPER & CENTRAL SOUTH | | | | |
| ATHENS, GA | 43.9 | 48.0 | 47.0 | 43.8 | 43.7 | 45.6 | 41.9 |
| CALHOUN, GA | 40.4 | 56.3 | 55.9 | 50.7 | 37.0 | 60.5 | 46.0 |
| CLEMSON, SC | 45.4 | 47.2 | 44.3 | 43.9 | 42.9 | 40.7 | 43.5 |
| MEAN | 43.2 | 50.5 | 49.1 | 46.1 | 41.2 | 48.9 | 43.8 |
| | | | DELTA & WEST | | | | |
| STONEVILLE, MS (A) | 32.9 | 45.5+ | 45.1+ | 42.7+ | 34.6 | 39.7+ | 31.1 |
| STONEVILLE, MS (B)* | 14.3 | 10.2 | 8.0 | 4.5 | 14.6 | 11.6 | 11.9 |
| STUTTGART, AR | 31.4 | 54.4+ | 58.3+ | 44.3+ | 47.6+ | 52.5+ | 41.2+ |
| ROHWER, AR | 36.9 | 46.2+ | 41.2 | 41.2 | 39.9 | 40.6 | 34.4 |
| ST. JOSEPH, LA | 36.3 | 43.9+ | 43.7+ | 47.0+ | 39.0 | 40.1 | 37.2 |
| BOSSIER CITY, LA | 44.4 | 38.8 | 35.5- | 54.4+ | 37.0 | 38.1 | 47.2 |
| BEAUMONT, TX | 33.7 | 30.2 | 33.5 | 26.9 | 30.0 | 24.4 | 32.4 |
| MEAN | 35.9 | 43.2 | 42.9 | 42.8 | 38.0 | 39.2 | 37.3 |

* Not included in mean

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

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

Table 44 - (continued)

| Location | Au85-1814 | D86-9845 | G84-3185 | N86-452 | Sc84-583 | L.S.D. (.05) | C.V. (%) |
|---|---|---|---|---|---|---|---|
| | | | EAST COAST | | | | |
| HOLLAND, VA | 51.9 | 49.1 | 54.1 | 50.0 | 49.5 | 14.6 | 16.6 |
| KINSTON, NC | 29.4 | 30.4 | 28.5 | 27.1 | 29.6 | | 13.0 |
| CLINTON, NC | 51.1 | 45.5 | 61.5+ | 51.0 | 57.4 | 12.1 | 13.3 |
| FLORENCE, SC (A) | 30.4 | 35.7 | 33.0 | 40.9 | 38.6 | | 20.2 |
| FLORENCE, SC (B) | 25.9 | 29.5 | 33.4 | 32.2 | 38.6+ | 6.1 | 11.6 |
| MEAN | 37.7 | 38.0 | 42.1 | 10.2 | 42.7 | | |
| | | | SOUTHEAST | | | | |
| BLACKVILLE, SC (A) | 34.8 | 33.6 | 43.5+ | 39.1 | 40.8 | 4.9 | 7.4 |
| BLACKVILLE, SC (B) | 26.1 | 23.3 | 30.7+ | 27.0 | 29.1+ | 6.5 | 14.2 |
| TALLASSEE, AL | 35.2 | *5.5- | 21.0 | 24.3 | 34.0 | 15.3 | 31.8 |
| TIFTON, GA | 39.9 | 37.1 | 41.2 | 45.2 | 41.2 | | |
| GAINESVILLE, FL | 38.6 | 35.1 | 51.0+ | 46.7+ | 48.5+ | 7.2 | 10.4 |
| QUINCY, FL | 33.1 | 38.5+ | 39.7+ | 41.0+ | 37.8 | 6.6 | 11.4 |
| JAY, FL | 47.1 | 40.1 | 51.9 | 50.7 | 36.5- | 9.4 | 13.2 |
| FAIRHOPE, AL | 39.6+ | 39.6+ | 39.3+ | 36.3 | 39.3+ | 5.9 | 9.8 |
| BATON ROUGE, LA | 32.6- | 39.8 | 40.5 | 34.7- | 26.6- | 5.3 | 7.5 |
| MEAN | 36.6 | 35.9 | 39.9 | 38.3 | 37.1 | | |
| | | | UPPER & CENTRAL SOUTH | | | | |
| ATHENS, GA | 42.4 | 48.5 | 39.7 | 46.5 | 41.7 | 5.5 | 7.3 |
| CALHOUN, GA | 41.9 | 47.2 | 42.5 | 54.3 | 47.7 | | |
| CLEMSON, SC | 46.3 | 52.2 | 42.4 | 45.6 | 50.3 | | 14.1 |
| MEAN | 43.5 | 49.3 | 41.5 | 48.8 | 46.6 | | |
| | | | DELTA & WEST | | | | |
| STONEVILLE, MS (A) | 34.3 | 32.4 | 42.0+ | 42.2+ | 39.1+ | 3.8 | 5.9 |
| STONEVILLE, MS (B)* | 15.6 | 10.9 | 27.6 | 17.6 | 13.9 | 3.6 | 15.7 |
| STUTTGART, AR | 41.2+ | 32.7 | 51.3+ | 43.5+ | 43.8+ | 4.6 | 6.0 |
| ROHWER, AR | 39.7 | 31.9- | 44.8+ | 44.9+ | 39.6 | 4.4 | 6.5 |
| ST. JOSEPH, LA | 38.1 | 33.2 | 48.2+ | 39.5 | 39.5 | 5.3 | 9.3 |
| BOSSIER CITY, LA | 43.9 | 44.1 | 44.4 | 48.6 | 47.5 | 8.0 | 10.8 |
| BEAUMONT, TX | 30.1 | 32.9 | 39.9 | 27.1 | 21.7 | 14.3 | 21.9 |
| MEAN | 37.9 | 34.5 | 45.0 | 41.0 | 38.5 | | |

TABLE 45 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP VII, 1989

| LOCATION | THOMAS | STONE-WALL | AU82-211 | N85-574 | R85-140S | Sc84-818 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| CLINTON, NC | 18.1 | 20.4 | 20.8 | 21.2 | 20.9 | 19.8 |
| FLORENCE, SC (A) | 20.2 | 20.7 | 21.6 | 22.2 | 22.4 | 20.8 |
| TALLASSEE, AL | 18.5 | 20.1 | 20.3 | 21.0 | 20.6 | 19.8 |
| ATHENS, GA | 19.9 | 20.4 | 19.8 | 20.8 | 19.0 | 19.3 |
| CLEMSON, SC | 18.8 | 20.5 | 21.0 | 22.1 | 20.2 | 20.3 |
| JAY, FL | 20.5 | 22.0 | 22.5 | 22.6 | 23.0 | 21.2 |
| STONEVILLE, MS (A) | 18.5 | 19.9 | 19.8 | 20.1 | 20.1 | 18.7 |
| STUTTGART, AR | 18.9 | 19.3 | 19.7 | 20.9 | 19.4 | 19.2 |
| ROHWER, AR | 18.1 | 20.1 | 20.3 | 21.7 | 20.3 | 18.2 |
| BEAUMONT, TX | 19.0 | 21.1 | 20.6 | 21.4 | 20.6 | 19.3 |
| MEAN | 19.1 | 20.5 | 20.6 | 21.4 | 20.7 | 19.7 |
| | | | PROTEIN PERCENTAGE | | | |
| CLINTON, NC | 44.0 | 43.6 | 43.3 | 41.3 | 41.1 | 43.1 |
| FLORENCE, SC (A) | 38.6 | 40.2 | 40.2 | 37.7 | 35.1 | 40.3 |
| TALLASSEE, AL | 42.3 | 42.1 | 42.5 | 41.6 | 41.0 | 42.5 |
| ATHENS, GA | 39.8 | 40.5 | 42.0 | 41.0 | 40.9 | 40.6 |
| CLEMSON, SC | 41.6 | 41.5 | 42.0 | 40.0 | 40.2 | 41.3 |
| JAY, FL | 40.7 | 41.3 | 40.9 | 40.2 | 36.8 | 41.3 |
| STONEVILLE, MS (A) | 40.0 | 40.9 | 40.9 | 40.5 | 39.5 | 41.6 |
| STUTTGART, AR | 37.9 | 41.0 | 42.1 | 39.9 | 39.7 | 43.6 |
| ROHWER, AR | 41.2 | 39.7 | 40.3 | 39.1 | 38.0 | 43.5 |
| BEAUMONT, TX | 42.5 | 41.6 | 42.0 | 40.9 | 40.1 | 43.0 |
| MEAN | 40.9 | 41.2 | 41.6 | 40.2 | 39.2 | 42.1 |
| | | | GRAMS PER 100 SEED | | | |
| CLINTON, NC | 19.0 | 17.9 | 19.1 | 15.5 | 15.2 | 14.4 |
| FLORENCE, SC (A) | 16.1 | 18.2 | 18.0 | 14.9 | 14.5 | 15.2 |
| TALLASSEE, AL | 13.0 | 14.0 | 14.1 | 13.3 | 12.8 | 13.0 |
| ATHENS, GA | 15.2 | 13.9 | 14.1 | 13.5 | 13.2 | 13.5 |
| CLEMSON, SC | 22.3 | 20.9 | 21.9 | 20.0 | 19.8 | 18.6 |
| JAY, FL | 13.0 | 13.0 | 15.0 | 13.0 | 11.0 | 12.0 |
| STONEVILLE, MS (A) | 11.4 | 12.1 | 12.1 | 11.5 | 11.6 | 11.2 |
| STUTTGART, AR | 11.6 | 14.6 | 16.1 | 13.8 | 12.1 | 14.0 |
| ROHWER, AR | 13.1 | 13.6 | 14.0 | 13.2 | 11.4 | 12.0 |
| BEAUMONT, TX | 13.8 | 13.8 | 14.5 | 12.9 | 12.8 | 12.6 |
| MEAN | 14.9 | 15.2 | 15.9 | 14.2 | 13.4 | 13.7 |

TABLE 45 - (continued)

| LOCATION | AU85-1088 | AU85-1814 | D86-9845 | G84-3185 | N86-452 | SC84-583 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| CLINTON, NC | 20.1 | 19.1 | 20.7 | 19.7 | 18.9 | 20.5 |
| FLORENCE, SC (A) | 21.2 | 20.7 | 21.6 | 21.1 | 19.7 | 21.4 |
| TALLASSEE, AL | 20.0 | 19.4 | 20.5 | 20.6 | 19.1 | 20.8 |
| ATHENS, GA | 19.0 | 20.9 | 20.9 | 20.3 | 18.2 | 19.3 |
| CLEMSON, SC | 20.0 | 20.2 | 21.3 | 19.8 | 19.2 | 21.0 |
| JAY, FL | 22.9 | 20.4 | 21.3 | 21.9 | 20.9 | 20.9 |
| STONEVILLE, MS (A) | 19.3 | 18.5 | 19.3 | 20.3 | 19.7 | 19.4 |
| STUTTGART, AR | 18.9 | 18.0 | 19.1 | 20.9 | 18.6 | 20.9 |
| ROHWER, AR | 19.8 | 19.3 | 19.0 | 21.0 | 19.1 | 20.4 |
| BEAUMONT, TX | 20.8 | 19.4 | 19.5 | 21.3 | 18.8 | 19.9 |
| MEAN | 20.2 | 19.6 | 20.3 | 20.7 | 19.2 | 20.5 |
| | | | PROTEIN PERCENTAGE | | | |
| CLINTON, NC | 42.9 | 45.0 | 42.2 | 41.5 | 43.4 | 41.0 |
| FLORENCE, SC (A) | 38.8 | 39.1 | 40.0 | 36.8 | 39.5 | 37.5 |
| TALLASSEE, AL | 40.4 | 43.1 | 41.4 | 41.2 | 42.9 | 38.6 |
| ATHENS, GA | 41.2 | 39.9 | 40.8 | 40.0 | 42.7 | 43.1 |
| CLEMSON, SC | 40.4 | 42.1 | 40.6 | 39.8 | 41.4 | 38.2 |
| JAY, FL | 37.8 | 43.1 | 41.5 | 39.5 | 40.8 | 38.5 |
| STONEVILLE, MS (A) | 40.1 | 41.8 | 41.1 | 38.8 | 41.0 | 38.7 |
| STUTTGART, AR | 42.1 | 43.6 | 41.7 | 37.8 | 41.2 | 37.3 |
| ROHWER, AR | 39.8 | 42.5 | 42.7 | 38.5 | 40.4 | 38.5 |
| BEAUMONT, TX | 40.7 | 43.4 | 43.6 | 40.8 | 44.1 | 40.4 |
| MEAN | 40.4 | 42.4 | 41.6 | 39.5 | 41.7 | 39.3 |
| | | | GRAMS PER 100 SEED | | | |
| CLINTON, NC | 15.0 | 15.0 | 14.7 | 16.8 | 15.0 | 15.1 |
| FLORENCE, SC (A) | 15.3 | 15.3 | 15.0 | 16.0 | 14.7 | 14.3 |
| TALLASSEE, AL | 12.7 | 13.8 | 11.7 | 14.1 | 11.9 | 11.9 |
| ATHENS, GA | 12.3 | 13.4 | 13.4 | 13.2 | 13.6 | 12.7 |
| CLEMSON, SC | 19.1 | 19.1 | 18.4 | 21.4 | 19.5 | 19.6 |
| JAY, FL | 12.0 | 12.0 | 10.0 | 15.0 | 12.0 | 12.0 |
| STONEVILLE, MS (A) | 11.7 | 10.9 | 10.6 | 12.7 | 11.2 | 10.7 |
| STUTTGART, AR | 12.3 | 12.9 | 11.3 | 14.8 | 13.3 | 11.9 |
| ROHWER, AR | 11.5 | 12.1 | 11.1 | 13.7 | 12.0 | 11.7 |
| BEAUMONT, TX | 12.4 | 14.2 | 12.5 | 15.6 | 11.9 | 11.0 |
| MEAN | 13.4 | 13.9 | 12.9 | 15.3 | 13.5 | 13.1 |

