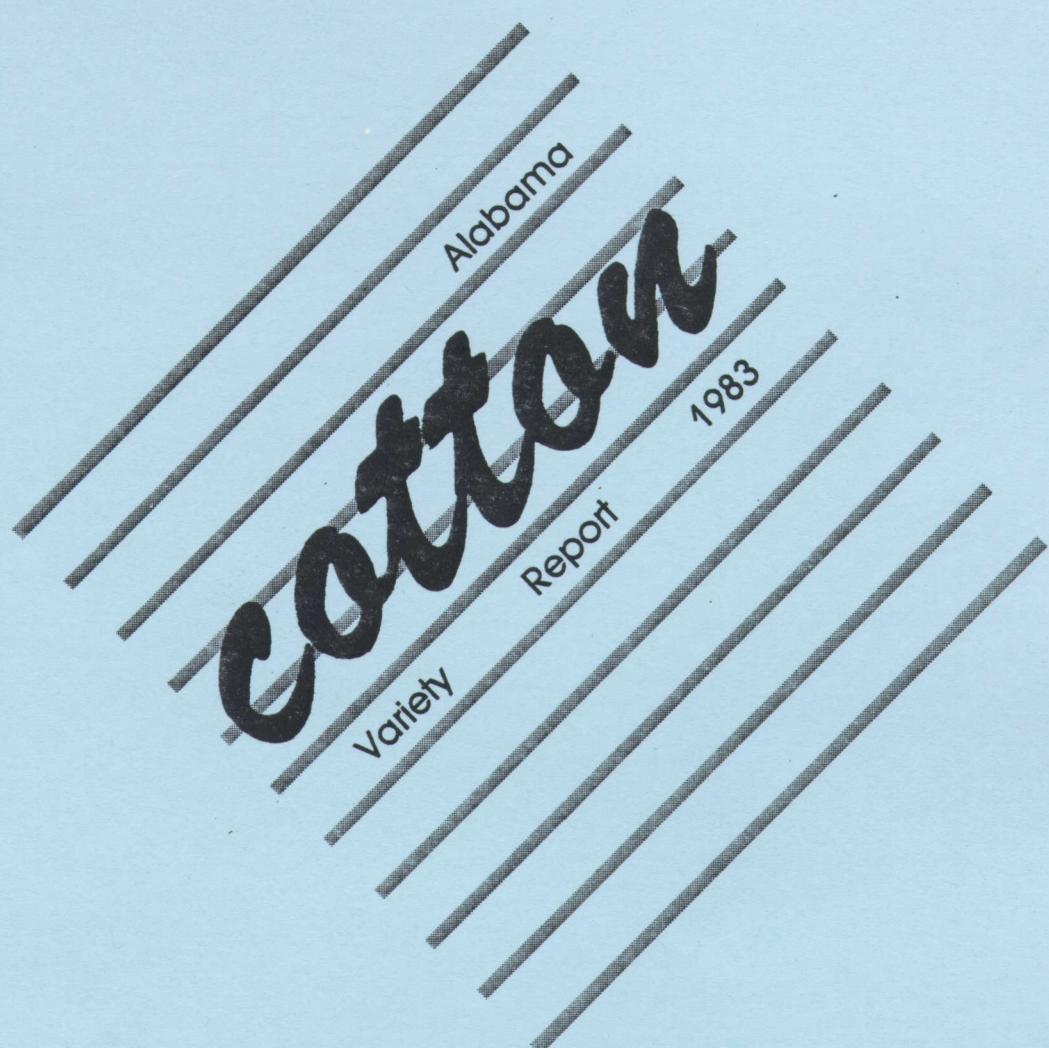


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*Information contained herein is available to all persons regardless
of race, color, sex, or national origin.*

1983 Alabama Cotton Variety Report

A Report of the Performance of Cotton Varieties Tested in Alabama

W. C. Johnson and Darrell Williams¹

INTRODUCTION

The Alabama Cotton Variety Test is a continuing evaluation of available cotton varieties from private companies and state agricultural experiment stations. Breeding lines that are likely to be released as varieties are also tested. Tests are conducted on units of the Alabama Agricultural Experiment Station by Experiment Station personnel. Cultural practices are those generally recommended by Auburn University to farmers. Every effort is made to test the varieties and present the results in an unbiased manner.

EXPERIMENTAL CONDITIONS

A randomized block experimental design with four replications was used at each location. Plot row length at different locations varied from 40 to 120 feet. Plots were two-row at Prattville, Headland, Belle Mina, and Crossville. Single-row plots were used at the other locations. Rainfall was extremely short after July 1 in northern Alabama, but more nearly adequate elsewhere. September and October were dry throughout Alabama, giving near ideal harvest conditions.

EXPLANATION OF DATA

Harvest of Seed Cotton

Tests at Prattville, Brewton, Monroeville, Tallassee, Belle Mina, and Shorter were harvested by a mechanical spindle picker. Tests at Headland

¹Professor and Technical Assistant, Department of Agronomy and Soils

and Crossville were harvested by hand. Average yield of seed cotton was determined for each variety at each location.

