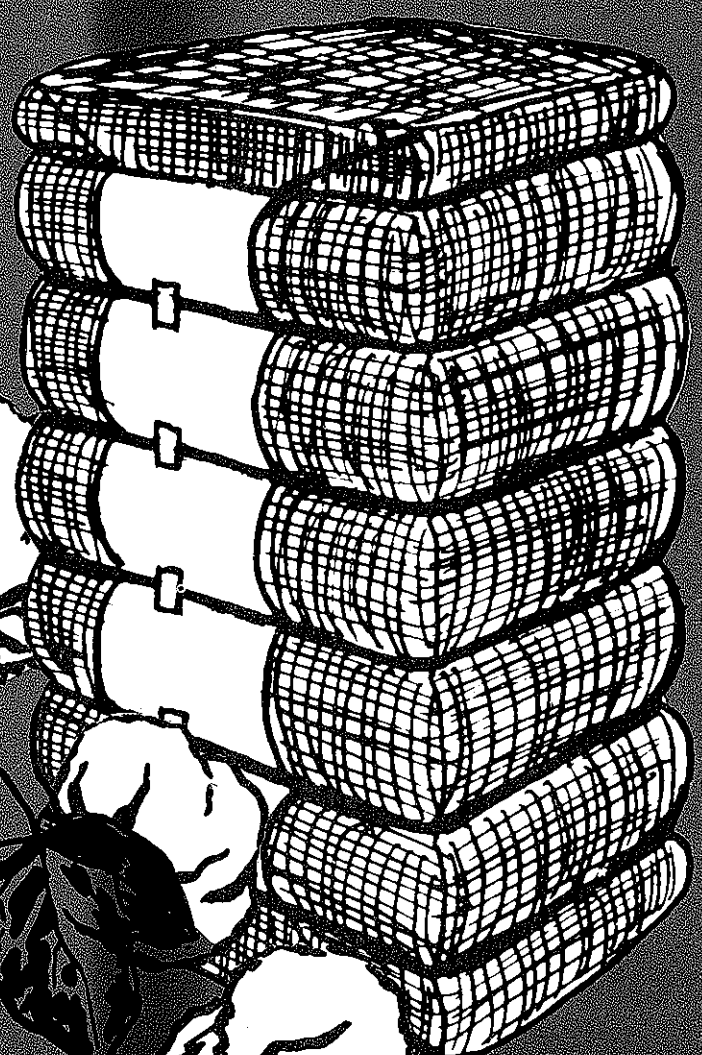


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# Mississippi Cotton Variety Tests in 1977



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# Mississippi Cotton Variety Tests in 1977



The Mississippi cotton variety testing program is a continuing evaluation of cotton varieties available from private companies and state agricultural experiment stations. The program is conducted to determine the relative performance of available varieties. Tests are conducted at various locations throughout the state but do not encompass all environmental conditions that may be present throughout the state. However, individual producers may use the results as a guide in selecting the variety or varieties best adapted to their location and growing conditions.

A major factor affecting yield and quality of cotton is the variety planted; however, yield and earliness of a given variety can be influenced by quality of seed, planting date, cultural practices, fertilization, irrigation, weather, weed control and insect control. A significant variety by soil type or variety by location interaction generally is not obtained, indicating that neither location, year nor soil type have consistent effects

on differential varietal responses when adapted varieties are planted. Analyses of yield data over a period of years have shown a statistically significant variety by year by location interaction, indicating differential yield responses of varieties when grown in different environments. Observations of individual tests have suggested that rainfall distribution, fertilization and insect control are important determinants of variety response.

Cotton varieties were tested in four Delta environments and three other Mississippi environments in 1977. Eighteen varieties were evaluated at Stoneville and Tunica on coarse-textured soils (sandy), 15 of the 18 at Sumner on a coarse-textured soil and at Stoneville on a mixed soil type, and 12 of the 18 at Holly Springs and Verona. A trial also was planted at Mississippi State University but was not harvested because of unfavorable weather.

Two entries, 'Stoneville 825 N' and 'Coker 420-511' were evaluated for the first time. 'Deltapine 26' had

been tested previously as 'Deltapine 6225-53.' Varieties grown at Stoneville and Tunica are included in a Cooperative Regional Variety Testing Program.

Each entry was randomized and replicated six times. Yield data were based on weight of cotton harvested from two-row plots. Determinations of lint percentage, boll size, seed index and fiber properties were made from hand-picked samples. Fiber properties were evaluated in the Cotton Fiber Laboratory of the Agricultural Research Service, USDA, Knoxville, Tennessee and the Cotton Fiber Laboratory, MAFES Delta Branch, Stoneville, Mississippi.