TABLE 46 - RELATIVE MATURITY DATA, DAYS EARLIER (-) OR LATER (+) THAN THOMAS, FOR THE STRAINS IN UNIFORM GROUP VII, 1989

| LOCATION | THOMAS | STONE-WALL | AU82-211 | N85-574 | R85-140S | SC84-818 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| HOLLAND, VA | 11-02 | -1 | -2 | -1 | -2 | 0 |
| KINSTON, NC | 10-29 | +2 | 0 | +1 | +2 | +4 |
| CLINTON, NC | 10-30 | -2 | -4 | -4 | -6 | 0 |
| FLORENCE, SC (A) | 10-23 | -7 | -9 | +1 | -8 | +1 |
| FLORENCE, SC (B) | 10-24 | +1 | 0 | +3 | 0 | +3 |
| MEAN | 10-27 | -1 | -3 | 0 | -3 | +2 |
| | | | SOUTHEAST | | | |
| BLACKVILLE, SC (A) | 10-22 | -4 | -6 | +2 | -5 | +7 |
| BLACKVILLE, SC (B) | 10-28 | +2 | +3 | +2 | +2 | +6 |
| TALLASSEE, AL | 10-21 | -1 | -7 | -3 | -8 | +2 |
| TIFTON, GA | 10-10 | -1 | -2 | +2 | -3 | +3 |
| GAINESVILLE, FL | 10-12 | -3 | -4 | 0 | -2 | +7 |
| JAY, FL | 10-17 | -1 | -2 | +3 | -5 | -1 |
| FAIRHOPE, AL | 10-27 | -7 | -10 | 0 | -5 | -1 |
| BATON ROUGE, LA | 10-23 | +1 | -2 | +1 | -3 | 0 |
| MEAN | 10-20 | -2 | -4 | +2 | -3 | +3 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ATHENS, GA | 10-23 | -6 | -8 | -5 | -7 | +1 |
| CLEMSON, SC | 10-28 | -8 | -7 | -6 | -7 | +2 |
| MEAN | 10-25 | -7 | -8 | -6 | -7 | +2 |
| | | | DELTA AND WEST | | | |
| STONEVILLE, MS (A) | 10-13 | +2 | -1 | +8 | +2 | +8 |
| STONEVILLE, MS (B) | 10-21 | -4 | -10 | -10 | -3 | +2 |
| STUTTGART, AR | 10-20 | +3 | +1 | +3 | -2 | +6 |
| ROHWER, AR | 10-17 | 0 | -3 | +1 | -2 | +2 |
| ST. JOSEPH, LA | 10-10 | 0 | -1 | +4 | -2 | -9 |
| BOSSIER CITY, LA | 10-12 | 0 | -1 | +6 | +1 | +1 |
| BEAUMONT, TX | 10-10 | -1 | -1 | -1 | -1 | +1 |
| MEAN | 10-14 | 0 | -2 | +2 | -1 | +2 |

TABLE 46 - (continued)

| LOCATION | AU85-1088 | AU85-1814 | D86 9845 | G84-3185 | N86-452 | SC84-583 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| HOLLAND, VA | 0 | 0 | -1 | -1 | -1 | 0 |
| KINSTON, NC | +4 | 0 | +4 | +1 | +4 | +3 |
| CLINTON, NC | -3 | -1 | -3 | -4 | -4 | -2 |
| FLORENCE, SC (A) | -5 | +3 | -5 | +1 | -5 | +2 |
| FLORENCE, SC (B) | -1 | -2 | +1 | +3 | +2 | +2 |
| MEAN | -1 | 0 | -1 | 0 | -1 | +1 |
| | | | SOUTHEAST | | | |
| BLACKVILLE, SC (A) | -1 | +3 | +4 | +1 | -6 | +4 |
| BLACKVILLE, SC (B) | +5 | +6 | +5 | +5 | +2 | +5 |
| TALLASSEE, AL | +1 | +1 | +1 | +2 | -7 | +3 |
| TIFTON, GA | +8 | +6 | +9 | +1 | -4 | +6 |
| GAINESVILLE, FL | 0 | +2 | +4 | +1 | -1 | +6 |
| JAY, FL | -1 | +2 | -2 | +4 | -3 | +1 |
| FAIRHOPE, AL | -1 | 0 | -1 | 0 | -6 | -2 |
| BATON ROUGE, LA | +2 | 0 | 0 | +2 | -1 | -3 |
| MEAN | +2 | +3 | +3 | +2 | -3 | +3 |
| | | | UPPER AND CENTRAL SOUTH | | | |
| ATHENS, GA | -3 | +1 | +2 | -6 | -8 | +2 |
| CLEMSON, SC | 0 | +1 | +2 | -4 | -5 | +2 |
| MEAN | -2 | +1 | +2 | -5 | -7 | +2 |
| | | | DELTA AND WEST | | | |
| STONEVILLE, MS (A) | +3 | +5 | +8 | +9 | +2 | +6 |
| STONEVILLE, MS (B) | -1 | +2 | +1 | +1 | -5 | 0 |
| STUTTGART, AR | +5 | +3 | +3 | +3 | +2 | +4 |
| ROHWER, AR | +1 | +2 | +1 | +2 | -4 | +2 |
| ST. JOSEPH, LA | +2 | +3 | +5 | +4 | -2 | +2 |
| BOSSIER CITY, LA | 0 | +3 | +4 | +3 | 0 | +3 |
| BEAUMONT, TX | +2 | +5 | +6 | +5 | -1 | +2 |
| MEAN | +2 | +3 | +4 | +4 | -1 | +3 |

TABLE 47 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP VII, 1989

| LOCATION | THOMAS | STONE-WALL | AU82-211 | N85-574 | R85-140S | SC84-818 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| HOLLAND, VA | 44 | 45 | 41 | 40 | 45 | 53 |
| KINSTON, NC | 40 | 40 | 42 | 40 | 48 | 42 |
| CLINTON, NC | 42 | 40 | 40 | 40 | 46 | 44 |
| FLORENCE, SC (A) | 33 | 33 | 33 | 35 | 37 | 40 |
| FLORENCE, SC (B) | 33 | 34 | 33 | 35 | 34 | 35 |
| MEAN | 38 | 38 | 38 | 38 | 42 | 43 |
| | | | SOUTHEAST | | | |
| BLACKVILLE, SC (A) | 37 | 34 | 34 | 31 | 37 | 38 |
| BLACKVILLE, SC (B) | 32 | 28 | 31 | 28 | 32 | 35 |
| TALLASSEE, AL | 23 | 22 | 20 | 22 | 25 | 28 |
| TIFTON, GA | 29 | 25 | 26 | 29 | 29 | 35 |
| GAINESVILLE, FL | 25 | 27 | 26 | 25 | 29 | 32 |
| JAY, FL | 31 | 28 | 27 | 26 | 35 | 35 |
| FAIRHOPE, AL | 25 | 20 | 22 | 26 | 27 | 30 |
| BATON ROUGE, LA | 31 | 31 | 34 | 29 | 29 | 30 |
| MEAN | 29 | 27 | 28 | 27 | 30 | 33 |
| | | | UPPER & CENTRAL SOUTH | | | |
| ATHENS, GA | 30 | 34 | 35 | 34 | 35 | 37 |
| CALHOUN, GA | 34 | 38 | 38 | 37 | 40 | 45 |
| CLEMSON, SC | 42 | 41 | 46 | 40 | 47 | 47 |
| MEAN | 35 | 38 | 40 | 37 | 41 | 43 |
| | | | DELTA & WEST | | | |
| STONEVILLE, MS (A) | 39 | 38 | 37 | 39 | 40 | 41 |
| STONEVILLE, MS (B)* | 29 | 23 | 24 | 23 | 27 | 29 |
| STUTTGART, AR | 33 | 34 | 33 | 32 | 40 | 41 |
| ROHWER, AR | 25 | 27 | 24 | 28 | 30 | 34 |
| ST. JOSEPH, LA | 38 | 38 | 36 | 37 | 43 | 42 |
| BOSSIER CITY, LA | 30 | 30 | 28 | 29 | 29 | 42 |
| BEAUMONT, TX | 25 | 20 | 27 | 28 | 28 | 29 |
| MEAN | 31 | 30 | 30 | 31 | 34 | 37 |

* Not in Mean.

TABLE 47 - (continued)

| LOCATION | AU85-1088 | AU85-1814 | D86-9845 | G84-3185 | N86-452 | SC84-583 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| HOLLAND, VA | 33 | 40 | 47 | 42 | 36 | 41 |
| KINSTON, NC | 38 | 44 | 42 | 40 | 36 | 40 |
| CLINTON, NC | 38 | 42 | 44 | 42 | 36 | 44 |
| FLORENCE, SC (A) | 36 | 42 | 39 | 35 | 33 | 33 |
| FLORENCE, SC (B) | 31 | 39 | 38 | 33 | 38 | 36 |
| MEAN | 35 | 41 | 42 | 38 | 36 | 39 |
| | | | SOUTHEAST | | | |
| BLACKVILLE, SC (A) | 35 | 39 | 37 | 34 | 35 | 34 |
| BLACKVILLE, SC (B) | 27 | 34 | 29 | 28 | 25 | 31 |
| TALLASSEE, AL | 21 | 29 | 20 | 21 | 21 | 23 |
| TIFTON, GA | 25 | 27 | 33 | 30 | 27 | 28 |
| GAINESVILLE, FL | 22 | 33 | 30 | 28 | 26 | 29 |
| JAY, FL | 26 | 35 | 34 | 32 | 26 | 27 |
| FAIRHOPE, AL | 23 | 33 | 25 | 27 | 24 | 23 |
| BATON ROUGE, LA | 34 | 28 | 32 | 32 | 27 | 33 |
| MEAN | 27 | 32 | 30 | 29 | 26 | 29 |
| | | | UPPER & CENTRAL SOUTH | | | |
| ATHENS, GA | 30 | 33 | 40 | 33 | 31 | 35 |
| CALHOUN, GA | 35 | 39 | 40 | 37 | 32 | 43 |
| CLEMSON, SC | 42 | 48 | 44 | 45 | 43 | 47 |
| MEAN | 36 | 40 | 41 | 38 | 35 | 42 |
| | | | DELTA & WEST | | | |
| STONEVILLE, MS (A) | 38 | 41 | 38 | 37 | 35 | 41 |
| STONEVILLE, MS (B) | 23 | 32 | 27 | 27 | 23 | 27 |
| STUTTGART, AR | 35 | 36 | 41 | 35 | 35 | 35 |
| ROHWER, AR | 24 | 33 | 32 | 30 | 24 | 26 |
| ST. JOSEPH, LA | 35 | 42 | 41 | 33 | 37 | 38 |
| BOSSIER CITY, LA | 26 | 30 | 30 | 29 | 28 | 31 |
| BEAUMONT, TX | 23 | 29 | 32 | 26 | 26 | 28 |
| MEAN | 29 | 35 | 34 | 31 | 30 | 32 |

TABLE 48 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP VII, 1989

| LOCATION | THOMAS | STONE-WALL | AU82-211 | N85-574 | R85-140S | SC84-818 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| HOLLAND, VA | 3.3 | 3.0 | 3.2 | 3.2 | 3.3 | 3.7 |
| KINSTON, NC | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| CLINTON, NC | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| FLORENCE, SC (A) | 2.5 | 2.2 | 2.3 | 2.0 | 2.4 | 2.8 |
| FLORENCE, SC (B) | 2.5 | 2.7 | 2.8 | 3.3 | 2.8 | 2.7 |
| | | | SOUTHEAST | | | |
| BLACKVILLE, SC (A) | 1.3 | 1.0 | 1.0 | 1.3 | 2.3 | 3.0 |
| BLACKVILLE, SC (B) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| TALLASSEE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| TIFTON, GA | 1.0 | 1.0 | 1.0 | 1.5 | 1.0 | 1.5 |
| GAINESVILLE, FL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| JAY, FL | 1.0 | 1.0 | 1.0 | 1.0 | 2.0 | 2.0 |
| FAIRHOPE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| BATON ROUGE, LA | 2.0 | 3.0 | 3.0 | 4.0 | 2.0 | 3.0 |
| | | | UPPER & CENTRAL SOUTH | | | |
| ATHENS, GA | 1.7 | 2.7 | 3.5 | 2.3 | 3.3 | 2.2 |
| CALHOUN, GA | 1.7 | 1.3 | 1.7 | 2.0 | 3.8 | 2.5 |
| CLEMSON, SC | 2.7 | 3.2 | 3.0 | 3.3 | 3.8 | 3.0 |
| | | | DELTA & WEST | | | |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | 3.0 |
| STONEVILLE, MS (B) | 2.3 | 2.3 | 2.7 | 2.7 | 2.7 | 2.7 |
| STUTTGART, AR | 2.2 | 2.5 | 2.6 | 2.8 | 3.5 | 3.4 |
| ROHWER, AR | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 |
| ST. JOSEPH, LA | 1.5 | 1.6 | 1.5 | 1.8 | 2.1 | 2.2 |
| BOSSIER CITY, LA | 1.2 | 1.3 | 1.0 | 1.3 | 2.3 | 2.0 |
| BEAUMONT, TX | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |

TABLE 48 - (continued)

| LOCATION | AU85-1088 | AU-1814 | D86-9845 | G84-3185 | N86-452 | SC84 583 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| HOLLAND, VA | 2.8 | 3.0 | 3.0 | 3.5 | 3.3 | 3.3 |
| KINSTON, NC | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| CLINTON, NC | 3.0 | 3.0 | 4.0 | 4.0 | 3.0 | 4.0 |
| FLORENCE, SC (A) | 2.7 | 2.5 | 2.7 | 2.7 | 3.3 | 2.0 |
| FLORENCE, SC (B) | 2.7 | 2.8 | 2.7 | 3.5 | 3.3 | 3.2 |
| | | | SOUTHEAST | | | |
| BLACKVILLE, SC (A) | 1.0 | 1.3 | 2.0 | 2.0 | 3.7 | 1.3 |
| BLACKVILLE, SC (B) | 1.0 | 1.0 | 1.0 | 1.7 | 1.0 | 1.0 |
| TALLASSEE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| TIFTON, GA | 1.0 | 1.3 | 1.3 | 1.3 | 1.0 | 1.2 |
| GAINESVILLE, FL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| JAY, FL | 1.0 | 2.0 | 2.0 | 2.0 | 1.0 | 1.0 |
| FAIRHOPE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| BATON ROUGE, LA | 3.0 | 3.0 | 4.0 | 4.0 | 3.0 | 4.0 |
| | | | UPPER & CENTRAL SOUTH | | | |
| ATHENS, GA | 1.3 | 2.2 | 2.3 | 2.8 | 2.7 | 2.0 |
| CALHOUN, GA | 1.3 | 2.0 | 2.2 | 2.5 | 2.0 | 2.0 |
| CLEMSON, SC | 1.7 | 2.0 | 2.0 | 4.2 | 4.2 | 3.0 |
| | | | DELTA & WEST | | | |
| STONEVILLE, MS (A) | 2.0 | 2.3 | 2.3 | 2.7 | 2.0 | 2.7 |
| STONEVILLE, MS (B) | 2.0 | 2.7 | 3.0 | 3.0 | 3.0 | 2.7 |
| STUTTGART, AR | 2.2 | 2.7 | 2.5 | 3.2 | 4.5 | 2.5 |
| ROHWER, AR | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| ST. JOSEPH, LA | 1.6 | 2.2 | 2.0 | 2.5 | 1.9 | 2.0 |
| BOSSIER CITY, LA | 1.0 | 1.7 | 1.5 | 2.8 | 1.5 | 1.3 |
| BEAUMONT, TX | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |

TABLE 49 - SEED QUALITY SCORES FOR THE STRAINS IN UNIFORM GROUP VII, 1989

| LOCATION | THOMAS | STONE-WALL | AU82-211 | N85-574 | R85-140S | SC84-818 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| KINSTON, NC | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| CLINTON, NC | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| | | | SOUTHEAST | | | |
| TALLASSEE, AL | 1.5 | 3.0 | 2.0 | 1.5 | 2.0 | 1.5 |
| TIFTON, GA | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.5 |
| GAINESVILLE, FL | 2.0 | 2.0 | 1.7 | 3.0 | 2.0 | 1.5 |
| JAY, FL | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 1.0 |
| | | | UPPER & CENTRAL SOUTH | | | |
| ATHENS, GA | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| CALHOUN, GA | 2.3 | 2.2 | 2.2 | 2.3 | 2.7 | 2.2 |
| | | | DELTA & WEST | | | |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.3 | 2.3 | 2.7 | 2.3 | 2.0 | 2.7 |
| STUTTGART, AR | 2.8 | 2.5 | 3.0 | 2.2 | 2.3 | 2.0 |
| ROHWER, AR | 2.3 | 2.0 | 2.7 | 2.0 | 2.3 | 2.0 |
| BEAUMONT, TX | 1.0 | 1.2 | 1.0 | 1.3 | 1.3 | 1.5 |

TABLE 49 - (continued)

| LOCATION | AU85-1088 | AU85-1814 | D86-9845 | G84-3185 | N86-452 | SC84-583 |
|---|---|---|---|---|---|---|
| | | | EAST COAST | | | |
| CLINTON, NC | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| KINSTON, NC | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| | | | SOUTHEAST | | | |
| TALLASSEE, AL | 2.0 | 1.5 | 1.0 | 2.5 | 2.0 | 1.5 |
| TIFTON, GA | 2.0 | 2.0 | 2.2 | 2.0 | 2.0 | 1.8 |
| GAINESVILLE, FL | 1.7 | 2.0 | 2.0 | 1.7 | 1.7 | 1.5 |
| JAY, FL | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| | | | UPPER & CENTRAL SOUTH | | | |
| ATHENS, GA | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| CALHOUN, GA | 2.0 | 2.0 | 2.3 | 2.0 | 2.0 | 1.7 |
| | | | DELTA & WEST | | | |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.0 | 2.3 | 2.3 | 2.0 | 2.0 | 2.3 |
| STUTTGART, AR | 2.5 | 2.8 | 2.3 | 2.2 | 2.7 | 2.3 |
| ROHWER, AR | 2.0 | 2.3 | 2.2 | 2.3 | 2.0 | 2.2 |
| BEAUMONT, TX | 1.2 | 1.3 | 1.3 | 1.5 | 1.3 | 2.0 |

# PRELIMINARY GROUP VII

## 1989

Preliminary Group VII nurseries, which included Braxton and Sharkey along with 34 experimental lines, were grown at 9 locations. The parents for each of these lines are reported in Table 50. A general summary of performance is reported in Table 51. Included in the table is mean seed yield, maturity, height, oil and protein percentage, reaction to SCN Rces 3 and 4 and to frogeye leaf spot. Performance data for individual locations is reported in Tables 52-56.

Braxton had a mean seed yield of 30.9 bu per acre, and Sharkey a mean seed yield of 35.9 bu per acre. There were no strains having a mean seed yield significantly higher than that of Sharkey. Eight strains were of Sharkey maturity or earlier, and therefore not considered to be of maturity group VII.

Twenty-three lines were rated resistant to SCN Race 3 plus two lines segregating for reaction. Nine of these lines were also rated resistant to Race 4. Two of the lines received a score of 3.5 for frogeye leaf spot development at Tallassee, AL. There were eight lines which were given a score of 1 and eight additional lines which received a score of 1.5. Two lines, Au86-1628 and Au86-1701 were not uniform for flower color.

Like Uniform Group VII, Preliminary Group VII on clay at Stoneville stood in water for more than two weeks and seed yields were low. These data are not included in means.

TABLE 50 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP VII, 1989

| | VARIETY OR STRAIN | PARENTAGE |
|---|---|---|
| 1. | BRAXTON | F59-1505 X (BRAGG(3) X D60-7965) |
| 2. | SHARKEY | TRACY X CENTENNIAL |
| 3. | AU86-1409 | CO 79-760 X BRAXTON |
| 4. | AU86-1592 | CO 79-760 X BRAXTON |
| 5. | AU86-1628 | CO 79-760 X BRAXTON |
| 6. | AU86-1686 | CO 79-760 X JOHNSTON |
| 7. | AU86-1701 | CO 79-760 X JOHNSTON |
| 8. | D86-8502 | SHARKEY X D79-10158 |
| 9. | D86-8571 | SHARKEY X D79-10158 |
| 10. | D86-9746 | D82-9965 X D82-5382 |
| 11. | D86-9765 | D82-9965 X D82-5382 |
| 12. | D87-4389 | SHARKEY X LEFLORE |
| 13. | D87-4434 | SHARKEY X LEFLORE |
| 14. | F87-1584 | F83-1969 X (KIRBY X TRACY-M) |
| 15. | G85-159 | D76-9665 X BRAXTON |
| 16. | G85-214 | D76-9665 X WRIGHT |
| 17. | G85-357 | GORDON X BRAXTON |
| 18. | G85-373 | GORDON X BRAXTON |
| 19. | G85-1089 | D76-9665 X BRAXTON |
| 20. | G85-1227 | D76-9665 X BRAXTON |
| 21. | G85-1278 | D76-9665 X BRAXTON |
| 22. | N87-445 | DAVIS X N73-1102 |
| 23. | N87-690 | DAVIS X N73-1102 |
| 24. | N87-805 | RS4 CYCLE 0 X F |
| 25. | N87-830 | RS4 CYCLE 0 X F |
| 26. | N87-963 | RS4 CYCLE 0 X F |
| 27. | N87-1104 | RS4 CYCLE 0 X F |
| 28. | R87-42S | JEFF X (CENTENNIAL X JEFF) |
| 29. | R87-55S | JEFF X (CENTENNIAL X JEFF) |
| 30. | R87-899S | R80-437 X SHARKEY |
| 31. | SC85-234 | BRAXTON X D76-9665 |
| 32. | SC85-252 | BRAXTON X D76-9665 |
| 33. | SC85-354 | BRAXTON X D76-9665 |
| 34. | SC85-410 | BRAXTON X D76-9665 |
| 35. | SC85-787 | CO 488 X BEDFORD |
| 36. | SC85-1362 | FOSTER X (GOVAN X D76-9665) |

TABLE 51 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP VII, 1989

| STRAIN | SEED YIELD | MAT. INDEX | -----PERCENT-------- HT. | OIL | PROTEIN | SCN 3 | SCN 4 | FROG EYE |
|---|---|---|---|---|---|---|---|---|
| BRAXTON | 30.5 | 10/22 | 34 | 19.7 | 41.7 | S | S | 2.5 |
| SHARKEY | 35.9+ | 7- | 34 | 19.7 | 43.1+ | R | S | 2.0 |
| AU86-1409 | 36.7+ | 5- | 31 | 21.3+ | 40.4- | R | S | 1.5 |
| AU86-1592 | 39.4+ | 9- | 31 | 20.8+ | 41.1 | R | S | 1.0 |
| AU86-1628 | 38.5+ | 4- | 33 | 20.7+ | 41.3 | h | S | 1.5 |
| AU86-1686 | 36.9+ | 2- | 31 | 20.4 | 39.2- | S | S | 1.0 |
| AU86-1701 | 35.9+ | 6- | 32 | 21.2+ | 39.6- | S | S | 1.0 |
| D86-8502 | 33.8 | 7+ | 39 | 18.8- | 43.0+ | R | R | 3.5 |
| D86-8571 | 33.9 | 0 | 36 | 18.4- | 43.4+ | R | R | 2.0 |
| D86-9746 | 32.2 | 1+ | 34 | 18.7- | 42.7+ | R | R | 1.0 |
| D86-9765 | 33.2 | 1- | 30 | 19.6 | 41.7 | R | R | 1.5 |
| D87-4389 | 36.8+ | 5- | 35 | 19.7 | 41.9 | R | R | 2.0 |
| D87-4434 | 37.8+ | 6- | 33 | 18.9- | 43.8+ | R | S | 1.0 |
| F87-1584 | 34.2 | 0 | 38 | 19.4 | 41.7 | R | R | 3.0 |
| G85-159 | 32.8 | 5- | 33 | 20.4 | 40.2- | R | S | 2.0 |
| G85-214 | 35.5 | 6- | 30 | 19.9 | 40.7- | R | S | 2.5 |
| G85-357 | 36.1+ | 5- | 33 | 20.1 | 41.1 | R | S | 2.0 |
| G85-373 | 37.6+ | 5- | 36 | 20.3 | 40.2- | R | S | 2.0 |
| G85-1089 | 34.2 | 5- | 33 | 20.8+ | 40.8- | R | S | 3.5 |
| G85-1227 | 35.7 | 5- | 35 | 21.1+ | 39.2- | R | S | 3.0 |
| G85-1278 | 33.1 | 5- | 32 | 20.2 | 41.2 | R | S | 3.0 |
| N87-445 | 38.5+ | 3- | 41 | 19.7 | 42.1 | S | S | 1.5 |
| N87-690 | 34.6 | 2- | 35 | 20.6+ | 41.5 | S | S | 1.0 |
| N87-805 | 31.6 | 10- | 33 | 20.3 | 43.7+ | S | S | 1.5 |
| N87-830 | 29.2 | 7- | 31 | 20.3 | 43.9+ | S | S | 2.5 |
| N87-963 | 30.4 | 12- | 29 | 19.3 | 44.9+ | S | S | 1.0 |
| N87-1104 | 34.1 | 3- | 38 | 19.4 | 43.6+ | S | S | 1.5 |
| R87-42S | 30.5 | 9- | 33 | 19.8 | 42.3 | R | R | 1.5 |
| R87-55S | 31.4 | 8- | 29 | 20.1 | 40.6- | R | R | 2.0 |
| R87-899S | 36.4+ | 8- | 30 | 19.9 | 43.3+ | R | S | 1.5 |
| SC85-234 | 34.4 | 4- | 34 | 20.3 | 40.7- | S | S | 2.0 |
| SC85-252 | 33.9 | 5- | 35 | 19.9 | 41.0 | h | S | 3.0 |
| SC85-354 | 31.3 | 3- | 34 | 19.8 | 40.9 | h | S | 2.5 |
| SC85-410 | 29.6 | 7- | 33 | 20.2 | 39.3- | R | S | 2.5 |
| SC85-787 | 35.1 | 4- | 36 | 19.9 | 40.8- | R | R | 2.5 |
| SC85-1362 | 27.9 | 8- | 30 | 20.5+ | 40.6- | R | S | 1.0 |
| LSD (.05) | 5.3 | | | 0.8 | 0.9 | | | |
| C.V. | 16% | | | 3% | 2% | | | |