Lint Percentage

A sample of seed cotton from each variety at each location was taken at harvest and ginned on a 10-saw gin. Lint percentage was calculated by dividing weight of lint by weight of seed cotton. Lint percentage may be higher than that obtained at commercial gins because the 10-saw gin has no cleaning equipment.

Yield of Lint

Lint yield was determined by multiplying the lint percentage by yield of seed cotton.

Fiber Properties

Fiber qualities of all varieties from selected locations were determined by Starlab, a commercial fiber testing laboratory in Knoxville, Tennessee.

Span Length. This is the fiber length measured with the digital fibrograph. The 2.5 percent length is the average length of the longest 2.5 percent of the fibers and the 50 percent length is the average length of 50 percent of the fibers. Their ratio is an expression of the fiber length uniformity. The 2.5 percent length is about the same as the classer's staple.

Stelometer. T_1 is a measure of breaking strength of a standard fiber bundle with the holding jaws separated by 1/8 inch. This is a measurement similar to Pressley strength except the figures are in grams per tex. Tex is a size measurement of the fiber bundle. The larger the T_1 , the stronger the fibers. E_1 measures the percentage stretch before the fibers break.

Micronaire. This measures the fineness and maturity of the cotton fibers. The smaller the micronaire reading, the finer and/or more immature the fibers. The desirable range of micronaire is 3.5 to 4.9.

Earliness

Where more than one harvest was made, earliness is reported as the percentage of the total yield harvested at the first picking.

Fusarium wilt

Reaction of varieties to Fusarium oxysporum f. vasinfectum (fusarium wilt) was evaluated at the Plant Breeding Unit, Tallahassee. The varieties were grown in a field with a high natural incidence of the fusarium wilt-root-knot nematode complex. Severity of the disease varies from year to year and also within the experimental area in the same year. Therefore, several years' data are necessary to realistically characterize a variety's wilt reaction. Stoneville 213 and Stoneville 825 have consistently shown a high incidence of wilt. All other reported varieties that have been tested for at least 3 years have acceptable tolerance to fusarium wilt.

NEW AND EXPERIMENTAL VARIETIES

Deltapine 90 was developed for the San Joaquin Valley of California. However, 3 years' testing indicates it is a high yielding, high quality, smoothleaf variety with broad adaptation. Deltapine 50 has been previously tested as D.P. 7537-6150, D.P. 6150, and Deltapine 50.

It is a high-yielding, smoothleaf variety with wide adaptation. Coker 208 is similar to Coker 201 and Carolina Queen, reliable favorites in Alabama that have been discontinued. Acala SJ-5 and Lockett 77 are varieties adapted to the Western United States and are included in certain Alabama variety tests as national standard varieties. Deltapine NSL is a recently

released, smoothleaf variety that is nectariless. This is the first year for it to be tested in Alabama. DES 422 is a new variety developed at the Delta Branch Agricultural Experiment Station, Stoneville, Mississippi. It is related to DES 56 and appears to be a high yielding, well adapted, moderately early variety. Deltapine 102, Deltapine 733, and Stoneville 1181 are advanced experimental lines whose release is anticipated for 1985 or 1986. PD 4548 is an experimental line from the Pee Dee Experiment Station, Florence, South Carolina.

STATISTICAL ANALYSIS

Appropriate analyses of the yield data were made. For each location, the variability in the test was measured and expressed as a percentage of the test mean, i.e., the coefficient of variation (C.V.). An indication of the magnitude of difference between variety averages necessary to be considered a real difference is given for each location, designated. Least Significant Difference (L.S.D. .05).