Planting conditions and soil temperatures were favorable at time of planting and stands in all tests were adequate. Rainfall distribution during the growing period was responsible for some differentials in yield. There were only small differences between maturity of varieties at most test locations.

## Results

The 1977 test on Bosket very fine sandy loam at Stoneville was planted April 25. Excellent growing conditions at planting time resulted in good stands and rapid growth. Moisture became a limiting factor in June and the test was irrigated on July 8. The test was harvested on September 21 and lint yields ranged from 577 to 1153 pounds per acre (Table 1).

The test at Stoneville on a mixed soil type was planted April 12, 1977 and lint yields ranged from 1004 to 1211 pounds per acre (Table 2). The test received no supplemental irrigation but yields were higher than those obtained on the irrigated coarse-textured soil at Stoneville--verticillium wilt was not present as it was on the coarse-textured soil.

The highest yields in the 1977

tests in the Delta were obtained from the test planted April 27 on a Dubbs sandy loam soil at Sumner. Lint yields (land acre basis) ranged from 1003 to 1298 pounds per acre (Table 3).

The 1977 test on a Dundee sandy loam soil at Tunica was planted April 28 and harvested on October 9. Fiber quality at this location was lower and yield variability was greater than at other Delta locations. Lint yields ranged from 440 to 923 pounds per acre (Table 4).

Average lint yields of the 15 varieties grown in the four Delta environments in 1977 ranged from 921 to 1088 pounds per acre (Table 5). Yields were higher and fiber quality was better than in 1976.

The 1977 trial on a Grenada silt loam soil at Holly Springs was planted May 2 and lint yields

ranged from 560 to 751 pounds per acre (Table 6).

Two tests were planted at Verona in 1977. The test on Tuscumbia silty clay soil was planted May 20 and lint yields ranged from 553 to 716 pounds per acre (Table 7). The test on a Catalpa silty clay soil was planted April 20 and lint yields ranged from 423 to 590 pounds per acre (Table 8).

The test at Holly Springs was harvested twice and maturity at first harvest (September 12) ranged from 63 to 75% (Table 6). The test at Verona on Tuscumbia silty clay also was harvested twice and maturity at first harvest (October 18) ranged from 45 to 67% (Table 7). These were the only test environments where large maturity differences were obtained in 1977.

### Long-Time Averages---Delta

Average lint yields of the ten varieties grown in ten Delta environments over the 3-year period (1975-77) ranged from 741 pounds to 858 pounds per acre (Table 9).

Average lint yields of the six cotton varieties grown in 15 Delta environments over the 4-year period (1974-77) ranged from 793 pounds to 890 pounds per acre (Table 10).

The small differences in yield of commercially-available varieties indicate that factors other than yield need to be considered in variety selection.