+ or - designations refer to differences from Braxton

TABLE 52 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP VII, 1989

| STRAIN | CLINTON, NC | BLACK-VILLE, SC | ATHENS, GA | TALLAS-SEE, AL | JAY, FL | ROHWER, AR | STONE-VILLE, MS (A) | STONE-VILLE, MS (B) | BEAU-MONT, TX |
|---|---|---|---|---|---|---|---|---|---|
| BRAXTON | 41.5 | 28.9 | 39.8 | 17.0 | 37.7 | 26.3 | 31.8 | 25.9 | 30.7 |
| SHARKEY | 53.1 | 30.0 | 47.1 | 22.4 | 41.2 | 39.7+ | 41.2+ | 29.2 | 26.8 |
| AU86-1409 | 52.3 | 33.3 | 50.5 | 16.3 | 44.8 | 39.4+ | 39.9+ | 38.4+ | 14.1- |
| AU86-1592 | 45.2 | 32.6 | 50.0 | 46.1+ | 47.1 | 29.2 | 43.3+ | 39.0+ | 25.3 |
| AU86-1628 | 38.3 | 36.2 | 58.2+ | 33.9+ | 38.9 | 43.1+ | 44.4+ | 30.8 | 26.5 |
| AU86-1686 | 51.7 | 28.2 | 49.1 | 45.1+ | 40.1 | 31.0 | 38.5+ | 30.9 | 30.8 |
| AU86-1701 | 49.9 | 25.9 | 55.4+ | 31.0 | 38.9 | 37.1+ | 36.9+ | 30.7 | 32.1 |
| D86-8502 | 52.3 | 24.7 | 37.2 | 29.1 | 40.1 | 38.3+ | 31.9 | 37.5+ | 20.8 |
| D86-8571 | 57.9+ | 25.7 | 50.1 | 16.2 | 42.4 | 33.8 | 43.5+ | 23.3 | 21.1 |
| D86-9746 | 46.9 | 23.8 | 42.1 | 6.7 | 35.4 | 37.3+ | 39.8+ | 34.8+ | 20.9 |
| D86-9765 | 53.8 | 26.5 | 42.2 | 5.7 | 36.5 | 38.6+ | 32.7 | 34.4+ | 33.8 |
| D87-4389 | 42.6 | 32.5 | 51.4+ | 34.2+ | 37.7 | 38.3+ | 44.3+ | 29.7 | 24.6 |
| D87-4434 | 49.0 | 29.6 | 50.3 | 39.1+ | 37.7 | 33.3 | 43.1+ | 37.2+ | 24.9 |
| F87-1584 | 53.0 | 28.1 | 47.8 | 34.4+ | 40.1 | 35.7+ | 32.4 | 22.8 | 32.8 |
| G85-159 | 50.3 | 32.7 | 42.0 | 26.6 | 34.2 | 34.0+ | 38.2+ | 23.0 | 19.2 |
| G85-214 | 45.7 | 33.2 | 55.6+ | 33.5+ | 44.8 | 27.1 | 32.4 | 29.0 | 29.6 |
| G85-357 | 64.9+ | 30.5 | 46.2 | 34.2+ | 43.6 | 31.4 | 32.0 | 29.5 | 29.2 |
| G85-373 | 55.1 | 35.3 | 44.7 | 29.1 | 38.9 | 43.6+ | 36.5+ | 31.1 | 33.4 |
| G85-1089 | 52.1 | 29.6 | 42.4 | 26.2 | 44.8 | 31.9 | 36.8+ | 27.3 | 25.8 |
| G85-1227 | 55.0 | 31.2 | 51.2+ | 30.3 | 46.0 | 33.3 | 32.8 | 26.1 | 33.0 |
| G85-1278 | 44.2 | 30.8 | 50.9+ | 26.8 | 42.4 | 27.6 | 35.0 | 21.2 | 31.3 |
| N87-445 | 57.1+ | 32.8 | 56.3+ | 30.6 | 44.8 | 43.2+ | 32.9 | 34.9+ | 28.8 |
| N87-690 | 54.4 | 29.7 | 51.0+ | 38.0+ | 30.6 | 30.8 | 34.9 | 31.7 | 17.2- |
| N87-805 | 45.7 | 25.5 | 49.5 | 11.6 | 34.2 | 39.5+ | 34.1 | 29.5 | 21.1 |
| N87-830 | 46.9 | 21.8 | 53.3+ | 12.7 | 31.8 | 35.3+ | 28.2 | 29.2 | 11.4- |
| N87-963 | 43.2 | 25.4 | 47.6 | 13.5 | 33.0 | 32.2 | 37.2+ | 29.0 | 12.5- |
| N87-1104 | 59.3+ | 25.8 | 43.8 | 23.9 | 34.2 | 45.1+ | 32.3 | 29.5 | 28.3 |
| R87-42S | 56.5+ | 29.9 | 49.0 | 8.4 | 23.6- | 33.0 | 33.5 | 25.6 | 17.8 |
| R87-55S | 48.8 | 26.2 | 55.1+ | 17.6 | 33.0 | 30.0 | 39.2+ | 22.8 | 15.5- |
| R87-899S | 51.9 | 26.4 | 56.1+ | 28.4 | 25.9- | 42.0+ | 42.2+ | 34.4+ | 27.1 |
| SC85-234 | 55.8+ | 30.7 | 48.4 | 24.0 | 37.7 | 34.2+ | 32.8 | 27.1 | 32.1 |
| SC85-252 | 43.5 | 35.0 | 45.2 | 30.6 | 38.9 | 29.1 | 33.6 | 23.5 | 35.3 |
| SC85-354 | 38.2 | 30.9 | 44.3 | 19.8 | 37.7 | 36.6+ | 31.4 | 22.3 | 29.4 |
| SC85-410 | 49.8 | 32.4 | 49.8 | 24.8 | 35.4 | 19.5 | 24.6- | 19.9 | 22.4 |
| SC85-787 | 48.3 | 31.5 | 55.7+ | 36.3+ | 40.1 | 33.7 | 32.7 | 25.0 | 29.0 |
| SC85-1362 | 40.0 | 26.5 | 44.6 | 8.0 | 37.7 | 28.0 | 28.0 | 18.9 | 29.7 |
| LSD (.05) | 14.2 | 8.6 | 11.1 | 14.3 | 9.4 | 7.6 | 4.6 | 7.2 | 13.1 |
| C.V. | 14% | 14% | 11% | 27% | 13% | 11% | 6% | 12% | 25% |

TABLE 53 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1989

| STRAIN | CLINTON, NC | TALLAS-SEE, AL | JAY, FL | STONE-VILLE, MS(A) | BEAU-MONT, TX |
|---|---|---|---|---|---|
| BRAXTON | 19.2 | 19.0 | 21.0 | 20.0 | 19.3 |
| SHARKEY | 18.9 | 19.2 | 22.6 | 19.6 | 18.2 |
| AU86-1409 | 20.4 | 20.7 | 22.4 | 22.4 | 20.6 |
| AU86-1592 | 20.5 | 20.6 | 21.9 | 20.7 | 20.2 |
| AU86-1628 | 20.1 | 20.1 | 22.4 | 20.7 | 20.3 |
| AU86-1686 | 20.1 | 20.4 | 22.0 | 20.3 | 19.3 |
| AU86-1701 | 20.9 | 20.6 | 23.0 | 20.9 | 20.6 |
| D86-8502 | 18.8 | 18.3 | 20.7 | 18.4 | 17.8 |
| D86-8571 | 17.7 | 17.5 | 19.9 | 18.5 | 18.3 |
| D86-9746 | 18.0 | 19.5 | 19.4 | 18.0 | 18.5 |
| D86-9765 | 19.5 | 19.7 | 19.7 | 19.7 | 19.2 |
| D87-4389 | 20.3 | 19.1 | 21.5 | 19.9 | 17.5 |
| D87-4434 | 17.9 | 19.0 | 21.1 | 18.7 | 17.8 |
| F87-1584 | 18.8 | 19.5 | 19.9 | 20.1 | 18.8 |
| G85-159 | 20.9 | 19.2 | 22.0 | 20.7 | 19.4 |
| G85-214 | 19.7 | 19.4 | 21.2 | 20.1 | 19.2 |
| G85-357 | 18.4 | 19.6 | 21.9 | 20.4 | 20.1 |
| G85-373 | 19.6 | 19.2 | 22.4 | 20.7 | 19.8 |
| G85-1089 | 21.8 | 20.3 | 21.9 | 20.8 | 19.2 |
| G85-1227 | 21.9 | 19.6 | 22.3 | 21.5 | 20.0 |
| G85-1278 | 19.9 | 20.2 | 21.1 | 20.6 | 19.2 |
| N87-445 | 19.2 | 20.5 | 20.9 | 19.5 | 18.3 |
| N87-690 | 18.6 | 19.9 | 23.7 | 20.9 | 19.9 |
| N87-805 | 19.4 | 19.5 | 22.3 | 21.0 | 19.4 |
| N87-830 | 18.8 | 19.7 | 21.8 | 20.8 | 20.4 |
| N87-963 | 18.6 | 18.2 | 20.9 | 19.9 | 18.9 |
| N87-1104 | 18.6 | 20.0 | 21.0 | 18.8 | 18.7 |
| R87-42S | 19.2 | 19.2 | 21.5 | 19.9 | 19.2 |
| R87-55S | 18.6 | 19.7 | 21.9 | 20.2 | 20.3 |
| R87-899S | 18.7 | 19.6 | 21.5 | 20.7 | 19.0 |
| SC85-234 | 20.1 | 20.0 | 21.1 | 20.6 | 19.7 |
| SC85-252 | 19.6 | 18.8 | 21.3 | 19.9 | 19.8 |
| SC85-354 | 19.7 | 19.0 | 20.7 | 20.3 | 19.4 |
| SC85-410 | 18.9 | 20.1 | 21.7 | 20.5 | 19.8 |
| SC85-787 | 19.9 | 18.3 | 21.6 | 20.1 | 19.7 |
| SC85-1362 | 18.5 | . | 21.5 | 21.9 | 20.2 |

TABLE 54 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1989

| STRAIN | CLINTON, NC | TALLAS-SEE, AL | JAY, FL | STONE-VILLE, MS(A) | BEAU-MONT, TX |
|---|---|---|---|---|---|
| BRAXTON | 43.6 | 42.7 | 41.0 | 39.3 | 41.7 |
| SHARKEY | 46.0 | 43.6 | 42.0 | 42.0 | 42.0 |
| AU86-1409 | 43.2 | 41.5 | 39.1 | 38.2 | 40.2 |
| AU86-1592 | 42.9 | 41.0 | 40.6 | 40.8 | 40.3 |
| AU86-1628 | 43.7 | 41.9 | 39.9 | 40.7 | 40.5 |
| AU86-1686 | 41.2 | 39.0 | 37.4 | 39.0 | 39.5 |
| AU86-1701 | 41.1 | 39.1 | 37.8 | 39.6 | 40.4 |
| D86-8502 | 44.0 | 43.7 | 42.3 | 42.0 | 42.8 |
| D86-8571 | 44.9 | 45.0 | 42.4 | 42.6 | 42.3 |
| D86-9746 | 43.7 | 42.8 | 42.7 | 41.5 | 42.8 |
| D86-9765 | 42.7 | 41.0 | 41.7 | 41.9 | 41.3 |
| D87-4389 | 42.7 | 42.3 | 40.7 | 41.3 | 42.5 |
| D87-4434 | 46.3 | 43.6 | 41.7 | 43.8 | 43.8 |
| F87-1584 | 43.7 | 42.3 | 40.5 | 40.6 | 41.2 |
| G85-159 | 41.0 | 41.2 | 39.1 | 39.3 | 40.3 |
| G85-214 | 42.0 | 41.1 | 39.9 | 39.9 | 40.4 |
| G85-357 | 42.7 | 42.0 | 40.3 | 40.0 | 40.4 |
| G85-373 | 42.2 | 41.2 | 38.4 | 39.1 | 40.3 |
| G85-1089 | 41.1 | 41.8 | 40.0 | 39.8 | 41.3 |
| G85-1227 | 39.5 | 39.6 | 38.6 | 37.3 | 40.8 |
| G85-1278 | 42.6 | 42.0 | 41.5 | 39.5 | 40.4 |
| N87-445 | 43.2 | 42.0 | 41.9 | 41.5 | 42.0 |
| N87-690 | 43.6 | 42.0 | 38.6 | 41.3 | 41.8 |
| N87-805 | 45.2 | 44.4 | 42.0 | 43.1 | 43.7 |
| N87-830 | 46.8 | 44.3 | 43.5 | 42.5 | 42.2 |
| N87-963 | 46.9 | 45.1 | 44.4 | 43.9 | 44.4 |
| N87-1104 | 46.0 | 44.3 | 41.4 | 43.1 | 43.0 |
| R87-42S | 44.1 | 42.5 | 41.5 | 42.3 | 40.9 |
| R87-55S | 42.6 | 41.1 | 40.2 | 40.1 | 38.8 |
| R87-899S | 46.1 | 43.5 | 42.5 | 42.0 | 42.4 |
| SC85-234 | 41.7 | 41.1 | 40.0 | 39.9 | 40.7 |
| SC85-252 | 41.8 | 41.2 | 40.9 | 41.0 | 40.3 |
| SC85-354 | 41.7 | 41.4 | 40.2 | 40.4 | 40.9 |
| SC85-410 | 41.3 | 39.7 | 37.6 | 38.8 | 38.9 |
| SC85-787 | 41.4 | 40.9 | 39.8 | 41.1 | 40.7 |
| SC85-1362 | 44.4 | 41.1 | 38.3 | 40.0 | 39.4 |

TABLE 55 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1989

| STRAIN | CLINTON, NC | BLACK-VILLE, SC | ATHENS, GA | TALLAS-SEE, AL | JAY, FL | ROHWER, AR | STONE-VILLE, MS (A) | STONE-VILLE, MS (B) | BEAU-MONT, TX |
|---|---|---|---|---|---|---|---|---|---|
| BRAXTON | 46.0 | 38.0 | 39.0 | 23.0 | 29.0 | 24.0 | 38.0 | 33.0 | 32.0 |
| SHARKEY | 41.0 | 40.0 | 40.0 | 22.0 | 31.0 | 21.0 | 41.0 | 33.0 | 28.0 |
| AU86-1409 | 42.0 | 38.0 | 37.0 | 21.0 | 27.0 | 24.0 | 36.0 | 27.0 | 22.0 |
| AU86-1592 | 36.0 | 39.0 | 35.0 | 21.0 | 26.0 | 20.0 | 36.0 | 27.0 | 26.0 |
| AU86-1628 | 44.0 | 40.0 | 39.0 | 17.0 | 22.0 | 27.0 | 38.0 | 26.0 | 36.0 |
| AU86-1686 | 42.0 | 36.0 | 36.0 | 23.0 | 29.0 | 18.0 | 35.0 | 28.0 | 28.0 |
| AU86-1701 | 40.0 | 37.0 | 35.0 | 26.0 | 29.0 | 25.0 | 36.0 | 28.0 | 30.0 |
| D86-8502 | 42.0 | 43.0 | 46.0 | 29.0 | 36.0 | 34.0 | 43.0 | 36.0 | 32.0 |
| D86-8571 | 42.0 | 41.0 | 44.0 | 29.0 | 33.0 | 32.0 | 42.0 | 31.0 | 28.0 |
| D86-9746 | 42.0 | 38.0 | 39.0 | 18.0 | 31.0 | 29.0 | 39.0 | 30.0 | 32.0 |
| D86-9765 | 34.0 | 35.0 | 33.0 | 15.0 | 28.0 | 26.0 | 34.0 | 28.0 | 29.0 |
| D87-4389 | 46.0 | 42.0 | 43.0 | 22.0 | 29.0 | 25.0 | 41.0 | 31.0 | 31.0 |
| D87-4434 | 40.0 | 39.0 | 37.0 | 22.0 | 28.0 | 20.0 | 40.0 | 28.0 | 30.0 |
| F87-1584 | 46.0 | 40.0 | 40.0 | 32.0 | 36.0 | 34.0 | 43.0 | 35.0 | 33.0 |
| G85-159 | 43.0 | 38.0 | 41.0 | 19.0 | 28.0 | 23.0 | 39.0 | 29.0 | 26.0 |
| G85-214 | 44.0 | 36.0 | 39.0 | 17.0 | 22.0 | 20.0 | 35.0 | 24.0 | 27.0 |
| G85-357 | 41.0 | 36.0 | 38.0 | 24.0 | 30.0 | 23.0 | 36.0 | 30.0 | 31.0 |
| G85-373 | 46.0 | 43.0 | 43.0 | 20.0 | 30.0 | 28.0 | 42.0 | 33.0 | 29.0 |
| G85-1089 | 42.0 | 36.0 | 41.0 | 25.0 | 26.0 | 24.0 | 39.0 | 27.0 | 32.0 |
| G85-1227 | 44.0 | 38.0 | 44.0 | 23.0 | 33.0 | 25.0 | 42.0 | 30.0 | 31.0 |
| G85-1278 | 37.0 | 38.0 | 43.0 | 20.0 | 30.0 | 22.0 | 38.0 | 26.0 | 27.0 |
| N87-445 | 48.0 | 45.0 | 48.0 | 35.0 | 37.0 | 37.0 | 42.0 | 40.0 | 38.0 |
| N87-690 | 46.0 | 43.0 | 42.0 | 30.0 | 27.0 | 26.0 | 39.0 | 33.0 | 25.0 |
| N87-805 | 40.0 | 37.0 | 38.0 | 20.0 | 30.0 | 28.0 | 38.0 | 30.0 | 30.0 |
| N87-830 | 40.0 | 37.0 | 38.0 | 16.0 | 30.0 | 24.0 | 36.0 | 27.0 | 20.0 |
| N87-963 | 30.0 | 31.0 | 38.0 | 20.0 | 28.0 | 23.0 | 38.0 | 26.0 | 24.0 |
| N87-1104 | 43.0 | 42.0 | 44.0 | 30.0 | 32.0 | 33.0 | 42.0 | 37.0 | 29.0 |
| R87-42S | 42.0 | 37.0 | 44.0 | 21.0 | 25.0 | 26.0 | 39.0 | 28.0 | 28.0 |
| R87-55S | 38.0 | 35.0 | 37.0 | 21.0 | 27.0 | 22.0 | 37.0 | 22.0 | 21.0 |
| R87-899S | 40.0 | 34.0 | 34.0 | 19.0 | 25.0 | 26.0 | 32.0 | 28.0 | 24.0 |
| SC85-234 | 40.0 | 41.0 | 47.0 | 22.0 | 27.0 | 24.0 | 41.0 | 30.0 | 29.0 |
| SC85-252 | 46.0 | 43.0 | 44.0 | 22.0 | 30.0 | 26.0 | 41.0 | 30.0 | 30.0 |
| SC85-354 | 42.0 | 39.0 | 40.0 | 19.0 | 30.0 | 30.0 | 39.0 | 29.0 | 31.0 |
| SC85-410 | 41.0 | 40.0 | 44.0 | 19.0 | 28.0 | 20.0 | 38.0 | 32.0 | 27.0 |
| SC85-787 | 48.0 | 35.0 | 41.0 | 28.0 | 33.0 | 26.0 | 42.0 | 34.0 | 29.0 |
| SC85-1362 | 40.0 | 37.0 | 38.0 | 6.0 | 28.0 | 20.0 | 40.0 | 27.0 | 24.0 |