LOCATIONS OF EXPERIMENTS

Tennessee Valley Substation, Belle Mina - W. B. Webster, Superintendent

Sand Mountain Substation, Crossville - J. T. Eason, Superintendent

Upper Coastal Plain Substation, Winfield - R. A. Moore, Jr., Superintendent

Prattville Experiment Field - D. P. Moore, Superintendent

E. V. Smith Research Center, Shorter - J. R. Akridge, Superintendent

Plant Breeding Unit, Talladega - L. L. Walker, Superintendent

Brewton Experiment Field - J. A. Pitts, Superintendent

Monroeville Experiment Field - J. A. Pitts, Superintendent

Wiregrass Substation, Headland - J. G. Starling, Superintendent

Table 1. Performance of Cotton Varieties at Belle Mina, Alabama, 1983

| Variety | 1983 | | | 2-yr. av. Lint/acre | 3-yr. av. Lint/acre |
|-----------------|-------------------------|---------------------|---------------------------------------|------------------------|------------------------|
| | Lint/acre <u>Lb.</u> | Lint <u>Pct.</u> | Earliness ¹ <u>Pct.</u> | | |
| Stoneville 825 | 424 | 41 | 89 | 819 | 841 |
| Stoneville 213 | 420 | 40 | 90 | 777 | 763 |
| DES 422 | 415 | 41 | 90 | - | - |
| Deltapine 50 | 412 | 38 | 89 | 837 | 833 |
| Stoneville 1181 | 397 | 37 | 92 | - | - |
| McNair 235 | 390 | 38 | 90 | 798 | 799 |
| Deltapine 733 | 390 | 39 | 89 | - | - |
| Deltapine 102 | 390 | 39 | 91 | - | - |
| Deltapine NSL | 380 | 39 | 89 | - | - |
| McNair 220 | 371 | 39 | 92 | 761 | 774 |
| Deltapine 90 | 353 | 38 | 86 | 794 | 787 |
| Coker 310 | 348 | 39 | 89 | 759 | 756 |
| Coker 208 | 338 | 39 | 88 | 788 | 750 |
| Stoneville 506 | 338 | 37 | 91 | 770 | 775 |
| Coker 304 | 337 | 38 | 86 | 754 | 739 |
| PD 4548 | 335 | 40 | 86 | 728 | - |
| Coker 3131 | 330 | 41 | 90 | 786 | 788 |
| Deltapine 41 | 324 | 42 | 88 | 730 | 717 |
| Coker 315 | 323 | 39 | 87 | 788 | 760 |
| Delcot 311 | 317 | 39 | 89 | 797 | 762 |
| Deltapine 61 | 310 | 39 | 81 | 673 | 692 |
| Lockett 77 | 293 | 38 | 84 | 616 | - |
| Acala SJ-5 | 291 | 39 | 83 | 326 | - |
| Test mean | 358 | | | | |
| L.S.D. (.05) | 56 | | | | |
| C.V. | 11% | | | | |

¹Percent harvested on first picking.

Table 2. Performance of Cotton Varieties at Crossville, Alabama, 1983

| Variety | 1983 | | 2-yr. av. lint/acre | 3-yr. av. lint/acre |
|-----------------|-----------|------|------------------------|------------------------|
| | Lint/acre | Lint | | |
| | Lb. | Pct. | Lb. | Lb. |
| Coker 3131 | 574 | 45 | 760 | 873 |
| McNair 220 | 534 | 40 | 719 | 803 |
| Delcot 311 | 516 | 39 | 775 | 862 |
| McNair 235 | 498 | 41 | 750 | 819 |
| Stoneville 506 | 486 | 41 | 650 | 690 |
| Deltapine 50 | 476 | 41 | 715 | 819 |
| Deltapine 102 | 466 | 40 | - | - |
| DES 422 | 464 | 43 | - | - |
| Deltapine NSL | 455 | 42 | - | - |
| Stoneville 825 | 422 | 42 | 597 | 627 |
| Coker 310 | 416 | 41 | 704 | 753 |
| Deltapine 90 | 415 | 42 | 698 | 759 |
| Coker 208 | 410 | 43 | 665 | 734 |
| Stoneville 213 | 406 | 42 | 634 | 611 |
| Stoneville 1181 | 382 | 38 | - | - |
| Coker 304 | 375 | 43 | 555 | 671 |
| Coker 315 | 362 | 44 | 617 | 666 |
| Deltapine 733 | 358 | 41 | - | - |
| Deltapine 61 | 342 | 39 | 569 | 630 |
| Deltapine 41 | 336 | 44 | 665 | 690 |
| Test mean | 434 | | | |
| L.S.D. (.05) | 99 | | | |
| C.V. | 16% | | | |

Table 3. Performance of Cotton Varieties at Prattville, Alabama, 1983

| Variety | 1983 | | | 2-yr. av. | 3-yr. av. |
|-----------------|-----------|------|------------------------|-----------|-----------|
| | Lint/acre | Lint | Earliness ¹ | lint/acre | lint/acre |
| | Lb. | Pct. | Pct. | Lb. | Lb. |
| Deltapine 90 | 1,050 | 40 | 87 | 1,101 | 1,013 |
| DES 422 | 1,043 | 43 | 86 | - | - |
| Deltapine 41 | 1,027 | 44 | 85 | 1,130 | 1,030 |
| Deltapine 102 | 970 | 40 | 86 | - | - |
| Stoneville 1181 | 961 | 40 | 83 | - | - |
| Deltapine 50 | 959 | 39 | 86 | 1,043 | 971 |
| Stoneville 825 | 945 | 42 | 85 | 989 | 933 |
| McNair 235 | 941 | 44 | 77 | 1,051 | 958 |
| Stoneville 506 | 935 | 40 | 90 | 976 | 910 |
| McNair 220 | 933 | 42 | 85 | 1,013 | 909 |
| Coker 208 | 929 | 41 | 86 | 1,027 | 909 |
| Deltapine 733 | 918 | 39 | 85 | - | - |
| Delcot 311 | 909 | 42 | 86 | 966 | 920 |
| Deltapine 61 | 906 | 40 | 85 | 992 | 903 |
| Coker 310 | 901 | 42 | 85 | 1,016 | 899 |
| Stoneville 213 | 894 | 41 | 85 | 1,074 | 973 |
| Deltapine NSL | 861 | 41 | 85 | - | - |
| Coker 3131 | 850 | 44 | 84 | 1,008 | 926 |
| Coker 315 | 842 | 44 | 80 | 1,000 | 897 |
| Coker 304 | 749 | 42 | 81 | 908 | 819 |
| Test mean | 926 | | | | |
| L.S.D. (.05) | 102 | | | | |
| C.V. | 8% | | | | |

¹Percent harvested on first picking.