**Table 1. Results of the 1977 Cotton Variety Test on Bosket very fine sandy loam soil at Stoneville, Mississippi.**

|                 | LINT PER ACRE |                 | Seed<br>index | Boll<br>size<br>grams | FIBER PROPERTIES   |                   |                 |                 |                 |
|-----------------|---------------|-----------------|---------------|-----------------------|--------------------|-------------------|-----------------|-----------------|-----------------|
|                 | Total         | Lint<br>percent |               |                       | Length<br>2.5% 50% | Strength<br>g/tex | Elonga-<br>tion | Micro-<br>naire |                 |
|                 |               |                 |               |                       |                    |                   |                 |                 | Lint<br>percent |
| DES 56          | 1153          | 36.2            | 11.4          | 4.95                  | 1.18               | .56               | 19.31           | 7.53            | 4.25            |
| DES 24          | 1109          | 36.9            | 12.2          | 5.58                  | 1.20               | .57               | 20.19           | 8.06            | 4.41            |
| Stoneville 731N | 1063          | 37.3            | 12.5          | 5.20                  | 1.14               | .53               | 19.42           | 6.79            | 4.67            |
| Stoneville 213  | 1058          | 36.0            | 11.4          | 5.42                  | 1.18               | .57               | 18.38           | 8.82            | 4.20            |
| Stoneville 825N | 1053          | 36.4            | 10.9          | 5.10                  | 1.16               | .55               | 17.49           | 6.64            | 4.22            |
| Deltapine 55    | 1052          | 37.9            | 10.3          | 5.18                  | 1.15               | .54               | 18.26           | 7.35            | 4.32            |
| Deltapine 61    | 1033          | 36.5            | 11.0          | 5.66                  | 1.17               | .57               | 20.72           | 9.35            | 4.60            |
| Deltapine 26    | 1024          | 39.2            | 10.8          | 5.09                  | 1.17               | .56               | 19.82           | 7.43            | 4.55            |
| Coker 310       | 1013          | 36.2            | 11.9          | 6.04                  | 1.22               | .59               | 19.90           | 7.01            | 4.22            |
| Deltapine 16    | 986           | 35.6            | 11.6          | 5.88                  | 1.20               | .56               | 19.31           | 9.03            | 4.22            |
| Stoneville 256  | 979           | 36.8            | 11.8          | 5.19                  | 1.16               | .53               | 17.93           | 6.93            | 4.30            |
| Coker 304       | 976           | 37.0            | 12.9          | 5.59                  | 1.22               | .59               | 19.56           | 6.80            | 4.52            |
| Delcot 277      | 955           | 35.8            | 13.2          | 6.33                  | 1.19               | .57               | 20.60           | 9.20            | 4.07            |
| Vail 7          | 904           | 35.7            | 11.1          | 5.14                  | 1.17               | .54               | 17.77           | 6.69            | 4.25            |
| Coker 420-511   | 902           | 33.9            | 13.0          | 6.03                  | 1.22               | .59               | 21.49           | 7.24            | 4.17            |
| Brycot 4        | 893           | 38.5            | 11.2          | 5.27                  | 1.16               | .55               | 17.55           | 6.79            | 4.27            |
| Acala 1517-70   | 679           | 33.5            | 13.0          | 5.65                  | 1.19               | .56               | 23.56           | 6.24            | 4.05            |
| Paymaster 909   | 577           | 35.3            | 14.1          | 6.62                  | 1.03               | .53               | 19.56           | 7.21            | 4.70            |
| C.V.            | 5.2           |                 |               |                       |                    |                   |                 |                 |                 |
| LSD .05         | 58            |                 |               |                       |                    |                   |                 |                 |                 |

Planted: April 25, 1977 Harvested: September 21, 1977

**Table 2. Results of the 1977 Cotton Variety Test on a mixed soil type at Stoneville, Mississippi.**

|                 | LINT PER ACRE |                 | Seed<br>index | Boll<br>size<br>grams | FIBER PROPERTIES   |                   |                 |                 |                 |
|-----------------|---------------|-----------------|---------------|-----------------------|--------------------|-------------------|-----------------|-----------------|-----------------|
|                 | Total         | Lint<br>percent |               |                       | Length<br>2.5% 50% | Strength<br>g/tex | Elonga-<br>tion | Micro-<br>naire |                 |
|                 |               |                 |               |                       |                    |                   |                 |                 | Lint<br>percent |
| Deltapine 26    | 1211          | 39.8            | 10.2          | 4.65                  | 1.11               | .53               | 19.53           | 6.71            | 4.67            |
| DES 56          | 1211          | 36.3            | 10.8          | 4.48                  | 1.15               | .55               | 19.60           | 7.39            | 4.29            |
| Stoneville 825N | 1184          | 36.3            | 11.9          | 4.55                  | 1.13               | .52               | 18.69           | 6.27            | 4.37            |
| DES 24          | 1167          | 35.9            | 11.2          | 5.19                  | 1.17               | .55               | 21.22           | 7.77            | 4.52            |
| Stoneville 213  | 1146          | 36.3            | 11.2          | 5.02                  | 1.14               | .53               | 18.23           | 7.21            | 4.68            |
| Stoneville 731N | 1139          | 36.7            | 11.1          | 4.57                  | 1.14               | .53               | 18.28           | 5.98            | 4.48            |
| Coker 310       | 1138          | 36.0            | 11.3          | 5.22                  | 1.20               | .56               | 19.53           | 6.64            | 4.24            |
| Deltapine 55    | 1134          | 38.0            | 10.0          | 4.53                  | 1.15               | .54               | 19.26           | 7.41            | 4.03            |
| Stoneville 256  | 1111          | 36.0            | 11.3          | 5.06                  | 1.16               | .54               | 18.65           | 5.91            | 4.44            |
| Deltapine 61    | 1100          | 37.1            | 10.5          | 5.10                  | 1.15               | .54               | 19.62           | 8.75            | 4.70            |
| Coker 304       | 1090          | 36.5            | 11.3          | 4.86                  | 1.18               | .56               | 20.10           | 6.60            | 4.32            |
| Deltapine 16    | 1079          | 35.2            | 11.4          | 5.55                  | 1.17               | .53               | 18.76           | 8.29            | 4.37            |
| Delcot 277      | 1078          | 34.8            | 13.4          | 5.69                  | 1.20               | .57               | 21.49           | 9.07            | 3.85            |
| Vail 7          | 1039          | 35.0            | 11.1          | 4.83                  | 1.16               | .53               | 18.54           | 6.15            | 4.47            |
| Coker 420-511   | 1004          | 33.0            | 13.0          | 5.26                  | 1.20               | .56               | 21.03           | 6.91            | 4.13            |
| C.V.            | 9.3           |                 |               |                       |                    |                   |                 |                 |                 |
| LSD .05         | 121           |                 |               |                       |                    |                   |                 |                 |                 |