TABLE 56 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1989

| STRAIN | CLINTON, NC | ATHENS, GA | TALLAS-SEE, AL | JAY, FL | ROHWER, AR | STONE-VILLE, MS (A) | STONE-VILLE, MS (B) | BEAU-MONT, TX |
|---|---|---|---|---|---|---|---|---|
| BRAXTON | 1.5 | 1.8 | 2.5 | 3.0 | 2.5 | 2.0 | 2.0 | 1.5 |
| SHARKEY | 1.5 | 2.2 | 3.0 | 2.0 | 2.5 | 2.0 | 2.0 | 3.0 |
| AU86-1409 | 1.5 | 1.8 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 |
| AU86-1592 | 1.5 | 2.5 | 1.0 | 3.0 | 2.5 | 2.0 | 2.0 | 1.0 |
| AU86-1628 | 1.5 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 |
| AU86-1686 | 1.5 | 2.8 | 1.0 | 2.0 | 2.3 | 2.0 | 2.0 | 1.0 |
| AU86-1701 | 1.5 | 1.8 | 1.5 | 2.0 | 2.3 | 2.0 | 2.0 | 1.0 |
| D86-8502 | 1.5 | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 |
| D86-8571 | 1.5 | 1.5 | 1.5 | 1.0 | 2.0 | 2.0 | 2.0 | 1.8 |
| D86-9746 | 1.5 | 2.0 | 1.5 | 3.0 | 2.0 | 2.0 | 2.0 | 1.5 |
| D86-9765 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 1.3 |
| D87-4389 | 1.5 | 1.5 | 1.5 | 2.0 | 2.3 | 2.0 | 2.0 | 2.0 |
| D87-4434 | 1.5 | 1.5 | 1.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| F87-1584 | 1.5 | 2.0 | 2.0 | 2.0 | 2.5 | 2.0 | 2.0 | 1.5 |
| G85-159 | 1.5 | 1.8 | 2.0 | 4.0 | 2.3 | 2.0 | 2.5 | 2.5 |
| G85-214 | 1.5 | 1.5 | 1.5 | 3.0 | 2.0 | 2.0 | 2.0 | 1.3 |
| G85-357 | 1.5 | 1.5 | 1.5 | 2.0 | 2.3 | 2.0 | 2.0 | 1.3 |
| G85-373 | 1.5 | 2.2 | 1.0 | 4.0 | 2.0 | 2.0 | 2.0 | 1.0 |
| G85-1089 | 1.5 | 1.5 | 1.5 | 4.0 | 2.0 | 2.0 | 2.0 | 1.3 |
| G85-1227 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 2.5 | 1.3 |
| G85-1278 | 1.5 | 1.5 | 2.0 | 4.0 | 2.5 | 2.0 | 2.0 | 1.3 |
| N87-445 | 1.5 | 1.5 | 1.5 | 2.0 | 2.5 | 2.0 | 2.0 | 1.5 |
| N87-690 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 |
| N87-805 | 1.5 | 2.0 | 2.0 | 4.0 | 2.0 | 2.0 | 2.0 | 2.3 |
| N87-830 | 1.5 | 2.5 | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| N87-963 | 1.5 | 2.2 | 1.5 | 4.0 | 2.5 | 2.0 | 2.0 | 2.0 |
| N87-1104 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 1.5 |
| R87-42S | 1.5 | 2.0 | 3.0 | 3.0 | 2.5 | 2.0 | 2.0 | 2.5 |
| R87-55S | 1.5 | 1.8 | 1.5 | 5.0 | 2.3 | 2.0 | 2.5 | 1.5 |
| R87-899S | 2.0 | 2.0 | 2.0 | 4.0 | 2.5 | 2.0 | 2.0 | 1.5 |
| SC85-234 | 1.5 | 1.5 | 1.0 | 3.0 | 2.0 | 2.0 | 2.0 | 1.5 |
| SC85-252 | 1.5 | 1.5 | 1.5 | 4.0 | 2.3 | 2.0 | 2.5 | 1.3 |
| SC85-354 | 1.5 | 1.5 | 1.5 | 3.0 | 2.0 | 2.0 | 2.5 | 1.5 |
| SC85-410 | 1.5 | 1.5 | 1.0 | 3.0 | 2.5 | 2.0 | 2.5 | 1.8 |
| SC85-787 | 1.5 | 2.0 | 2.0 | 3.0 | 2.5 | 2.0 | 2.0 | 2.3 |
| SC85-1362 | 1.5 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 |

UNIFORM GROUP VIII

1989

| | Variety or strain | Parentage | Generation composited |
|---|---|---|---|
| 1. | Kirby | Centennial X [Forrest X (Cobb X D68-216)] | $F_6$ |
| 2. | Co6738 | Braxton X Co368 | $F_5$ |
| 3. | Crockett | PI 171451 X Hampton 266 | $F_{14}$ |
| 4. | F83-1648 | Bedford X Kirby | $F_5$ |
| 5. | SC83-1810 | Foster X Ransom | $F_5$ |
| 6. | G83-266 | Braxton X Young | $F_6$ |
| 7. | G83-644 | D77-6103 X F77-6903 | $F_6$ |
| 8. | Au 85-1086 | Wright X Co79-501 | $F_6$ |
| 9. | Au85-1797 | F76-8757 X Braxton | $F_5$ |
| 10. | F86-1456 | Kirby(2) X Tracy-M | $F_5$ |
| 11. | G84-234 | Kirby X Wright | $F_6$ |
| 12. | Sc84-679 | D76-9665 X Johnston | $F_5$ |

Background of breeding lines used as parents

D68-216 is a selection from Dyer X Bragg.

Co368 is a selection from Co71-211 X Centennail evaluated in Uniform Group VIII in 1982.

D77-6103 is a selection from Centennial X J74-57.

F77-6903 is a selection from Forrest X Cobb X D68-216.

Co79-501 is a selection from Co71-217 X Centennial

F86-8758 is a SCN race 3 resistant line from Centennial X [Forrest X (Cobb X D68-216)].

D77-966J is a selection from Forrest X Centennial.

# UNIFORM GROUP VIII

## 1989

Uniform Group VIII nurseries were grown at 15 locations. Data from these plantings are reported in Tables 57-63. Table 57 gives a general summary of performance which includes 1,2 and 3-year seed yield data, 1, 2 and 3-year data for percent protein and percent oil, agronomic characteristics, and reaction to M. incognita and M. arenaria, SCN Races 3 and 4, and frogeye leaf spot. Data from individual locations are reported in Tables 58-63.

Ratings for the root knot nematode species M. incognita and M. arenaria were made in the greenhouse at the University of Georgia, Athens. Ratings for reaction to SCN Races 3 and 4 were made in the greenhouse at Jackson, TN. With regard to root-knot nematodes, eight lines were resistant to M. incognita, and six of these were also resistant to M. arenaria. Nine lines were resistant to SCN Race 3 and seven of these were also resistant to Race 4. Three lines, F83-1648, F86-1456 and G84-234, were resistant to both species of root-knot nematode and both Races of SCN. F86-1456 also received a low rating for frogeye leaf spot at both Tallassee, AL and at Gainesville. Kirby received a rating of 4.7 for frogeye leaf spot at Tallassee, AL. Five lines were rated resistant.

Crockett, which has a high level of resistance to feeding by foliar feeding insects is also highly resistant to frogeye leaf spot and stem canker. It averaged 7 days later in maturity than Kirby. It's two-year mean seed yield was 31.9 bu per acre as compared with 39 bushels for Coker6738 and 35 bushels for Kirby.

TABLE 57 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN UNIFORM GROUP VIII, 1989

| | NO. OF LOCATIONS | KIRBY | CO 6738 | CROCKETT | F83-1648 | SC83-1810 |
|---|---|---|---|---|---|---|
| Seed Yield - 1989 | 15 | 32.0 | 36.9 | 31.2 | 36.4 | 37.2 |
| 1988-89 | | 35.0 | 39.0 | 31.9 | 37.0 | 38.3 |
| 1987-89 | | 33.0 | 37.7 | | 35.5 | 37.0 |
| Oil Content - 1989 | | 19.1 | 20.7 | 18.8 | 20.0 | 20.9 |
| 1988-89 | | 20.1 | 21.5 | 19.5 | 20.6 | 21.3 |
| 1987-89 | | 20.0 | 21.3 | | 20.5 | 21.0 |
| Protein Content - 1989 | | 42.5 | 40.0 | 42.1 | 42.9 | 41.5 |
| 1988-89 | | 41.7 | 39.5 | 41.8 | 42.5 | 41.3 |
| 1987-89 | | 41.5 | 39.7 | | 42.3 | 41.3 |
| Seed size | | 11.1 | 11.7 | 11.0 | 11.9 | 12.8 |
| Maturity index | | 10-25 | -1 | +7 | 0 | +3 |
| Height | | 35 | 34 | 34 | 36 | 35 |
| Seed quality | | 1.9 | 1.8 | 1.7 | 2.0 | 1.8 |
| M. incognita | | 1.0 | 1.2 | 3.5 | 1.2 | 4.0 |
| M. arenaria | | 2.5 | 3.1 | 3.0 | 1.2 | 1.4 |
| SCN race 3 | | R | R | S | R | S |
| SCN race 4 | | S | S | S | R | S |
| Flower color | | P | P | P | P | P |
| Pubescence color | | T | T | T | T | T |
| Pod wall color | | Tn | Tn | Br | Tn | Tn |
| Frogeye | | 4.7 | 4.0 | 1.0 | 4.0 | 1.0 |

Table 57 - (continued)

| | G83-266 | G83-1086 | Au85-1797 | Au85- | F86-1456 | G84-234 | Sc84-679 |
|---|---|---|---|---|---|---|---|
| Seed Yield - 1989 | 43.1 | 35.8 | 35.0 | 34.9 | 35.3 | 35.3 | 39.5 |
| 1988-89 | 43.7 | 37.5 | | | | | |
| 1987-89 | | | | | | | |
| Oil Content - 1989 | 20.1 | 20.1 | 20.6 | 20.0 | 20.0 | 19.4 | 20.9 |
| 1988-89 | 20.4 | 20.4 | | | | | |
| 1987-89 | | | | | | | |
| Protein Content - 1989 | 41.4 | 42.1 | 40.8 | 41.2 | 41.8 | 41.6 | 40.1 |
| 1988-89 | 41.6 | 42.0 | | | | | |
| 1988-89 | | | | | | | |
| Seed size | 14.1 | 12.2 | 12.6 | 15.1 | 11.9 | 11.9 | 13.1 |
| Maturity index | 0 | -1 | +2 | 0 | -3 | -3 | 0 |
| Height | 34 | 32 | 35 | 35 | 35 | 32 | 32 |
| Seed quality | 1.7 | 1.9 | 1.9 | 1.8 | 2.0 | 1.9 | 1.8 |
| M.incognita | 1.5 | 1.5 | 1.8 | 1.5 | 1.5 | 1.0 | 2.2 |
| M. arenaria | 2.5 | 3.2 | 3.1 | 1.8 | 1.0 | 1.8 | 3.2 |
| SCN race 3 | S | R | R | R | R | R | R |
| SCN race 4 | S | R | R | R | R | R | R |
| Flower color | P | W | W | W | P | P | P |
| Pubescence color | T | T | T | T | T | T | T |
| Pod wall color | Tn | Tn | Tn | Tn | Tn | Tn | Tn |
| Frogeye | 1.0 | 3.0 | 2.7 | 2.7 | 1.3 | 3.0 | 1.0 |

TABLE 58 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN UNIFORM GROUP VIII, 1989

| LOCATION | KIRBY | CO 6738 | CROCKETT | F83-1648 | SC83-181 | G83-266 | G83-644 |
|---|---|---|---|---|---|---|---|
| CLINTON, NC | 43.1 | 42.7 | 36.8 | 52.9 | 46.6 | 72.1+ | 50.1 |
| FLORENCE, SC (A) | 32.6 | 39.2 | 28.1 | 32.0 | 38.5 | 43.3+ | 33.9 |
| FLORENCE, SC, (B) | 27.2 | 28.1 | 22.0 | 25.9 | 29.6 | 38.0 | 24.5 |
| BLACKVILLE, SC (A) | 18.7 | 32.2+ | 30.6+ | 28.1 + | 26.3+ | 29.6+ | 25.7 |
| BLACKVILLE, SC (B) | 25.5 | 32.1+ | 28.2 | 27.2 | 32.3+ | 38.6+ | 31.6+ |
| ATHENS, GA | 46.6 | 46.6 | 27.3- | 44.8 | 43.2 | 48.0 | 43.3 |
| TALLASSEE, AL | 22.3 | 36.4+ | 29.0 | 39.8+ | 40.2+ | 39.7+ | 39.6+ |
| TIFTON, GA | 37.1 | 36.6 | 34.6 | 38.1 | 38.8 | 40.6 | 33.0 |
| GAINESVILLE, FL | 31.2 | 36.7 | 33.0 | 36.9 | 46.6+ | 51.3+ | 33.8 |
| QUINCY, FL | 35.0 | 44.0+ | 31.4 | 39.7 | 32.9 | 44.0+ | 35.5 |
| JAY,FL | 40.1 | 47.1 | 40.1 | 42.4 | 40.1 | 49.5 | 37.7 |
| FAIRHOPE, AL | 33.3 | 39.9+ | 32.7 | 36.9 | 37.5+ | 34.8 | 39.9+ |
| BATON ROUGE, LA | 41.3 | 29.8- | 37.5 | 36.3 | 38.1 | 32.9 | 41.2 |
| STONEVILLE, MS (A) | 19.9 | 26.0+ | 28.9+ | 34.1+ | 33.6+ | 43.6+ | 34.9+ |
| STONEVILLE, MS (B)* | 5.4 | 16.6 | 6.7 | 7.8 | 17.1 | 23.0 | 12.4 |
| BEAUMONT, TX | 26.3 | 36.5+ | 27.4 | 31.0 | 34.3+ | 39.8+ | 32.1 |
| MEAN | 32.0 | 36.9 | 31.2 | 36.4 | 37.2 | 43.1 | 35.8 |

* Not included in mean.

