

Table 2. Maricopa Yield Test (1985 Season)

| | VARIETY | LBS. LINT PER ACRE |
|-----|--------------------|--------------------|
| 1. | HYP-81 | 2,056 |
| 2. | HYP-209 | 2,040 |
| 3. | HYP-58 | 2,030 |
| 4. | HYP-49 | 2,028 |
| 5. | HYP-70 | 2,008 |
| 6. | HYP-362 | 1,980 |
| 7. | HYP-67 | 1,975 |
| 35. | DELTAPINE 62 | 1,842 |
| 38. | DELTAPINE 90 | 1,832 |
| | C.V. | 8.4% |
| | LSD _{.05} | 151 |

Regional Variety Test

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In cooperation with a beltwide testing program, a regional variety test was planted at Maricopa. SJC 1, Paymaster 145, Stoneville 213, and McNair 235 were national standards common to all tests. Yields and various boll and fiber properties are given in Table 1.

SHORT STAPLE BREEDING, GENETICS & CYTOLOGY

Table 1. Regional Variety Test, Maricopa, Arizona 1985

| VARIETY | Yield Lint/ Acre | Lint % | Lint Index | Seed Index | Bolls/ lb.S.C. | Strength Pressley | Mic- ron | Plant ht. cm. |
|-----------------|------------------------|-----------|---------------|---------------|-------------------|----------------------|-------------|---------------------|
| Deltapine 775 | 2032 | 39.8 | 6.4 | 9.7 | 90 | 3.27 | 4.92 | 128 |
| Deltapine 61 | 2006 | 37.3 | 6.9 | 11.6 | 82 | 3.28 | 5.01 | 111 |
| Deltapine 41 | 2003 | 41.0 | 6.5 | 9.3 | 99 | 3.26 | 4.86 | 104 |
| Stoneville 213 | 2000 | 37.1 | 6.4 | 10.8 | 87 | 3.21 | 5.03 | 112 |
| Stoneville 353 | 1988 | 38.4 | 6.8 | 11.0 | 98 | 3.19 | 4.96 | 111 |
| Stoneville 453 | 1984 | 38.1 | 6.8 | 11.2 | 89 | 3.22 | 4.94 | 105 |
| McNair 220 | 1979 | 37.5 | 6.6 | 11.1 | 81 | 3.41 | 5.04 | 113 |
| McNair 235 | 1954 | 38.5 | 6.7 | 11.0 | 84 | 3.34 | 4.94 | 114 |
| Stoneville 506 | 1953 | 36.3 | 6.7 | 11.7 | 89 | 3.34 | 5.04 | 103 |
| Stoneville 825 | 1938 | 37.0 | 6.6 | 11.0 | 92 | 3.12 | 4.86 | 113 |
| Deltapine 50 | 1921 | 35.3 | 6.1 | 11.2 | 85 | 3.14 | 5.09 | 108 |
| Deltapine 90 | 1904 | 39.4 | 6.6 | 10.2 | 92 | 3.52 | 5.00 | 131 |
| Stoneville 6603 | 1903 | 36.2 | 6.1 | 10.8 | 93 | 3.32 | 4.62 | 116 |
| Deltapine 30 | 1868 | 39.3 | 6.2 | 9.7 | 92 | 3.34 | 4.88 | 103 |
| SV 8513 | 1864 | 36.8 | 6.4 | 10.9 | 82 | 3.44 | 4.67 | 112 |
| AZ 107 | 1852 | 37.8 | 8.0 | 13.3 | 70 | 3.72 | 4.70 | 100 |
| PD 1 | 1848 | 37.4 | 7.4 | 12.6 | 86 | 3.65 | 4.77 | 114 |
| Stoneville 827 | 1830 | 37.1 | 6.8 | 11.4 | 97 | 3.29 | 4.55 | 112 |
| KNX 2019 | 1815 | 36.8 | 6.5 | 11.3 | 86 | 3.33 | 5.02 | 127 |
| SV 8593 | 1763 | 36.0 | 6.5 | 11.6 | 80 | 3.36 | 4.92 | 110 |
| Coker 3131 | 1747 | 38.9 | 7.7 | 12.3 | 81 | 3.27 | 4.73 | 125 |
| PD 2 | 1711 | 36.0 | 6.6 | 11.8 | 85 | 3.33 | 4.76 | 106 |
| Coker 315 | 1708 | 36.4 | 6.9 | 12.0 | 77 | 3.52 | 4.78 | 122 |
| KNX 125 | 1653 | 36.5 | 6.6 | 11.4 | 81 | 3.34 | 4.92 | 101 |
| SJC 1 | 1627 | 36.9 | 7.5 | 12.9 | 71 | 3.82 | 4.68 | 130 |
| Paymaster 145 | 1464 | 36.4 | 6.7 | 11.7 | 82 | 3.25 | 5.11 | 103 |
| ----- | | | | | | | | |
| Ave. | 1857 | lbs. | | | | | | |
| LSD 5% | 221 | | | | | | | |
| 1% | 293 | | | | | | | |
| C.V. | 9.5% | | | | | | | |

A measure of the earliness of the crop was determined by a sequential harvest of plots of Deltapine 61. The total percent of the crop open by dates is as follows:

| | |
|--------------|--------|
| August 30 | 13.6% |
| September 10 | 36.0% |
| September 23 | 67.4% |
| October 7 | 81.4% |
| October 21 | 93.4% |
| November 7 | 100.0% |

Host-Plant Resistance

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Summary

Cotton breeding stocks were evaluated for resistance to pink bollworm. Resistance is being transferred into improved agronomic stocks.

In the regional short-season test, WC-12NL, a nectariless, okra-leaf cotton developed in our breeding program, had the least amount of seed damage caused by pink bollworm of the 18 cottons in the test. Two of the 18 cottons in the test yielded more lint than the long-season check, 'Stoneville 213', and 11 yielded more lint than the short-season check, 'Tamcot Camd-E'.

Five of six converted Texas race stocks had significantly less seed damage than a susceptible selection, Texas 39C-1-H, when infested artificially with pink bollworm eggs, but none had less damage than Texas 39C-1-L, a resistant selection.