Planted: April 12, 1977 Harvested: October 6, 1977

**Table 3. Results of the 1977 Cotton Variety Test on a Dubbs sandy loam at Sumner, Mississippi.**

|                 | LINT PER ACRE |            |            | Lint percent | Seed index | Boll size grams | FIBER PROPERTIES |                |              |              |      |
|-----------------|---------------|------------|------------|--------------|------------|-----------------|------------------|----------------|--------------|--------------|------|
|                 | Total         | Percent    |            |              |            |                 | Length 2.5%      | Strength g/tex | Elonga- tion | Micro- naire |      |
|                 |               | First pick | first pick |              |            |                 |                  |                |              |              | 50%  |
| Stoneville 825N | 1298          | 1156       | 89         | 38.2         | 12.2       | 5.25            | 1.17             | .56            | 19.71        | 6.47         | 4.97 |
| Coker 310       | 1276          | 1122       | 88         | 38.2         | 12.0       | 5.92            | 1.24             | .59            | 20.36        | 6.52         | 4.50 |
| Deltapine 26    | 1252          | 1113       | 89         | 40.9         | 10.6       | 5.28            | 1.15             | .56            | 19.98        | 7.25         | 4.96 |
| DES 24          | 1241          | 1103       | 89         | 37.5         | 12.4       | 5.55            | 1.20             | .58            | 20.13        | 7.51         | 4.60 |
| DES 56          | 1230          | 1081       | 88         | 37.2         | 12.0       | 5.05            | 1.20             | .59            | 18.91        | 7.22         | 4.52 |
| Deltapine 61    | 1223          | 1091       | 89         | 39.2         | 10.8       | 5.65            | 1.18             | .59            | 18.96        | 8.66         | 4.87 |
| Stoneville 213  | 1210          | 1056       | 87         | 37.5         | 11.8       | 5.40            | 1.18             | .58            | 19.18        | 7.66         | 4.81 |
| Coker 304       | 1190          | 1071       | 90         | 38.8         | 11.3       | 5.10            | 1.22             | .60            | 20.32        | 6.89         | 4.42 |
| Vail 7          | 1187          | 992        | 84         | 37.8         | 11.9       | 5.30            | 1.17             | .56            | 19.11        | 6.45         | 4.91 |
| Deltapine 55    | 1172          | 1043       | 89         | 39.9         | 10.5       | 5.22            | 1.19             | .56            | 18.70        | 7.71         | 4.35 |
| Deltapine 16    | 1150          | 1023       | 89         | 37.1         | 11.7       | 5.85            | 1.19             | .57            | 19.20        | 9.41         | 4.60 |
| Stoneville 731N | 1147          | 1002       | 87         | 37.6         | 11.7       | 5.18            | 1.17             | .57            | 19.70        | 6.70         | 4.76 |
| Stoneville 256  | 1147          | 974        | 85         | 38.2         | 11.5       | 5.32            | 1.18             | .56            | 19.87        | 6.66         | 4.70 |
| Coker 420-511   | 1129          | 984        | 85         | 35.5         | 13.1       | 6.06            | 1.25             | .61            | 20.27        | 6.86         | 4.61 |
| Delcot 277      | 1003          | 855        | 85         | 35.8         | 14.0       | 5.70            | 1.27             | .63            | 21.18        | 9.18         | 4.03 |
| C.V.            | 6.5           |            |            |              |            |                 |                  |                |              |              |      |
| LSD .05         | 89            |            |            |              |            |                 |                  |                |              |              |      |