TABLE 58 - (continued)

| LOCATION | AU85-1086 | AU85-1797 | F86-1456 | G84-234 | SC84-679 | L.S.D. (.05) | C.V. % |
|---|---|---|---|---|---|---|---|
| CLINTON, NC | 45.2 | 41.9 | 49.9 | 44.3 | 46.6 | 10.3 | 12.8 |
| FLORENCE, SC (A) | 31.0 | 26.0 | 35.4 | 33.8 | 39.0 | 6.7 | 11.6 |
| FLORENCE, SC, (B) | 26.7 | 31.1 | 26.4 | 27.3 | 31.6 | | 23.2 |
| BLACKVILLE, SC (A) | 29.8+ | 29.2+ | 28.7+ | 30.3+ | 35.6+ | 7.2 | 14.91 |
| BLACKVILLE, SC (B) | 28.7 | 28.9 | 27.4 | 31.5+ | 34.2+ | 4.1 | 7.9 |
| ATHENS, GA | 44.8 | 44.0 | 47.2 | 49.2 | 46.1 | 5.3 | 7.1 |
| TALLASSEE, AL | 39.5+ | 39.4+ | 32.3+ | 33.7+ | 49.4+ | 9.8 | 15.8 |
| TIFTON, GA | 36.8 | 37.9 | 36.7 | 40.4 | 43.9 | | |
| GAINESVILLE, FL | 37.6 | 35.8 | 36.2 | 32.9 | 36.0 | 8.5 | 13.5 |
| QUINCY, FL | 36.2 | 32.7 | 38.4 | 36.7 | 33.1 | 6.3 | 10.2 |
| JAY, FL | 41.2 | 42.4 | 40.1 | 40.1 | 46.0 | | 11.3 |
| FAIRHOPE, AL | 41.7+ | 32.4 | 35.1 | 32.7 | 37.8+ | 4.1 | 6.7 |
| BATON ROUGE, LA | 21.9- | 34.1 | 36.4 | 35.0 | 32.0- | 8.4 | 12.4 |
| STONEVILLE, MS (A) | 24.5 | 37.6+ | 30.5+ | 27.9+ | 42.2+ | 4.2 | 7.8 |
| STONEVILLE, MS (B)* | 7.4 | 12.4 | 8.5 | 7.9 | 12.8 | 4.3 | 22.0 |
| BEAUMONT, TX | 38.7+ | 30.4 | 29.4 | 34.1+ | 39.2+ | 7.1 | 12.7 |
| MEAN | 35.0 | 34.9 | 35.3 | 35.3 | 39.5 | | |

TABLE 59 - CHEMICAL COMPOSITION AND SEED SIZE FOR THE STRAINS IN UNIFORM GROUP VIII, 1989

| LOCATION | KIRBY | CO 6738 | CROCKETT | F83-1648 | SC83-1810 | G83-266 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| ATHENS, GA | 19.6 | 20.7 | 17.9 | 19.0 | 20.9 | 19.2 |
| TALLASSEE, FL | 17.4 | 19.5 | 17.7 | 19.5 | 20.4 | 19.7 |
| JAY, FL | 19.8 | 22.2 | 20.6 | 20.3 | 22.2 | 21.2 |
| GAINESVILLE, FL | 20.4 | 20.2 | 20.4 | 21.3 | 22.3 | 21.8 |
| STONEVILLE, MS (A) | 18.2 | 20.6 | 17.7 | 19.4 | 19.5 | 19.6 |
| BEAUMONT, TX | 19.3 | 20.7 | 18.7 | 20.3 | 20.2 | 19.2 |
| MEAN | 19.1 | 20.7 | 18.8 | 20.0 | 20.9 | 20.1 |
| | | | PROTEIN PERCENTAGE | | | |
| ATHENS, GA | 41.9 | 40.7 | 41.5 | 43.7 | 41.4 | 40.7 |
| TALLASSEE, FL | 43.4 | 40.3 | 41.7 | 42.2 | 42.7 | 41.6 |
| JAY, FL | 42.3 | 38.0 | 44.0 | 42.8 | 40.4 | 40.7 |
| GAINESVILLE, FL | 43.5 | 43.2 | 44.0 | 45.4 | 42.3 | 41.9 |
| STONEVILLE, MS (A) | 42.4 | 38.0 | 41.5 | 40.5 | 39.9 | 40.5 |
| BEAUMONT, TX | 41.6 | 39.8 | 40.1 | 42.5 | 42.3 | 42.9 |
| MEAN | 42.5 | 40.0 | 42.1 | 42.9 | 41.5 | 41.4 |
| | | | GRAMS PER 100 SEED | | | |
| ATHENS, GA | 12.6 | 13.5 | 11.2 | 12.6 | 14.5 | 14.1 |
| TALLASSEE, FL | 10.1 | 9.8 | 11.4 | 11.9 | 12.6 | 12.7 |
| JAY, FL | 11.0 | 11.0 | 14.0 | 11.0 | 12.0 | 13.0 |
| GAINESVILLE, FL | 12.0 | 12.9 | 11.0 | 13.3 | 14.6 | 16.1 |
| STONEVILLE, MS (A) | 9.0 | 9.7 | 9.1 | 9.9 | 10.6 | 13.6 |
| BEAUMONT, TX | 11.7 | 13.1 | 9.5 | 12.7 | 12.5 | 15.3 |
| MEAN | 11.1 | 11.7 | 11.0 | 11.9 | 12.8 | 14.1 |

TABLE 59 - (continued)

| LOCATION | G83-644 | AU85-1086 | AU85-1797 | F86-1456 | G84-234 | SC84-679 |
|---|---|---|---|---|---|---|
| | | | OIL PERCENTAGE | | | |
| ATHENS, GA | 19.9 | 20.3 | 19.4 | 19.9 | 19.6 | 20.2 |
| TALLASSEE, FL | 18.6 | 19.5 | 18.9 | 18.9 | 18.2 | 20.2 |
| JAY, FL | 20.8 | 21.7 | 21.4 | 20.5 | 20.9 | 21.4 |
| GAINESVILLE, FL | 21.6 | 22.4 | 21.9 | 22.3 | 21.0 | 22.4 |
| STONEVILLE, MS (A) | 19.4 | 19.2 | 19.0 | 19.2 | 19.0 | 19.9 |
| BEAUMONT, TX | 20.1 | 20.3 | 19.4 | 19.4 | 17.8 | 21.0 |
| MEAN | 20.1 | 20.6 | 20.0 | 20.0 | 19.4 | 20.9 |
| | | | PROTEIN PERCENTAGE | | | |
| ATHENS, GA | 41.9 | 41.2 | 41.0 | 41.4 | 41.8 | 41.0 |
| TALLASSEE, FL | 43.4 | 40.8 | 42.0 | 41.5 | 41.7 | 39.3 |
| JAY, FL | 41.3 | 40.1 | 39.9 | 41.6 | 40.7 | 39.8 |
| GAINESVILLE, FL | 43.0 | 41.7 | 42.2 | 43.0 | 43.1 | 41.9 |
| STONEVILLE, MS (A) | 40.8 | 39.9 | 40.0 | 40.5 | 38.4 | 38.4 |
| BEAUMONT, TX | 41.9 | 41.1 | 42.0 | 42.6 | 43.8 | 40.2 |
| MEAN | 42.1 | 40.8 | 41.2 | 41.8 | 41.6 | 40.1 |
| | | | GRAMS PER 100 SEED | | | |
| ATHENS, GA | 13.5 | 15.0 | 16.3 | 13.5 | 14.0 | 13.4 |
| TALLASSEE, FL | 12.2 | 11.2 | 15.2 | 10.9 | 11.4 | 13.2 |
| JAY, FL | 11.0 | 12.0 | 15.0 | 10.0 | 11.0 | 13.0 |
| GAINESVILLE, FL | 13.3 | 13.9 | 15.7 | 13.9 | 12.9 | 14.4 |
| STONEVILLE, MS (A) | 10.7 | 10.3 | 13.5 | 10.1 | 9.8 | 11.6 |
| BEAUMONT, TX | 12.4 | 13.4 | 15.0 | 13.0 | 12.4 | 13.2 |
| MEAN | 12.2 | 12.6 | 15.1 | 11.9 | 11.9 | 13.1 |

TABLE 60 - RELATIVE MATURITY, DAYS EARLIER, (-) OR LATER (+) THAN KIRBY, FOR THE STRAINS IN UNIFORM GROUP VIII, 1989.

| LOCATION | KIRBY | CO 6738 | CROCKETT | F83-1648 | SC83-181 | G83-266 |
|---|---|---|---|---|---|---|
| CLINTON, NC | 11-02 | 0 | -3 | 0 | +1 | 0 |
| FLORENCE, SC (A) | 10-26 | +1 | +8 | +1 | +6 | -3 |
| FLORENCE, SC, (B) | 10-26 | 0 | +5 | +1 | +9 | +1 |
| BLACKVILLE, SC (A) | 10-26 | -1 | +12 | +1 | +4 | +5 |
| BLACKVILLE, SC (B) | 11-07 | -5 | +1 | -3 | -4 | -7 |
| ATHENS, GA | 10-28 | 0 | +3 | -1 | +1 | -3 |
| TIFTON, GA | 10-26 | -2 | +6 | -2 | -1 | -5 |
| TALLASSEE, AL | 10-22 | 0 | +8 | 0 | +1 | 0 |
| GAINESVILLE, FL | 10-18 | -1 | +8 | 0 | +3 | -1 |
| JAY, FL | 10-22 | -4 | +10 | +1 | +6 | +5 |
| FAIRHOPE, AL | 10-27 | -4 | +6 | -2 | 0 | -2 |
| BATON ROUGE, LA | 10-29 | +1 | +1 | +1 | +3 | +1 |
| STONEVILLE, MS (A) | 10-16 | +3 | +12 | +1 | +6 | +5 |
| STONEVILLE, MS (B) | 10-22 | 0 | +11 | 0 | +2 | -1 |
| BEAUMONT, TX | 10-20 | 0 | +7 | -1 | 0 | -2 |
| MEAN | 10-25 | -1 | +6 | 0 | +2 | 0 |

TABLE 60 - (continued)

| LOCATION | G83-644 | AU85-1086 | AU85-1797 | F86-1456 | G84-234 | SC84-679 |
|---|---|---|---|---|---|---|
| CLINTON, NC | -2 | 0 | +2 | -2 | -2 | +2 |
| FLORENCE, SC (A) | -2 | +1 | -3 | -8 | -6 | 0 |
| FLORENCE, SC, (B) | -3 | +6 | +1 | -3 | -2 | +3 |
| BLACKVILLE, SC (A) | +4 | +6 | +3 | +2 | +1 | +2 |
| BLACKVILLE, SC (B) | -3 | -3 | -2 | -6 | -8 | -6 |
| ATHENS, GA | -1 | +1 | 0 | -3 | -6 | -1 |
| TIFTON, GA | -3 | +2 | 0 | -3 | -3 | 0 |
| TALLASSEE, AL | +1 | +2 | +2 | -3 | -2 | +1 |
| GAINESVILLE, FL | -1 | +1 | -3 | -5 | -4 | +3 |
| JAY, FL | -3 | +5 | +2 | -5 | -4 | +3 |
| FAIRHOPE, AL | -2 | +1 | -1 | -5 | -4 | +2 |
| BATON ROUGE, LA | +3 | +1 | +2 | -1 | 0 | 0 |
| STONEVILLE, MS (A) | +4 | +6 | +5 | +3 | -4 | +6 |
| STONEVILLE, MS (B) | -3 | +1 | -3 | 0 | -3 | 0 |
| BEAUMONT, TX | -4 | +1 | -3 | -3 | -3 | -2 |
| MEAN | -1 | +2 | 0 | -3 | -3 | 0 |