Table 4. Performance of Cotton Varieties at Tallahassee, Alabama, 1983

| Variety | 1983 | | | 2-yr. av. lint/acre | 3-yr. av. lint/acre |
|-----------------|-----------|------|------------------------|------------------------|------------------------|
| | Lint/acre | Lint | Earliness ¹ | | |
| | Lb. | Pct. | Pct. | | |
| Deltapine 733 | 1,338 | 42 | 93 | - | - |
| Deltapine 41 | 1,332 | 45 | 93 | 1,235 | 1,132 |
| McNair 235 | 1,290 | 41 | 95 | 1,219 | 1,182 |
| Coker 208 | 1,262 | 41 | 96 | 1,216 | 1,135 |
| Coker 315 | 1,252 | 43 | 94 | 1,113 | 1,088 |
| Deltapine NSL | 1,242 | 42 | 95 | - | - |
| Deltapine 61 | 1,229 | 41 | 94 | 1,147 | 1,097 |
| McNair 220 | 1,203 | 41 | 94 | 1,166 | 1,151 |
| Deltapine 50 | 1,200 | 39 | 95 | 1,092 | 1,067 |
| Coker 310 | 1,196 | 41 | 94 | 1,233 | 1,141 |
| Deltapine 90 | 1,194 | 42 | 94 | 1,117 | 1,124 |
| Coker 304 | 1,186 | 40 | 94 | 1,081 | 1,020 |
| Stoneville 1181 | 1,155 | 40 | 93 | - | - |
| Deltapine 102 | 1,142 | 42 | 96 | - | - |
| Stoneville 825 | 1,135 | 40 | 93 | 1,092 | 1,051 |
| Stoneville 213 | 1,129 | 42 | 95 | 1,137 | 1,109 |
| DES 422 | 1,102 | 41 | 95 | - | - |
| Stoneville 506 | 1,098 | 39 | 95 | 985 | 944 |
| Delcot 311 | 1,060 | 39 | 96 | 1,005 | 964 |
| Coker 3131 | 1,043 | 41 | 93 | 1,066 | 1,062 |
| Test mean | 1189 | | | | |
| L.S.D. (.05) | 170 | | | | |
| C.V. | 10% | | | | |

¹Percent harvested on first picking.

Table 5. Performance of Cotton Varieties at Shorter, Alabama, 1983

| Variety | 1983 | | 2-yr. av. lint/acre ¹ | 3-yr. av. lint/acre ² |
|-----------------|------------|-------------|-------------------------------------|-------------------------------------|
| | Lint/acre | Lint | | |
| | <u>Lb.</u> | <u>Pct.</u> | <u>Lb.</u> | <u>Lb.</u> |
| DES 422 | 669 | 41 | - | - |
| Deltapine 90 | 622 | 40 | 586 | - |
| Deltapine 61 | 601 | 40 | 509 | 398 |
| Deltapine 50 | 601 | 39 | 526 | - |
| Stoneville 213 | 584 | 40 | 500 | 399 |
| Coker 3131 | 564 | 42 | 492 | 401 |
| Stoneville 825 | 560 | 40 | 487 | 411 |
| McNair 235 | 542 | 39 | 519 | 419 |
| McNair 220 | 519 | 38 | 508 | 412 |
| Delcot 311 | 519 | 39 | 486 | 394 |
| Deltapine NSL | 516 | 40 | 458 | - |
| Stoneville 506 | 497 | 38 | 444 | 347 |
| Coker 310 | 494 | 38 | 484 | 372 |
| Stoneville 1181 | 484 | 38 | - | - |
| Deltapine 733 | 472 | 38 | - | - |
| Coker 304 | 469 | 38 | 450 | 356 |
| PD 4548 | 468 | 40 | 433 | - |
| Deltapine 102 | 448 | 39 | - | - |
| Lockett 77 | 447 | 38 | 447 | - |
| Coker 315 | 442 | 38 | 467 | 365 |
| Coker 208 | 411 | 39 | 452 | - |
| Deltapine 41 | 409 | 42 | 409 | 338 |
| Acala SJ-5 | 285 | 39 | 292 | 224 |
| Test mean | 505 | | | |
| L.S.D. (.05) | 138 | | | |
| C.V. | 19% | | | |

¹1981 and 1983 data.

²1980, 1981, and 1983 data.