Planted: April 27, 1977 Harvested: September 22 and October 12, 1977

**Table 4. Results of the 1977 Cotton Variety Test on a Dundee sandy loam soil at Tunica, Mississippi.**

|                 | LINT PER ACRE |             |                | Lint percent | Seed index | Boll size grams | FIBER PROPERTIES |              |       |      |      |
|-----------------|---------------|-------------|----------------|--------------|------------|-----------------|------------------|--------------|-------|------|------|
|                 | Total         | Length 2.5% | Strength g/tex |              |            |                 | Elonga- tion     | Micro- naire |       |      |      |
|                 |               |             |                |              |            |                 |                  |              | 50%   |      |      |
| Stoneville 256  | 923           |             |                | 39.0         | 10.8       | 5.04            | 1.10             | .51          | 16.93 | 5.94 | 5.01 |
| Deltapine 55    | 826           |             |                | 40.9         | 9.5        | 4.69            | 1.09             | .52          | 18.19 | 7.09 | 4.82 |
| Stoneville 731N | 822           |             |                | 39.3         | 10.5       | 4.67            | 1.09             | .51          | 16.83 | 6.04 | 5.05 |
| Coker 310       | 820           |             |                | 37.6         | 11.4       | 5.49            | 1.17             | .56          | 18.09 | 6.83 | 4.57 |
| Stoneville 825N | 819           |             |                | 39.0         | 11.0       | 4.91            | 1.09             | .51          | 16.60 | 6.09 | 5.07 |
| Deltapine 26    | 780           |             |                | 40.6         | 10.0       | 4.61            | 1.07             | .52          | 19.00 | 6.84 | 5.35 |
| Deltapine 61    | 753           |             |                | 38.9         | 10.3       | 4.92            | 1.08             | .52          | 19.64 | 8.69 | 5.01 |
| Coker 420-511   | 727           |             |                | 35.4         | 11.6       | 5.05            | 1.14             | .53          | 19.04 | 7.28 | 4.60 |
| DES 24          | 721           |             |                | 37.6         | 11.2       | 4.86            | 1.14             | .54          | 20.28 | 7.68 | 4.95 |
| Brycot 4        | 720           |             |                | 38.7         | 11.2       | 4.63            | 1.10             | .50          | 17.80 | 5.61 | 4.98 |
| Vail 7          | 716           |             |                | 39.8         | 10.2       | 4.83            | 1.10             | .52          | 17.29 | 5.66 | 5.10 |
| Deltapine 16    | 715           |             |                | 37.7         | 10.7       | 5.02            | 1.12             | .53          | 18.37 | 9.17 | 4.77 |
| Coker 304       | 688           |             |                | 37.6         | 11.2       | 5.28            | 1.16             | .55          | 18.78 | 5.99 | 4.77 |
| DES 56          | 654           |             |                | 38.1         | 10.4       | 4.57            | 1.10             | .52          | 18.37 | 6.72 | 4.72 |
| Stoneville 213  | 652           |             |                | 37.7         | 10.5       | 4.89            | 1.09             | .52          | 17.43 | 6.97 | 4.92 |
| Delcot 277      | 648           |             |                | 36.2         | 12.5       | 5.48            | 1.14             | .55          | 21.43 | 9.25 | 4.55 |
| Acala 1517-70   | 512           |             |                | 35.2         | 12.8       | 5.30            | 1.15             | .57          | 23.89 | 6.03 | 4.30 |
| Paymaster 909   | 440           |             |                | 38.1         | 13.6       | 6.33            | 0.97             | .51          | 20.67 | 7.34 | 5.10 |
| C.V.            | 13.2          |             |                |              |            |                 |                  |              |       |      |      |
| LSD .05         | 120           |             |                |              |            |                 |                  |              |       |      |      |