TABLE 61 - PLANT HEIGHT FOR THE STRAINS IN UNIFORM GROUP VIII, 1989

| LOCATION | KIRBY | CO 6738 | CROCKETT | F83-1648 | SC83-181 | G83-266 |
|---|---|---|---|---|---|---|
| CLINTON, NC | 44 | 44 | 28 | 44 | 40 | 46 |
| FLORENCE, SC (A) | 41 | 41 | 41 | 44 | 39 | 40 |
| FLORENCE, SC, (B) | 37 | 32 | 32 | 37 | 34 | 36 |
| BLACKVILLE, SC (A) | 39 | 41 | 40 | 43 | 43 | 37 |
| BLACKVILLE, SC (B) | 32 | 32 | 35 | 33 | 37 | 33 |
| ATHENS, GA | 37 | 37 | 38 | 42 | 36 | 39 |
| TIFTON, GA | 36 | 33 | 33 | 35 | 35 | 33 |
| TALLASSEE, AL | 23 | 26 | 26 | 29 | 26 | 23 |
| GAINESVILLE, FL | 32 | 27 | 35 | 30 | 32 | 31 |
| JAY, FL | 35 | 32 | 34 | 34 | 34 | 31 |
| FAIRHOPE, AL | 29 | 30 | 32 | 31 | 29 | 31 |
| BATON ROUGE, LA | 32 | 38 | | 34 | 32 | 25 |
| STONEVILLE, MS (A) | 41 | 41 | 41 | 45 | 44 | 42 |
| STONEVILLE, MS (B) | 28 | 27 | 29 | 27 | 28 | 29 |
| BEAUMONT, TX | 32 | 30 | 34 | 31 | 31 | 29 |
| MEAN | 35 | 34 | 34 | 36 | 35 | 34 |

TABLE 61 - (continued)

| LOCATION | G83-644 | AU85-1086 | AU85-1797 | F86-1456 | G84-234 | SC84-679 |
|---|---|---|---|---|---|---|
| CLINTON, NC | 38 | 44 | 40 | 40 | 38 | 38 |
| FLORENCE, SC (A) | 37 | 37 | 39 | 43 | 39 | 38 |
| FLORENCE, SC, (B) | 31 | 31 | 32 | 33 | 28 | 31 |
| BLACKVILLE, SC (A) | 36 | 42 | 42 | 40 | 36 | 38 |
| BLACKVILLE, SC (B) | 32 | 34 | 33 | 36 | 31 | 33 |
| ATHENS, GA | 36 | 38 | 34 | 37 | 35 | 34 |
| TIFTON, GA | 31 | 35 | 32 | 39 | 30 | 28 |
| TALLASSEE, AL | 24 | 27 | 24 | 25 | 24 | 24 |
| GAINESVILLE, FL | 33 | 32 | 27 | 32 | 29 | 27 |
| JAY, FL | 31 | 31 | 32 | 33 | 28 | 31 |
| FAIRHOPE, AL | 29 | 28 | 25 | 29 | 25 | 24 |
| BATON ROUGE, LA | 24 | 34 | 35 | 33 | 27 | 30 |
| STONEVILLE, MS (A) | 40 | 44 | 41 | 42 | 41 | 40 |
| STONEVILLE, MS (B) | 26 | 27 | 29 | 27 | 29 | 28 |
| BEAUMONT, TX | 28 | 31 | 20 | 31 | 31 | 29 |
| MEAN | 32 | 35 | 33 | 35 | 32 | 32 |

TABLE 62 - LODGING SCORES FOR THE STRAINS IN UNIFORM GROUP VII, 1989

| LOCATION | KIRBY | CO 6738 | CROCKETT | F83-1648 | SC83-181 | G83-266 |
|---|---|---|---|---|---|---|
| CLINTON, NC | 3.0 | 3.0 | 5.0 | 3.0 | 1.0 | 3.0 |
| FLORENCE, SC (A) | 1.7 | 2.2 | 2.7 | 1.8 | 1.7 | 2.2 |
| FLORENCE, SC, (B) | 2.5 | 2.2 | 2.7 | 2.5 | 2.7 | 3.0 |
| BLACKVILLE, SC (A) | 1.3 | 1.0 | 3.0 | 1.3 | 1.7 | 1.0 |
| BLACKVILLE, SC (B) | 1.0 | 1.0 | 2.3 | 1.0 | 1.0 | 1.7 |
| ATHENS, GA | 2.5 | 3.0 | 3.7 | 3.0 | 2.2 | 2.7 |
| TIFTON, GA | 1.5 | 1.3 | 2.5 | 1.5 | 1.8 | 2.3 |
| TALLASSEE, AL | 1.0 | 1.0 | 1.7 | 1.0 | 1.0 | 1.0 |
| GAINESVILLE, FL | 1.0 | 1.0 | 2.0 | 1.0 | 1.5 | 1.0 |
| JAY, FL | 2.0 | 1.0 | 2.0 | 1.0 | 2.0 | 1.0 |
| FAIRHOPE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| BATON ROUGE, LA | 3.0 | 2.0 |  | 3.0 | 2.0 | 2.0 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.3 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.0 | 2.0 | 2.3 | 2.0 | 2.0 | 2.0 |
| BEAUMONT, TX | 1.0 | 1.0 | 1.3 | 1.0 | 1.0 | 1.0 |

Table 62 - (continued)

| LOCATION | G83-644 | AU85-1086 | AU85-1797 | F86-1456 | G84-234 | SC84-679 |
|---|---|---|---|---|---|---|
| CLINTON, NC | 4.0 | 3.0 | 4.0 | 3.0 | 4.0 | 3.0 |
| FLORENCE, SC (A) | 2.0 | 2.0 | 1.4 | 2.2 | 2.0 | 2.3 |
| FLORENCE, SC, (B) | 2.8 | 2.3 | 2.5 | 3.0 | 2.7 | 3.0 |
| BLACKVILLE, SC (A) | 1.0 | 1.4 | 1.3 | 1.3 | 1.0 | 1.3 |
| BLACKVILLE, SC (B) | 1.7 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| ATHENS, GA | 3.2 | 4.0 | 3.3 | 3.0 | 3.3 | 4.2 |
| TIFTON, GA | 1.5 | 1.8 | 1.7 | 1.7 | 1.5 | 1.3 |
| GAINESVILLE, FL | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| TALLASSEE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| JAY, FL | 1.0 | 1.0 | 1.0 | 2.0 | 1.0 | 1.0 |
| FAIRHOPE, AL | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| BATON ROUGE, LA | 2.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.0 |
| STONEVILLE, MS (A) | 3.0 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| BEAUMONT, TX | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |

TABLE 63 - SEED QUALITY SCORES FOR THE STRAINS IN UNIFORM GROUP VIII, 1989

| LOCATION | KIRBY | CO 6738 | CROCKETT | F83-1648 | SC83-1810 | G83-266 |
|---|---|---|---|---|---|---|
| CLINTON, NC | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| ATHENS, GA | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| TIFTON, GA | 2.2 | 1.8 | 2.3 | 2.3 | 2.0 | 2.0 |
| TALLASSEE, FL | 2.0 | 2.0 | 1.5 | 1.5 | 1.5 | 2.0 |
| GAINESVILLE, FL | 1.5 | 1.5 | 1.3 | 1.5 | 1.7 | 2.0 |
| JAY, FL | 2.0 | 3.0 | 2.0 | 4.0 | 3.0 | 1.0 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.7 | 2.0 | 2.0 | 2.7 | 2.0 | 2.0 |
| BEAUMONT, TX | 1.5 | 1.2 | 1.0 | 1.3 | 1.2 | 1.0 |

Table 63 - (continued)

| LOCATION | G83-644 | AU85-1086 | AU85-1797 | F86-1456 | G84-234 | SC84-679 |
|---|---|---|---|---|---|---|
| CLINTON, NC | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| ATHENS, GA | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.7 |
| TIFTON, GA | 2.2 | 2.2 | 2.3 | 2.0 | 2.2 | 2.0 |
| TALLASSEE, AL | 1.5 | 1.5 | 1.5 | 2.0 | 2.5 | 1.5 |
| GAINESVILLE, FL | 1.7 | 1.5 | 2.3 | 1.7 | 2.0 | 1.7 |
| JAY, FL | 3.0 | 3.0 | 2.0 | 3.0 | 2.0 | 2.0 |
| STONEVILLE, MS (A) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| STONEVILLE, MS (B) | 2.7 | 2.7 | 2.0 | 3.0 | 2.7 | 2.3 |
| BEAUMONT, TX | 1.2 | 1.2 | 1.2 | 1.2 | 1.0 | 1.3 |

# PRELIMINARY GROUP VIII

## 1989

Preliminary Group VIII lines, which included Kirby and Braxton along with 28 experimental lines, were grown at six locations. Parentage for each of these lines is reported in Table 64. Table 65 gives a general summary of performance which includes mean seed yield, maturity, height, percent protein, percent oil, reaction to SCN Races 3 and 4 and rating for frogeye leaf spot. Data from individual locations are reported in Tables 66-70.

Braxton was rated only one day earlier than Kirby. It had a mean seed yield of 34.9 bu per acre as compared with 28.6 bu per acre for Kirby. Co6738 had a mean seed yield of 36 bushels. Three lines were rated earlier in maturity than Braxton.

Ratings for SCN Races 3 and 4 were made in the greenhouse at Jackson, TN. Twenty-one lines were rated resistant to SCN Race 3 and two of the lines were also rated resistant to Race 4. Ratings for frogeye leaf spot at Gainesville were made on a 1-10 basis. Kirby was given a score of 9.5. Five lines were rated resistant to frogeye leaf spot and four of these lines had Johnston as a parent.

TABLE 64 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP VIII, 1989

| | VARIETY OR STRAIN | PARENTAGE |
|---|---|---|
| 1. | KIRBY | CENTENNIAL X (FORREST X (COBB X D68-218) |
| 2. | BRAXTON | F59-1505 X (BRAGG(3) X D60-7965) |
| 3. | CO 6738 | BRAXTON X CO 368 |
| 4. | AU86-1618 | CO 79-760 X BRAXTON |
| 5. | AU86-1731 | BRAXTON X JOHNSTON |
| 6. | AU86-1755 | BRAXTON X JOHNSTON |
| 7. | AU86-1874 | BRAXTON X JOHNSTON |
| 8. | AU86-1924 | BRAXTON X JOHNSTON |
| 9. | AU86-2126 | BRAXTON X JOHNSTON |
| 10. | D86-9845 | KIRBY X D82-9973 |
| 11. | F86-3755 | F77-2000 X BRAXTON |
| 12. | F86-4309 | BEDFORD X KIRBY |
| 13. | F87-1009 | KIRBY(2) X TRACY-M |
| 14. | F87-1313 | KIRBY(2) X TRACY-M |
| 15. | F87-1377 | F77-2000 X TRACY-M |
| 16. | F87-1486 | F77-6903 X F77-1790 |
| 17. | F87-1515 | KIRBY X F80-4666 |
| 18. | F87-2306 | N80-5320 X (D81-9788 X F81-5923) |
| 19. | F87-3037 | D81-9788 X F81-5923 |
| 20. | F87-3041 | D81-9788 X F81-5923 |
| 21. | F87-3111 | D81-9788 X (FORREST(3) X D77-12480) |
| 22. | G85-29 | D76-9665 X BRAXTON |
| 23. | G85-77 | D76-9665 X BRAXTON |
| 24. | G85-1133 | D76-9665 X BRAXTON |
| 25. | SC85-123 | CENTENNIAL X YOUNG |
| 26. | SC85-927 | HUTTON X (BRAXTON X D76-9665) |
| 27. | SC85-971 | HUTTON X (BRAXTON X D76-9665) |
| 28. | SC85-1138 | FOSTER X (GOVAN X D76-9665) |
| 29. | SC85-1452 | FOSTER X (GOVAN X D76-9665) |
| 30. | SC85-2034 | KIRBY X (BRAXTON X GOVAN) |

TABLE 65 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP VIII, 1989

| STRAIN | SEED YIELD | MAT. INDEX | HT. | PERCENT OIL | PERCENT PROTEIN | SCN 3 | SCN 4 | FROG EYE |
|---|---|---|---|---|---|---|---|---|
| KIRBY | 28.6 | 10/22 | 33 | 20.3 | 42.1 | R | S | 9.5 |
| BRAXTON | 34.9+ | 1- | 33 | 20.3 | 42.4 | S | S | 8.5 |
| CO 6738 | 36.0+ | 1- | 33 | 22.5+ | 39.3- | R | S | 9.0 |
| AU86-1618 | 35.7+ | 0 | 33 | 21.8+ | 41.0 | S | S | 1.0 |
| AU86-1731 | 37.2+ | 0 | 31 | 21.8+ | 41.9 | R | S | 2.5 |
| AU86-1755 | 35.2+ | 1+ | 30 | 22.3+ | 39.9- | R | S | 3.0 |
| AU86-1874 | 36.9+ | 1+ | 31 | 21.7+ | 39.6- | S | S | 1.5 |
| AU86-1924 | 35.3+ | 1+ | 29 | 21.1+ | 41.9 | S | S | 1.5 |
| AU86-2126 | 38.3+ | 1- | 28 | 22.3+ | 41.3 | R | S | 1.5 |
| D86-9845 | 33.4 | 1- | 33 | 21.0 | 42.3 | R | R | 7.5 |
| F86-3755 | 34.5+ | 8+ | 34 | 20.6 | 42.9 | R | S | 3.0 |
| F86-4309 | 31.4 | 1+ | 37 | 19.1- | 42.9 | R | R | 3.0 |
| F87-1009 | 33.4 | 1+ | 31 | 19.7 | 44.3+ | R | S | 3.5 |
| F87-1313 | 31.5 | 1- | 30 | 20.4 | 43.1 | S | S | 7.0 |
| F87-1377 | 30.1 | 1- | 34 | 19.8 | 41.1 | R | S | 9.0 |
| F87-1486 | 32.3 | 1+ | 32 | 21.9+ | 38.9- | R | S | 1.5 |
| F87-1515 | 31.2 | 2+ | 35 | 19.4- | 42.5 | S | S | 8.0 |
| F87-2306 | 29.3 | 0 | 35 | 21.6+ | 40.9- | R | S | 1.5 |
| F87-3037 | 30.1 | 1- | 33 | 19.7 | 42.1 | R | S | 9.0 |
| F87-3041 | 30.7 | 2- | 33 | 19.5- | 43.3 | R | S | 7.0 |
| F87-3111 | 31.0 | 2- | 38 | 20.4 | 42.3 | R | S | 6.0 |
| G85-29 | 33.2 | 2- | 34 | 21.2+ | 41.9 | R | S | 6.5 |
| G85-77 | 31.6 | 5- | 30 | 20.5 | 42.4 | R | S | 7.0 |
| G85-1133 | 36.2+ | 5- | 32 | 20.5 | 41.0 | R | S | 7.5 |
| SC85-123 | 36.1+ | 0 | 35 | 20.2 | 43.1 | S | S | 1.0 |
| SC85-927 | 32.4 | 1- | 35 | 19.7 | 42.7 | S | S | 8.0 |
| SC85-971 | 35.2+ | 0 | 35 | 20.6 | 42.0 | R | S | 8.0 |
| SC85-1138 | 28.7 | 2- | 36 | 20.3 | 40.3- | R | S | 6.0 |
| SC85-1452 | 29.8 | 3- | 33 | 21.4+ | 39.2- | R | S | 10.0 |
| SC85-2034 | 28.5 | 0 | 30 | 20.9 | 42.4 | S | S | 8.0 |
| LSD (.05) | 5.0 | | | 0.7 | 1.2 | | | |
| C.V. | 13% | | | 2% | 2% | | | |