Table 6. Performance of Cotton Varieties at Monroeville, Alabama, 1983

| Variety | 1983 | | | 1-yr. av. lint/acre | 3-yr. av. lint/acre |
|-----------------|-------------------------|---------------------|---------------------------------------|------------------------|------------------------|
| | Lint/acre <u>Lb.</u> | Lint <u>Pct.</u> | Earliness ¹ <u>Pct.</u> | | |
| Deltapine 90 | 968 | 43 | 87 | 950 | 987 |
| Deltapine 102 | 921 | 41 | 88 | - | - |
| McNair 235 | 875 | 42 | 89 | 915 | 919 |
| Stoneville 1181 | 871 | 41 | 88 | - | - |
| Coker 208 | 818 | 42 | 84 | 829 | 894 |
| Deltapine 50 | 807 | 41 | 85 | 890 | 913 |
| Deltapine 41 | 802 | 44 | 85 | 866 | 906 |
| Deltapine NSL | 801 | 40 | 89 | - | - |
| DES 422 | 798 | 42 | 88 | - | - |
| Stoneville 213 | 795 | 43 | 85 | 823 | 819 |
| Coker 310 | 793 | 42 | 87 | 846 | 874 |
| Coker 3131 | 780 | 44 | 80 | 813 | 845 |
| Stoneville 825 | 762 | 42 | 89 | 913 | 890 |
| Coker 315 | 752 | 43 | 83 | 770 | 840 |
| Stoneville 506 | 738 | 40 | 88 | 798 | 837 |
| Coker 304 | 731 | 40 | 83 | 801 | 826 |
| Deltapine 733 | 713 | 39 | 84 | - | - |
| Deltapine 61 | 701 | 41 | 85 | 811 | 827 |
| McNair 220 | 691 | 41 | 91 | 808 | 858 |
| Delcot 311 | 686 | 40 | 90 | 798 | 808 |
| Test mean | 790 | | | | |
| L.S.D. (.05) | 121 | | | | |
| C.V. | 11% | | | | |

¹Percent harvested on first picking.

Table 7. Performance of Cotton Varieties at Brewton, Alabama, 1983

| Variety | 1983 | | | 2-yr. av. Lint/acre | 3-yr. av. Lint/acre |
|-----------------|-------------------------|---------------------|---------------------------------------|------------------------|------------------------|
| | Lint/acre <u>Lb.</u> | Lint <u>Pct.</u> | Earliness ¹ <u>Pct.</u> | | |
| McNair 235 | 1,029 | 40 | 92 | 901 | 916 |
| Stoneville 1181 | 1,019 | 37 | 89 | - | - |
| Coker 310 | 993 | 39 | 90 | 877 | 964 |
| Deltapine 90 | 989 | 39 | 86 | 934 | 992 |
| Coker 315 | 988 | 40 | 89 | 915 | 984 |
| DES 422 | 988 | 39 | 90 | - | - |
| McNair 220 | 980 | 39 | 93 | 922 | 946 |
| Stoneville 825 | 964 | 39 | 90 | 899 | 958 |
| Deltapine 50 | 955 | 38 | 89 | 873 | 903 |
| Deltapine 733 | 938 | 37 | 89 | - | - |
| Stoneville 213 | 923 | 40 | 87 | 887 | 905 |
| Deltapine NSL | 885 | 39 | 91 | - | - |
| Stoneville 506 | 860 | 38 | 93 | 890 | 896 |
| Coker 208 | 853 | 39 | 89 | 866 | 890 |
| Deltapine 102 | 846 | 39 | 93 | - | - |
| Delcot 311 | 844 | 38 | 90 | 802 | 812 |
| Coker 304 | 828 | 39 | 91 | 848 | 878 |
| Deltapine 41 | 775 | 41 | 90 | 799 | 886 |
| Deltapine 61 | 717 | 39 | 86 | 809 | 856 |
| Coker 3131 | 649 | 40 | 88 | 709 | 801 |
| Test mean | 901 | | | | |
| L.S.D. (.05) | 185 | | | | |
| C.V. | 14% | | | | |

¹Percent harvested on first picking.

Table 8. Performance of Cotton Varieties at Headland, Alabama, 1983

| Variety | 1983 | | 2-yr. av. lint/acre | 3-yr. av. lint/acre |
|-----------------|-----------|------|------------------------|------------------------|
| | Lint/acre | Lint | | |
| | Lb. | Pct. | Lb. | Lb. |
| Stoneville 1181 | 794 | 39 | - | - |
| Stoneville 213 | 772 | 40 | 1,001 | 1,049 |
| Delcot 311 | 737 | 38 | 961 | 1,033 |
| Deltapine 41 | 718 | 42 | 1,072 | 1,115 |
| Coker 304 | 716 | 39 | 981 | 1,061 |
| Deltapine 733 | 715 | 39 | - | - |
| Coker 315 | 700 | 40 | 1,021 | 1,076 |
| Coker 208 | 695 | 39 | 944 | 1,043 |
| Coker 3131 | 692 | 42 | 922 | 1,043 |
| Coker 310 | 687 | 38 | 1,064 | 1,059 |
| Deltapine 50 | 675 | 38 | 936 | 994 |
| Deltapine 90 | 674 | 39 | 934 | 1,049 |
| Deltapine NSL | 638 | 39 | - | - |
| DES 422 | 637 | 39 | - | - |
| Stoneville 825 | 629 | 39 | 983 | 1,050 |
| McNair 220 | 621 | 39 | 975 | 1,092 |
| Stoneville 506 | 609 | 39 | 890 | 967 |
| Deltapine 61 | 570 | 37 | 830 | 931 |
| Deltapine 102 | 570 | 37 | - | - |
| McNair 235 | 553 | 40 | 979 | 1,059 |
| Test mean | 670 | | | |
| L.S.D. (.05) | 187 | | | |
| C.V. | 20% | | | |