Planted: April 28, 1977 Harvested: October 9, 1977

**Table 5. Average performance of 15 cotton varieties grown in four Delta environments in 1977<sup>1</sup>.**

|                 | LINT PER ACRE |         | Lint<br>percent | Seed<br>index | Boll<br>size<br>grams | FIBER PROPERTIES |     |                   |                 |                 |
|-----------------|---------------|---------|-----------------|---------------|-----------------------|------------------|-----|-------------------|-----------------|-----------------|
|                 | Total         | Percent |                 |               |                       | Length           |     | Strength<br>g/tex | Elonga-<br>tion | Micro-<br>naire |
|                 |               |         |                 |               |                       | 2.5%             | 50% |                   |                 |                 |
| Stoneville 825N | 1088          |         | 37.5            | 11.5          | 4.95                  | 1.14             | .53 | 18.12             | 6.37            | 4.66            |
| Deltapine 26    | 1067          |         | 39.9            | 10.4          | 4.91                  | 1.12             | .54 | 19.58             | 7.06            | 4.88            |
| Coker 310       | 1062          |         | 37.0            | 11.6          | 5.67                  | 1.21             | .57 | 19.47             | 6.75            | 4.38            |
| DES 56          | 1062          |         | 36.9            | 11.1          | 4.76                  | 1.16             | .55 | 19.05             | 7.21            | 4.44            |
| DES 24          | 1059          |         | 37.0            | 11.7          | 5.29                  | 1.18             | .56 | 20.45             | 7.75            | 4.62            |
| Deltapine 55    | 1046          |         | 39.2            | 10.0          | 4.90                  | 1.14             | .54 | 18.60             | 7.39            | 4.38            |
| Stoneville 731N | 1043          |         | 37.7            | 11.4          | 4.90                  | 1.13             | .53 | 18.56             | 6.38            | 4.74            |
| Stoneville 256  | 1040          |         | 37.5            | 11.3          | 5.15                  | 1.15             | .53 | 18.34             | 6.36            | 4.61            |
| Deltapine 61    | 1027          |         | 37.9            | 10.6          | 5.33                  | 1.14             | .55 | 19.73             | 8.86            | 4.79            |
| Stoneville 213  | 1016          |         | 36.9            | 11.2          | 5.18                  | 1.15             | .55 | 18.30             | 7.66            | 4.65            |
| Coker 304       | 986           |         | 37.5            | 11.7          | 5.21                  | 1.19             | .57 | 19.69             | 6.57            | 4.51            |
| Deltapine 16    | 982           |         | 36.4            | 11.3          | 5.57                  | 1.17             | .55 | 18.91             | 8.97            | 4.49            |
| Vail 7          | 961           |         | 37.1            | 11.1          | 5.00                  | 1.15             | .54 | 18.18             | 6.24            | 4.68            |
| Coker 420-511   | 940           |         | 34.4            | 12.7          | 5.60                  | 1.20             | .57 | 20.46             | 7.07            | 4.38            |
| Delcot 277      | 921           |         | 35.6            | 13.3          | 5.80                  | 1.20             | .58 | 21.17             | 9.17            | 4.12            |

<sup>1</sup>Four environments — Stoneville 2, Sumner 1, Tunica 1.

**Table 6. Results of the 1977 Cotton Variety Test on a Grenada silt loam soil at Holly Springs, Mississippi.**

|                 | LINT PER ACRE |               |               | Lint<br>percent | Seed<br>index | Boll<br>size<br>grams | FIBER PROPERTIES |     |                   |                 |                 |
|-----------------|---------------|---------------|---------------|-----------------|---------------|-----------------------|------------------|-----|-------------------|-----------------|-----------------|
|                 | Total         | Percent       |               |                 |               |                       | Length           |     | Strength<br>g/tex | Elonga-<br>tion | Micro-<br>naire |
|                 |               | First<br>pick | first<br>pick |                 |               |                       | 2.5%             | 50% |                   |                 |                 |
| Stoneville 731N | 751           | 502           | 67            | 40.4            | 11.3          | 4.94                  | 1.11             | .53 | 19.48             | 6.75            | 4.58            |
| DES 56          | 732           | 552           | 75            | 40.1            | 10.7          | 4.43                  | 1.13             | .53 | 19.87             | 7.59            | 4.00            |
| DES 24          | 680           | 471           | 69            | 39.7            | 11.6          | 5.12                  | 1.14             | .54 | 19.94             | 8.27            | 4.19            |
| Stoneville 213  | 668           | 461           | 69            | 39.5            | 11.0          | 5.17                  | 1.12             | .55 | 19.01             | 7.66            | 4.58            |
| Deltapine 55    | 667           | 449           | 67            | 43.0            | 9.8           | 5.07                  | 1.09             | .52 | 19.10             | 7.51            | 4.27            |
| Coker 304       | 664           | 485           | 73            | 40.5            | 11.5          | 5.43                  | 1.16             | .55 | 19.96             | 6.88            | 4.32            |
| Stoneville 256  | 652           | 409           | 63            | 40.9            | 10.8          | 4.67                  | 1.12             | .53 | 18.74             | 6.66            | 4.57            |
| Deltapine 16    | 645           | 429           | 66            | 40.4            | 10.9          | 5.58                  | 1.13             | .54 | 19.38             | 9.12            | 4.24            |
| Coker 310       | 640           | 476           | 74            | 38.5            | 11.4          | 5.48                  | 1.17             | .54 | 20.76             | 6.92            | 3.96            |
| Deltapine 61    | 626           | 413           | 66            | 40.5            | 10.8          | 5.37                  | 1.12             | .54 | 19.31             | 8.71            | 4.65            |
| Delcot 277      | 578           | 391           | 68            | 38.7            | 12.2          | 5.40                  | 1.16             | .55 | 20.35             | 9.00            | 3.95            |
| Coker 420-511   | 560           | 370           | 66            | 39.2            | 11.8          | 5.59                  | 1.14             | .56 | 21.79             | 7.64            | 4.36            |
| C.V.            | 10.7          |               |               |                 |               |                       |                  |     |                   |                 |                 |
| LSD .05         | 81            |               |               |                 |               |                       |                  |     |                   |                 |                 |