+ or - designations refer to differences from Kirby

TABLE 66 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1989

| STRAIN | BLACK-VILLE, SC | GAINES-VILLE, FL | QUINCY, FL | JAY, FL | BEAU-MONT, TX | STONE-VILLE, MS (B) |
|---|---|---|---|---|---|---|
| KIRBY | 34.1 | 32.0 | 37.3 | 40.1 | 23.6 | 9.4 |
| BRAXTON | 40.6 | 38.5 | 38.2 | 50.7+ | 23.0 | 22.3+ |
| CO 6738 | 37.5 | 34.2 | 42.6 | 53.0+ | 25.0 | 25.8+ |
| AU86-1618 | 34.6 | 44.2+ | 40.2 | 44.8 | 24.9 | 28.9+ |
| AU86-1731 | 39.1 | 43.3+ | 40.2 | 44.8 | 28.0 | 30.0+ |
| AU86-1755 | 43.8+ | 25.8 | 36.5 | 44.8 | 33.9 | 26.0+ |
| AU86-1874 | 43.1+ | 42.4+ | 36.4 | 46.0 | 24.1 | 30.1+ |
| AU86-1924 | 40.8 | 35.6 | 39.6 | 50.7+ | 18.5 | 25.9+ |
| AU86-2126 | 37.8 | 43.5+ | 36.6 | 54.2+ | 31.8 | 33.4+ |
| D86-9845 | 37.3 | 35.6 | 39.2 | 47.1 | 26.8 | 19.0+ |
| F86-3755 | 38.7 | 35.6 | 43.0 | 46.0 | 30.2 | 17.8+ |
| F86-4309 | 31.0 | 37.8 | 36.0 | 40.1 | 28.4 | 21.1+ |
| F87-1009 | 41.4 | 33.5 | 40.4 | 51.9+ | 21.2 | 15.0 |
| F87-1313 | 35.3 | 40.0 | 37.5 | 42.4 | 9.4 | 23.0+ |
| F87-1377 | 36.8 | 32.6 | 38.3 | 37.7 | 21.7 | 14.4 |
| F87-1486 | 35.1 | 29.8 | 48.2+ | 40.1 | 15.8 | 19.2+ |
| F87-1515 | 32.6 | 36.2 | 34.4 | 47.1 | 22.7 | 20.4+ |
| F87-2306 | 26.6 | 34.9 | 39.3 | 38.9 | 16.5 | 20.7+ |
| F87-3037 | 37.5 | 28.4 | 37.4 | 41.2 | 14.1 | 18.6+ |
| F87-3041 | 37.1 | 35.5 | 36.0 | 38.9 | 18.5 | 18.4+ |
| F87-3111 | 34.3 | 36.8 | 37.6 | 33.0 | 28.0 | 18.6+ |
| G85-29 | 33.3 | 38.5 | 39.8 | 46.0 | 25.2 | 21.5+ |
| G85-77 | 34.7 | 32.0 | 38.8 | 43.6 | 17.6 | 22.1+ |
| G85-1133 | 44.8+ | 41.4 | 37.9 | 47.1 | 26.0 | 23.0+ |
| SC85-123 | 41.0 | 45.6+ | 34.9 | 37.7 | 23.6 | 33.2+ |
| SC85-927 | 36.5 | 43.5+ | 35.2 | 42.4 | 18.7 | 21.7+ |
| SC85-971 | 36.3 | 40.9 | 39.0 | 44.8 | 31.2 | 24.9+ |
| SC85-1138 | 26.6 | 41.0 | 35.4 | 35.4 | 20.0 | 18.8+ |
| SC85-1452 | 35.9 | 36.3 | 39.0 | 37.7 | 15.5 | 14.7 |
| SC85-2034 | 38.8 | 28.5 | 32.0 | 46.0 | 17.1 | 11.7 |
| LSD (.05) | 8.5 | 9.6 | 7.4 | 9.4 | 15.1 | 7.9 |
| C.V. | 11% | 13% | 10% | 10% | 33% | 18% |

TABLE 67 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1989

| STRAIN | GAINES-VILLE, FL | JAY, FL | BEAU-MONT, TX |
|---|---|---|---|
| KIRBY | 21.0 | 21.0 | 18.8 |
| BRAXTON | 20.9 | 20.7 | 19.2 |
| CO 6738 | 23.8 | 22.8 | 20.8 |
| AU86-1618 | 22.5 | 22.2 | 20.6 |
| AU86-1731 | 23.2 | 22.2 | 19.9 |
| AU86-1755 | 23.3 | 22.8 | 20.7 |
| AU86-1874 | 22.5 | 22.2 | 20.5 |
| AU86-1924 | 22.4 | 21.1 | 19.7 |
| AU86-2126 | 23.9 | 21.7 | 21.2 |
| D86-9845 | 22.0 | 21.4 | 19.7 |
| F86-3755 | 21.1 | 21.0 | 19.7 |
| F86-4309 | 20.3 | 19.5 | 17.5 |
| F87-1009 | 20.6 | 20.2 | 18.3 |
| F87-1313 | 21.6 | 20.4 | 19.3 |
| F87-1377 | 20.2 | 20.1 | 19.2 |
| F87-1486 | 23.5 | 22.1 | 20.0 |
| F87-1515 | 20.1 | 19.8 | 18.4 |
| F87-2306 | 22.9 | 21.5 | 20.3 |
| F87-3037 | 20.2 | 19.9 | 19.1 |
| F87-3041 | 20.7 | 20.1 | 17.7 |
| F87-3111 | 21.2 | 20.6 | 19.3 |
| G85-29 | 22.4 | 21.8 | 19.4 |
| G85-77 | 21.4 | 21.0 | 19.1 |
| G85-1133 | 22.0 | 21.0 | 18.6 |
| SC85-123 | 21.5 | 20.4 | 18.6 |
| SC85-927 | 20.0 | 19.4 | 19.6 |
| SC85-971 | 21.7 | 21.3 | 18.8 |
| SC85-1138 | 21.6 | 21.0 | 18.3 |
| SC85-1452 | 22.3 | 22.2 | 19.7 |
| SC85-2034 | 22.1 | 21.2 | 19.3 |

TABLE 68 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1989

| STRAIN | GAINES-VILLE, FL | JAY, FL | BEAU-MONT, TX |
|---|---|---|---|
| KIRBY | 43.4 | 40.2 | 42.6 |
| BRAXTON | 42.9 | 41.7 | 42.7 |
| CO 6738 | 39.9 | 37.8 | 40.2 |
| AU86-1618 | 42.1 | 40.2 | 40.6 |
| AU86-1731 | 42.6 | 40.7 | 42.5 |
| AU86-1755 | 43.0 | 37.3 | 39.3 |
| AU86-1874 | 41.8 | 38.3 | 38.8 |
| AU86-1924 | 42.8 | 41.1 | 41.7 |
| AU86-2126 | 42.0 | 40.7 | 41.3 |
| D86-9845 | 43.7 | 40.4 | 42.8 |
| F86-3755 | 45.4 | 40.9 | 42.4 |
| F86-4309 | 43.8 | 41.6 | 43.4 |
| F87-1009 | 45.4 | 42.9 | 44.5 |
| F87-1313 | 44.0 | 42.4 | 42.8 |
| F87-1377 | 42.1 | 40.7 | 40.4 |
| F87-1486 | 39.8 | 37.9 | 39.0 |
| F87-1515 | 43.4 | 41.7 | 42.4 |
| F87-2306 | 42.6 | 40.0 | 40.2 |
| F87-3037 | 44.3 | 41.0 | 41.0 |
| F87-3041 | 44.1 | 41.8 | 43.9 |
| F87-3111 | 43.3 | 41.4 | 42.3 |
| G85-29 | 43.1 | 41.0 | 41.6 |
| G85-77 | 43.4 | 41.2 | 42.6 |
| G85-1133 | 41.8 | 39.6 | 41.7 |
| SC85-123 | 44.2 | 42.1 | 42.9 |
| SC85-927 | 43.9 | 42.0 | 42.3 |
| SC85-971 | 42.6 | 40.2 | 43.3 |
| SC85-1138 | 41.0 | 39.4 | 40.5 |
| SC85-1452 | 41.6 | 36.9 | 39.2 |
| SC85-2034 | 43.4 | 41.5 | 42.3 |

TABLE 69 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1989

| STRAIN | BLACK-VILLE, SC | GAINES-VILLE, FL | JAY, FL | BEAU-MONT, TX | STONE-VILLE, MS (B) |
|---|---|---|---|---|---|
| KIRBY | 39.0 | 28.0 | 36.0 | 28.0 | 30.0 |
| BRAXTON | 41.0 | 30.0 | 32.0 | 24.0 | 31.0 |
| CO 6738 | 40.0 | 29.0 | 37.0 | 26.0 | 30.0 |
| AU86-1618 | 41.0 | 27.0 | 34.0 | 25.0 | 30.0 |
| AU86-1731 | 36.0 | 26.0 | 34.0 | 28.0 | 28.0 |
| AU86-1755 | 38.0 | 23.0 | 33.0 | 24.0 | 26.0 |
| AU86-1874 | 38.0 | 27.0 | 34.0 | 24.0 | 27.0 |
| AU86-1924 | 37.0 | 23.0 | 30.0 | 22.0 | 27.0 |
| AU86-2126 | 35.0 | 25.0 | 31.0 | 24.0 | 25.0 |
| D86-9845 | 39.0 | 30.0 | 36.0 | 29.0 | 30.0 |
| F86-3755 | 44.0 | 33.0 | 37.0 | 25.0 | 29.0 |
| F86-4309 | 42.0 | 35.0 | 35.0 | 36.0 | 34.0 |
| F87-1009 | 37.0 | 32.0 | 30.0 | 27.0 | 27.0 |
| F87-1313 | 34.0 | 30.0 | 31.0 | 21.0 | 30.0 |
| F87-1377 | 41.0 | 33.0 | 36.0 | 27.0 | 29.0 |
| F87-1486 | 36.0 | 29.0 | 34.0 | 29.0 | 30.0 |
| F87-1515 | 39.0 | 33.0 | 34.0 | 34.0 | 35.0 |
| F87-2306 | 41.0 | 39.0 | 37.0 | 30.0 | 29.0 |
| F87-3037 | 41.0 | 33.0 | 37.0 | 23.0 | 29.0 |
| F87-3041 | 40.0 | 35.0 | 33.0 | 27.0 | 27.0 |
| F87-3111 | 44.0 | 38.0 | 38.0 | 33.0 | 33.0 |
| G85-29 | 37.0 | 36.0 | 32.0 | 29.0 | 34.0 |
| G85-77 | 38.0 | 25.0 | 28.0 | 26.0 | 29.0 |
| G85-1133 | 40.0 | 28.0 | 33.0 | 29.0 | 29.0 |
| SC85-123 | 40.0 | 35.0 | 35.0 | 29.0 | 33.0 |
| SC85-927 | 42.0 | 34.0 | 34.0 | 28.0 | 33.0 |
| SC85-971 | 44.0 | 32.0 | 36.0 | 29.0 | 31.0 |
| SC85-1138 | 43.0 | 35.0 | 35.0 | 28.0 | 33.0 |
| SC85-1452 | 44.0 | 30.0 | 35.0 | 24.0 | 28.0 |
| SC85-2034 | 39.0 | 25.0 | 31.0 | 24.0 | 26.0 |

TABLE 70 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1989

| STRAIN | GAINES-VILLE, FL | JAY, FL | BEAU-MONT, TX | STONE-VILLE, MS (B) |
|---|---|---|---|---|
| KIRBY | 1.7 | 3.0 | 1.0 | 2.5 |
| BRAXTON | 2.0 | 3.0 | 1.3 | 2.0 |
| CO 6738 | 1.5 | 3.0 | 1.3 | 2.0 |
| AU86-1618 | 2.3 | 2.0 | 1.0 | 2.0 |
| AU86-1731 | 1.7 | 2.0 | 1.5 | 2.0 |
| AU86-1755 | 2.0 | 3.0 | 1.0 | 2.0 |
| AU86-1874 | 1.7 | 2.0 | 1.0 | 2.0 |
| AU86-1924 | 2.0 | 2.0 | 1.3 | 2.0 |
| AU86-2126 | 1.7 | 3.0 | 1.3 | 2.0 |
| D86-9845 | 2.0 | 3.0 | 1.5 | 2.0 |
| F86-3755 | 1.5 | 2.0 | 1.5 | 4.0 |
| F86-4309 | 2.0 | 3.0 | 1.0 | 2.0 |
| F87-1009 | 1.7 | 3.0 | 1.0 | 2.5 |
| F87-1313 | 1.3 | 3.0 | 1.0 | 2.0 |
| F87-1377 | 2.0 | 2.0 | 1.0 | 2.5 |
| F87-1486 | 1.7 | 2.0 | 1.5 | 2.0 |
| F87-1515 | 2.0 | 3.0 | 1.0 | 2.0 |
| F87-2306 | 1.7 | 3.0 | 1.0 | 2.0 |
| F87-3037 | 2.3 | 3.0 | 1.3 | 2.5 |
| F87-3041 | 1.5 | 3.0 | 1.3 | 2.5 |
| F87-3111 | 1.5 | 3.0 | 1.0 | 2.0 |
| G85-29 | 2.5 | 2.0 | 1.5 | 2.0 |
| G85-77 | 2.3 | 2.0 | 1.5 | 2.5 |
| G85-1133 | 2.0 | 3.0 | 1.3 | 2.0 |
| SC85-123 | 2.0 | 3.0 | 1.0 | 2.0 |
| SC85-927 | 2.0 | 3.0 | 1.3 | 2.0 |
| SC85-971 | 1.7 | 2.0 | 1.5 | 2.0 |
| SC85-1138 | 1.5 | 2.0 | 1.3 | 2.5 |
| SC85-1452 | 2.3 | 3.0 | 1.0 | 2.5 |
| SC85-2034 | 2.0 | 2.0 | 1.0 | 2.5 |