Table 9. Performance of Cotton Varieties in Alabama, Average of All Locations

| Variety | Yield, Lint/acre | | | Lint | | | Earliness | | |
|-----------------|------------------|----------------|----------------|--------------|-----------------|-----------------|--------------|-----------------|-----------------|
| | 1983 Lb. | 1982-83 Lb. | 1981-83 Lb. | 1983 Pct. | 1982-83 Pct. | 1981-83 Pct. | 1983 Pct. | 1982-83 Pct. | 1981-83 Pct. |
| Deltapine 90 | 783 | 933 | 959 | 40 | 40 | 40 | 88 | 80 | 78 |
| McNair 235 | 765 | 945 | 950 | 41 | 41 | 41 | 89 | 86 | 83 |
| McNair 220 | 732 | 909 | 933 | 40 | 40 | 40 | 91 | 86 | 83 |
| Deltapine 50 | 761 | 912 | 929 | 39 | 39 | 39 | 89 | 82 | 80 |
| Deltapine 41 | 715 | 928 | 925 | 43 | 43 | 43 | 88 | 82 | 80 |
| Coker 310 | 728 | 928 | 921 | 40 | 40 | 40 | 89 | 82 | 79 |
| Coker 208 | 715 | 905 | 908 | 40 | 40 | 40 | 89 | 84 | 81 |
| Stoneville 825 | 730 | 899 | 907 | 41 | 40 | 40 | 89 | 84 | 82 |
| Coker 3131 | 685 | 866 | 905 | 42 | 42 | 42 | 87 | 84 | 82 |
| Coker 315 | 708 | 889 | 901 | 41 | 41 | 41 | 87 | 82 | 79 |
| Stoneville 213 | 740 | 905 | 890 | 41 | 41 | 40 | 88 | 80 | 78 |
| Delcot 311 | 698 | 872 | 880 | 39 | 39 | 39 | 90 | 84 | 83 |
| Stoneville 506 | 695 | 851 | 860 | 39 | 39 | 39 | 91 | 84 | 82 |
| Coker 304 | 674 | 847 | 859 | 40 | 40 | 40 | 87 | 82 | 80 |
| Deltapine 61 | 672 | 833 | 848 | 39 | 40 | 39 | 86 | 79 | 77 |
| DES 422 | 765 | | | 41 | | | 90 | | |
| Stoneville 1181 | 758 | | | 39 | | | 89 | | |
| Deltapine 733 | 730 | | | 39 | | | 88 | | |
| Deltapine NSL | 722 | | | 40 | | | 90 | | |
| Deltapine 102 | 719 | | | 40 | | | 91 | | |

These varieties at 2 locations only.

| | | | | | | |
|------------|-----|----|----|----|----|----|
| PD 4548 | 401 | 40 | 41 | 86 | - | - |
| Lockett 77 | 370 | 38 | 38 | 84 | - | - |
| Acala SJ-5 | 288 | 39 | 38 | 83 | 74 | 73 |

Table 10. Percentage of Plants Showing Symptoms of Fusarium Wilt¹

| Variety | Average wilt percentage | | | | | | | | |
|-----------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| | 1983 | 2-yr. 1982-83 | 3-yr. 1981-83 | 4-yr. 1980-83 | 5-yr. 1979-83 | 6-yr. 1978-83 | 7-yr. 1977-83 | 8-yr. 1976-83 | 11-yr. 1973-83 |
| | Pct. | Pct. | Pct. | Pct. | Pct. | Pct. | Pct. | Pct. | Pct. |
| Stoneville 213 | 22.9 | 24.4 | 20.0 | 32.2 | 38.7 | 35.2 | 36.4 | 33.9 | 39.7 |
| Coker 310 | 27.5 | 22.8 | 15.8 | 20.6 | 23.5 | 21.6 | 21.3 | 20.2 | 23.4 |
| Coker 304 | 28.2 | 24.0 | 16.3 | 21.8 | 21.9 | 20.0 | 19.7 | 18.2 | 21.5 |
| Deltapine 61 | 14.0 | 18.2 | 14.5 | 18.4 | 20.1 | 17.7 | 17.3 | 17.4 | |
| McNair 220 | 18.4 | 21.1 | 13.0 | 18.9 | 18.0 | 16.1 | 16.2 | 14.8 | |
| Coker 315 | 27.4 | 22.9 | 16.8 | 23.7 | 24.1 | 21.4 | 22.1 | | |
| Deltapine 41 | 9.2 | 13.9 | 12.5 | 22.5 | 23.2 | 20.5 | | | |
| McNair 235 | 9.0 | 13.5 | 10.4 | 14.0 | 14.6 | 13.3 | | | |
| Stoneville 825 | 30.6 | 34.0 | 27.5 | 41.3 | 43.2 | | | | |
| Coker 3131 | 18.3 | 19.7 | 17.0 | 21.8 | | | | | |
| Delcot 311 | 10.9 | 10.1 | 7.1 | 11.7 | | | | | |
| Stoneville 506 | 13.0 | 12.3 | 9.8 | 15.8 | | | | | |
| Coker 208 | 24.6 | 23.7 | 16.5 | | | | | | |
| Deltapine 90 | 9.4 | 10.2 | 10.1 | | | | | | |
| Deltapine 50 | 15.3 | 13.7 | | | | | | | |
| Deltapine NSL | 17.2 | | | | | | | | |
| DES 422 | 15.1 | | | | | | | | |
| Stoneville 1181 | 31.2 | | | | | | | | |
| Deltapine 733 | 44.2 | | | | | | | | |
| Deltapine 102 | 36.0 | | | | | | | | |