Planted: May 2, 1977

Harvested: September 12 and October 13, 1977

**Table 7. Results of the 1977 Cotton Variety Test on a Tuscumbia silty clay soil at Verona, Mississippi.**

|                 | LINT PER ACRE |            |                    | Lint percent | Boll size grams |
|-----------------|---------------|------------|--------------------|--------------|-----------------|
|                 | Total         | First pick | Percent first pick |              |                 |
| Coker 310       | 716           | 480        | 67                 | 39.3         | 5.58            |
| DES 56          | 678           | 398        | 59                 | 38.9         | 4.85            |
| Deltapine 61    | 673           | 302        | 45                 | 40.1         | 5.14            |
| Delcot 277      | 670           | 439        | 65                 | 37.5         | 5.86            |
| Stoneville 731N | 658           | 359        | 54                 | 40.0         | 4.95            |
| Coker 420-511   | 642           | 360        | 56                 | 37.4         | 5.72            |
| Deltapine 16    | 632           | 316        | 50                 | 38.7         | 5.75            |
| Stoneville 213  | 630           | 309        | 49                 | 39.2         | 5.49            |
| Stoneville 256  | 618           | 311        | 50                 | 40.3         | 5.03            |
| Deltapine 55    | 587           | 321        | 55                 | 40.8         | 4.66            |
| DES 24          | 580           | 338        | 58                 | 39.5         | 5.28            |
| Coker 304       | 553           | 297        | 54                 | 40.0         | 5.15            |
| C.V.            | 7.1           |            |                    |              |                 |
| LSD .05         | 77            |            |                    |              |                 |

Planted: May 20, 1977

Harvested: October 18 and November 15, 1977

*“The test at Verona on Tuscumbia silty clay also was harvested twice...”*

**Table 8. Results of the 1977 Cotton Variety Test on a Catalpa silty clay soil at Verona, Mississippi.**

|                 | LINT PER ACRE |              | Boll size grams | FIBER PROPERTIES |     |                |            |             |
|-----------------|---------------|--------------|-----------------|------------------|-----|----------------|------------|-------------|
|                 | Total         | Lint percent |                 | Length           |     | Strength g/tex | Elongation | Micro-naire |
|                 |               |              | 2.5%            | 50%              |     |                |            |             |
| Coker 420-511   | 590           | 37.4         | 5.72            | 1.15             | .54 | 19.23          | 6.8        | 4.58        |
| Deltapine 61    | 589           | 40.1         | 5.14            | 1.12             | .54 | 19.00          | 8.4        | 4.92        |
| Stoneville 731N | 586           | 40.0         | 4.95            | 1.11             | .51 | 19.15          | 5.4        | 4.95        |
| DES 24          | 580           | 39.5         | 5.28            | 1.12             | .52 | 18.31          | 7.4        | 4.77        |
| Coker 310       | 565           | 39.3         | 5.58            | 1.13             | .53 | 17.63          | 6.5        | 4.53        |
| Deltapine 16    | 556           | 38.7         | 5.75            | 1.11             | .50 | 17.78          | 8.2        | 4.49        |
| DES 56          | 553           | 38.9         | 4.85            | 1.12             | .51 | 18.09          | 6.2        | 4.50        |
| Stoneville 213  | 535           | 39.2         | 5.49            | 1.11             | .52 | 18.32          | 7.0        | 4.93        |
| Deltapine 55    | 519           | 40.8         | 4.66            | 1.12             | .51 | 19.07          | 7.1        | 4.19        |
| Stoneville 256  | 507           | 40.3         | 5.03            | 1.11             | .52 | 18.77          | 5.9        | 4.97        |
| Coker 304       | 482           | 40.0         | 5.15            | 1.13             | .53 | 18.16          | 6.0        | 4.71        |
| Delcot 277      | 423           | 37.5         | 5.86            | 1.13             | .53 | 19.68          | 8.9        | 4.05        |
| C.V.            | 10.8          |              |                 |                  |     |                |            |             |
| LSD .05         | 67            |              |                 |                  |     |                |            |             |