¹Data were taken from a field severely infested with the fusarium wilt fungus and root-knot nematodes, Plant Breeding Unit, Talladega, Alabama.

Table 11. Fiber Properties of Cotton Varieties at Crossville, Alabama, 1983

| Variety | Micronaire Reading | Fibrograph | | Uniformity ratio Pct. | Stelometer | |
|-----------------|-----------------------|------------|-------------|-----------------------------|-------------|------------|
| | | 50% In. | 2.5% In. | | T1 g/tex | E1 Pct. |
| Coker 208 | 4.6 | .49 | 0.97 | 51 | 20.6 | 7.5 |
| Coker 304 | 4.8 | .53 | 1.07 | 50 | 19.3 | 7.5 |
| Coker 310 | 4.6 | .56 | 1.13 | 50 | 20.9 | 7.5 |
| Coker 315 | 4.4 | .52 | 1.08 | 48 | 21.2 | 8.0 |
| Coker 3131 | 4.9 | .52 | 1.02 | 51 | 18.0 | 9.0 |
| Delcot 311 | 4.5 | .52 | 1.04 | 50 | 22.3 | 8.5 |
| DES 422 | 4.7 | .48 | 1.02 | 47 | 19.6 | 8.0 |
| Deltapine 41 | 4.2 | .50 | 1.00 | 50 | 20.8 | 8.0 |
| Deltapine 61 | 4.8 | .55 | 1.11 | 50 | 24.8 | 9.0 |
| Deltapine 90 | 5.0 | .52 | 1.07 | 49 | 25.4 | 8.0 |
| Deltapine 102 | 4.6 | .52 | 1.06 | 49 | 20.7 | 8.5 |
| Deltapine 50 | 5.1 | .50 | 1.04 | 48 | 19.8 | 9.5 |
| Deltapine 733 | 4.8 | .54 | 1.10 | 49 | 21.0 | 7.5 |
| Deltapine NSL | 5.0 | .52 | 1.04 | 50 | 19.5 | 8.5 |
| McNair 220 | 4.8 | .50 | 1.04 | 48 | 20.8 | 7.0 |
| McNair 235 | 4.8 | .52 | 1.10 | 47 | 19.2 | 7.0 |
| Stoneville 213 | 5.0 | .50 | 1.02 | 49 | 17.9 | 8.5 |
| Stoneville 506 | 4.4 | .52 | 1.10 | 47 | 21.6 | 8.0 |
| Stoneville 825 | 4.8 | .54 | 1.10 | 49 | 20.7 | 7.0 |
| Stoneville 1181 | 5.0 | .58 | 1.16 | 50 | 22.0 | 7.0 |

Table 12. Fiber Properties of Cotton Varieties at Prattville, Alabama, 1983

| Variety | Micronaire Reading | Fibrograph | | | Uniformity ratio Pct. | Stelometer | |
|-----------------|-----------------------|------------|------|------|-----------------------------|-------------|------------|
| | | 50% | 2.5% | In. | | T1 g/tex | E1 Pct. |
| Coker 208 | 5.0 | 0.54 | | 1.10 | 50 | 21.2 | 7.0 |
| Coker 304 | 5.2 | .57 | | 1.18 | 48 | 22.0 | 7.0 |
| Coker 310 | 4.8 | .58 | | 1.16 | 50 | 22.5 | 6.5 |
| Coker 315 | 5.0 | .54 | | 1.12 | 48 | 20.6 | 8.0 |
| Coker 3131 | 4.4 | .54 | | 1.10 | 49 | 19.2 | 8.5 |
| Delcot 311 | 4.1 | .57 | | 1.10 | 52 | 23.3 | 9.0 |
| DES 422 | 4.2 | .56 | | 1.13 | 50 | 19.5 | 8.5 |
| Deltapine 41 | 4.9 | .56 | | 1.13 | 50 | 20.8 | 8.0 |
| Deltapine 61 | 5.0 | .53 | | 1.04 | 51 | 22.2 | 9.0 |
| Deltapine 90 | 4.4 | .56 | | 1.11 | 50 | 22.5 | 7.5 |
| Deltapine 102 | 4.2 | .58 | | 1.13 | 51 | 19.8 | 8.5 |
| Deltapine 50 | 4.4 | .54 | | 1.14 | 47 | 17.5 | 9.5 |
| Deltapine 733 | 4.6 | .58 | | 1.16 | 50 | 22.0 | 7.0 |
| Deltapine NSL | 5.2 | .58 | | 1.12 | 52 | 21.1 | 9.5 |
| McNair 220 | 4.3 | .56 | | 1.14 | 49 | 22.8 | 7.0 |
| McNair 235 | 4.5 | .54 | | 1.12 | 48 | 21.8 | 6.5 |
| Stoneville 213 | 4.7 | .58 | | 1.13 | 51 | 19.7 | 8.0 |
| Stoneville 506 | 4.4 | .54 | | 1.12 | 48 | 20.8 | 8.0 |
| Stoneville 825 | 5.1 | .52 | | 1.06 | 49 | 19.2 | 7.0 |
| Stoneville 1181 | 4.8 | .54 | | 1.12 | 48 | 21.2 | 7.0 |

Table 13. Fiber Properties of Cotton Varieties at Headland, Alabama, 1983

| Variety | Micronaire Reading | Fibrograph | | Uniformity ratio Pct. | Stelometer | |
|-----------------|-----------------------|------------|-------------|-----------------------------|-------------|------------|
| | | 50% In. | 2.5% In. | | T1 g/tex | E1 Pct. |
| Coker 208 | 4.9 | 0.48 | 1.04 | 46 | 22.6 | 5.5 |
| Coker 304 | 5.0 | .54 | 1.12 | 48 | 24.1 | 6.0 |
| Coker 310 | 4.8 | .56 | 1.20 | 47 | 27.4 | 6.5 |
| Coker 315 | 4.8 | .56 | 1.18 | 47 | 23.0 | 7.5 |
| Coker 3131 | 4.6 | .53 | 1.09 | 49 | 22.4 | 7.5 |
| Delcot 311 | 4.4 | .56 | 1.14 | 49 | 25.3 | 7.5 |
| DES 422 | 4.9 | .54 | 1.12 | 48 | 23.3 | 7.5 |
| Deltapine 41 | 4.9 | .53 | 1.09 | 49 | 25.1 | 7.0 |
| Deltapine 61 | 5.2 | .52 | 1.14 | 46 | 24.1 | 7.5 |
| Deltapine 90 | 5.4 | .54 | 1.11 | 49 | 25.3 | 7.5 |
| Deltapine 102 | 4.8 | .52 | 1.10 | 47 | 22.8 | 9.0 |
| Deltapine 50 | 5.0 | .52 | 1.10 | 47 | 20.1 | 8.0 |
| Deltapine 733 | 5.0 | .53 | 1.14 | 46 | 24.7 | 6.5 |
| Deltapine NSL | 4.9 | .54 | 1.10 | 49 | 22.9 | 7.5 |
| McNair 220 | 5.0 | .50 | 1.08 | 46 | 24.3 | 5.5 |
| McNair 235 | 5.1 | .51 | 1.06 | 48 | 22.7 | 7.0 |
| Stoneville 213 | 5.2 | .52 | 1.08 | 48 | 19.1 | 8.0 |
| Stoneville 506 | 4.6 | .52 | 1.12 | 46 | 22.1 | 7.5 |
| Stoneville 825 | 5.2 | .54 | 1.14 | 47 | 23.3 | 6.0 |
| Stoneville 1181 | 5.2 | .53 | 1.13 | 47 | 24.7 | 6.5 |

Table 14. Sources of Seed for the 1983 Cotton Variety Tests

| Variety | Source |
|-----------------|--|
| Deltapine NSL | |
| Deltapine 61 | |
| Deltapine 41 | Delta and Pine Land Co. |
| Deltapine 102 | Scott, Mississippi |
| Deltapine 90 | |
| Deltapine 50 | |
| Deltapine 733 | |
| <hr/> | |
| Stoneville 213 | |
| Stoneville 825 | Stoneville Pedigreed Seed Co. |
| Stoneville 506 | Stoneville, Mississippi |
| Stoneville 1181 | |
| <hr/> | |
| Coker 310 | |
| Coker 304 | |
| Coker 315 | Coker's Pedigreed Seed Co. |
| Coker 3131 | Hartsville, South Carolina |
| Coker 208 | |
| <hr/> | |
| Delcot 311 | Delta Center Portageville, Missouri |
| <hr/> | |
| McNair 235 | Northrup King Co. |
| McNair 220 | Leland, Mississippi |
| <hr/> | |
| DES 422 | Delta Branch Experiment Station Stoneville, Mississippi |

RECOMMENDED COTTON VARIETIES FOR ALABAMA

The list of recommended varieties given below was prepared by a committee composed of the authors of this report and Dr. Louie J. Chapman, Head of Extension Agronomy, Alabama Cooperative Extension Service, based on variety test performance for at least 3 years. Varieties differ in performance at individual locations, so selection should be based largely on variety performance at a site that most nearly represents the grower's local situation. The recommended varieties are listed in order of 3-year average lint yield.

Deltapine 90

McNair 235

McNair 220

Deltapine 50

Deltapine 41

Coker 310

Coker 208

Stoneville 825¹

Coker 3131

Coker 315

Stoneville 213¹

Delcot 311

Stoneville 506

Coker 304

Deltapine 61

¹Not suited for soils where fusarium wilt has been a problem.