Planted: April 20, 1977

Harvested: October 7, 1977

**Table 9. Performance of ten cotton varieties grown in ten Delta environments 1975-77.<sup>1</sup>**

|                 | <u>LINT PER ACRE</u> |         | Lint<br>percent | Seed<br>index | Boll<br>size<br>grams | <u>FIBER PROPERTIES</u> |     |                   |                 |                 |
|-----------------|----------------------|---------|-----------------|---------------|-----------------------|-------------------------|-----|-------------------|-----------------|-----------------|
|                 | Total                | Percent |                 |               |                       | Length                  |     | Strength<br>g/tex | Elonga-<br>tion | Micro-<br>naire |
|                 |                      |         |                 |               |                       | 2.5%                    | 50% |                   |                 |                 |
| DES 24          | 858                  |         | 38.2            | 11.3          | 5.41                  | 1.16                    | .55 | 20.33             | 7.94            | 4.53            |
| DES 56          | 840                  |         | 37.8            | 10.6          | 4.76                  | 1.13                    | .55 | 19.35             | 7.28            | 4.41            |
| Stoneville 731N | 832                  |         | 39.1            | 10.8          | 4.89                  | 1.12                    | .53 | 18.19             | 6.14            | 4.68            |
| Deltapine 55    | 827                  |         | 40.1            | 9.7           | 4.98                  | 1.13                    | .53 | 18.69             | 7.29            | 4.30            |
| Stoneville 256  | 788                  |         | 38.2            | 10.9          | 5.10                  | 1.13                    | .53 | 18.30             | 6.32            | 4.56            |
| Stoneville 213  | 778                  |         | 38.0            | 10.7          | 5.11                  | 1.12                    | .54 | 18.71             | 7.61            | 4.68            |
| Coker 310       | 776                  |         | 38.1            | 11.2          | 5.44                  | 1.19                    | .57 | 20.01             | 6.93            | 4.31            |
| Deltapine 61    | 775                  |         | 38.5            | 10.4          | 5.32                  | 1.14                    | .55 | 19.77             | 8.72            | 4.67            |
| Deltapine 16    | 770                  |         | 37.6            | 10.9          | 5.58                  | 1.15                    | .55 | 19.29             | 8.87            | 4.44            |
| Coker 304       | 741                  |         | 38.6            | 11.0          | 5.13                  | 1.19                    | .56 | 20.00             | 6.63            | 4.40            |

<sup>1</sup>Ten environments — Stoneville 5, Tunica 3, Sumner 2.

**Table 10. Performance of six cotton varieties grown in 15 Delta environments, 1974-77 Average.<sup>1</sup>**

|                | <u>LINT PER ACRE</u> |                          | Lint<br>percent | Seed<br>index | Boll<br>size<br>grams | <u>FIBER PROPERTIES</u> |     |                   |                 |                 |
|----------------|----------------------|--------------------------|-----------------|---------------|-----------------------|-------------------------|-----|-------------------|-----------------|-----------------|
|                | Total                | Percent<br>first<br>pick |                 |               |                       | Length                  |     | Strength<br>g/tex | Elonga-<br>tion | Micro-<br>naire |
|                |                      |                          |                 |               |                       | 2.5%                    | 50% |                   |                 |                 |
| DES 24         | 890                  | 86                       | 38.8            | 11.3          | 5.61                  | 1.16                    | .56 | 20.33             | 7.94            | 4.58            |
| Deltapine 55   | 833                  | 83                       | 40.4            | 9.8           | 5.14                  | 1.14                    | .54 | 18.58             | 7.34            | 4.36            |
| Stoneville 256 | 824                  | 83                       | 38.7            | 10.8          | 5.26                  | 1.14                    | .54 | 18.22             | 6.33            | 4.64            |
| Stoneville 213 | 821                  | 83                       | 38.5            | 10.7          | 5.31                  | 1.13                    | .55 | 18.57             | 7.39            | 4.73            |
| Coker 310      | 808                  | 83                       | 38.7            | 11.1          | 5.52                  | 1.20                    | .57 | 19.82             | 6.91            | 4.40            |
| Deltapine 16   | 793                  | 79                       | 38.1            | 11.0          | 5.71                  | 1.16                    | .55 | 19.24             | 8.90            | 4.54            |

<sup>1</sup>Fifteen environments — Stoneville 7, Tunica 4, Sumner 3, Yazoo City 1.



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In conformity with Title IX of the Education Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973, Dr. T. K. Martin, Vice President, 610 Allen Hall, P. O. Drawer J, Mississippi State, Mississippi 39762, office telephone number 325-3221, has been designated as the responsible employee to coordinate efforts to carry out responsibilities and make investigation of complaints relating to nondiscrimination.

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