LSU AgCenter
Research & Extension

# 2007

# Louisiana On-Farm Cotton Variety Trial Summary

## LSU AgCenter Cotton Extension Program

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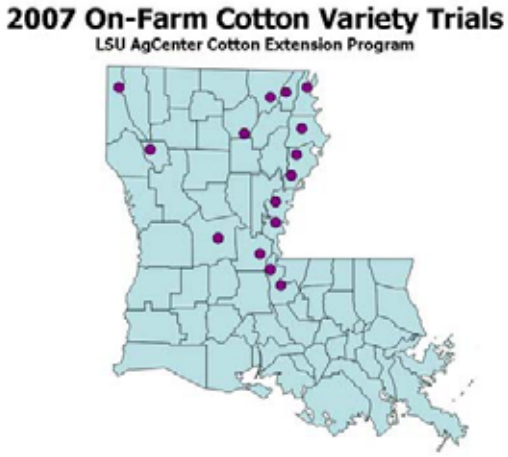
## Introduction

Each year, the LSU AgCenter conducts a number of on-farm cotton variety trials. These trials can be a useful supplement to Official Variety Trial (OVT) information as well as other sources of data on which to base cotton variety selection decisions. On-farm trials can be particularly helpful in choosing a cotton variety because they represent many localities and can indicate the adaptation of a particular variety to a small geography. Additionally, on-farm trials are managed by the farmer cooperators and should reflect the performance of varieties in a commercial production system well.

Data from on-farm cotton variety trials are not meant to replace or supersede results from OVTs. Cotton OVTs are conducted under relatively controlled environments and have been the standard for assessing the performance of cotton varieties for many years. However, cotton variety data reported in this publication can serve as an excellent supplement to OVT results. Cotton variety selection is a critical factor in any successful production system and growers are encouraged to consult as many data sources as possible before making a decision.

## Locations and Methods

On-farm cotton variety trials were conducted in 15 locations (shown on map) in 2007 by the LSU AgCenter's Cotton Extension Program. Most of these locations were replicated, large-plot trials, with each individual plot ranging in size from 8 to 16 rows and a minimum of 600 feet long. Trials were planted and managed throughout the season by cooperators and harvested with their equipment. Where replications were possible, data have been subjected to analysis of variance and mean separation information is included.




## Entries

***Core Block:*** Prior to the establishment of the on-farm trials, a core block of five varieties was identified. Based on OVT and on-farm data from 2006, these five varieties appeared to be very competitive compared with others tested in 2006. Therefore, they were included in as many locations as possible in order to generate as many comparisons as possible. These five were Deltapine DP 117 B2RF, Deltapine DP 164 B2RF, Deltapine DP 143 B2RF, Stoneville ST 4554 B2RF, and PhytoGen PHY 485 WRF.

***New Entries:*** Seed companies were encouraged to submit varieties expected to be adapted to Louisiana for testing that were not previously tested in large-plot trials in Louisiana. These new entries were not tested at every location due to space and seed availability constraints. At locations

in which these were tested at least two standards, Deltapine DP 164 B2RF, and PhytoGen 485 WRF, were included in the trial.

**Explanation of Data Tables**

Data are reported for lint yield, lint percent, and the physical fiber properties of staple length (reported as upper half mean, or UHM, in inches), micronaire (mic), strength, and uniformity. Seedcotton samples were ginned on a 10-saw gin without drying, pre-cleaning, or lint cleaning which tends to slightly inflate lint percent and some fiber properties. However, the relative differences among varieties are of the most interest and are valid. Where replications allowed statistical analysis of the data, the least significant difference (LSD) is reported along with the coefficient of variance (CV). The LSD represents the smallest value that can be used to separate two means; differences less than the LSD are likely to due to chance and field variability. A lower CV indicates less variance in the data. Seedling vigor ratings were subjective evaluations on a 1-5 scale with 1 being best and 5 being worst.

**Core Varieties– Summary Across All Locations**

**Parishes** – Avoyelles, Caddo, Concordia, East Carroll, Morehouse, Ouachita, Pointe Coupee (2), Red River, Tensas (2), West Carroll

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Stoneville ST 4554B2RF | 1253 | 39.3 | 1.14 | 4.6 | 30.2 | 83.0 |
| Deltapine DP 117 B2RF | 1219 | 40.2 | 1.18 | 4.4 | 30.6 | 83.4 |
| PhytoGen PHY 485 WRF | 1194 | 39.5 | 1.15 | 4.6 | 30.2 | 83.8 |
| Deltapine DP 164 B2RF | 1116 | 38.1 | 1.19 | 4.4 | 28.9 | 83.0 |
| Deltapine DP 143 B2RF | 1097 | 38.4 | 1.22 | 4.2 | 28.5 | 82.6 |
| **$LSD_{0.10}$** | 28 | 0.3 | 0.01 | 0.07 | 0.4 | 0.3 |
| **CV (%)** | 5.0 | 1.7 | 1.2 | 3.3 | 3.1 | 0.6 |
| **Mean** | **1176** | **39.1** | **1.18** | **4.5** | **29.7** | **83.2** |

**Plant stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Stoneville ST 4554B2RF | 2.52 | 2.0 |
| Deltapine DP 117 B2RF | 2.49 | 1.4 |
| PhytoGen PHY 485 WRF | 2.65 | 2.3 |
| Deltapine DP 164 B2RF | 2.82 | 1.9 |
| Deltapine DP 143 B2RF | 2.49 | 2.6 |
| **$LSD_{0.10}$** | 0.15 | 0.2 |
| **CV (%)** | 9.7 | 23.3 |
| **Mean** | **2.6.** | **2.1** |

**†1=best, 5=worst**

## Core Varieties – Summary by Soil Type and Irrigation

| Variety | Silt Loam | Clay | Dryland | Irrigated | Overall Mean |
|---|---|---|---|---|---|
| | lb/acre (rank) | lb/acre (rank) | lb/acre (rank) | lb/acre (rank) | lb/acre |
| Stoneville ST 4554B2RF | 1246 (1) | 1272 (2) | 1336 (1) | 1175 (2) | 1253 |
| Deltapine DP 117 B2RF | 1187 (2) | 1306 (1) | 1247 (3) | 1194* (1) | 1219 |
| PhytoGen PHY 485 WRF | 1184 (3) | 1218 (4) | 1266 (2) | 1126 (3) | 1194 |
| Deltapine DP 164 B2RF | 1085 (4) | 1195 (5) | 1224 (4) | 1014 (5) | 1116 |
| Deltapine DP 143 B2RF | 1048 (5) | 1221 (3) | 1162 (5) | 1033 (4) | 1097 |
| **$LSD_{0.10}$** | 21 | 32 | 49 | 35 | 28 |
| **CV (%)** | 5.7 | 2.6 | 5.3 | 4.8 | 5.0 |
| **Mean** | **1151** | **1242** | **1247** | **1109** | **1176** |
| **Locations** | **9** | **4** | **7** | **6** | **13** |

* Not significantly different from the highest yielding variety in the group of trials.

## AVOYELLES PARISH

Simmesport, LA
**Soil Type** – Clay, Non-Irrigated
**Planting Date** – April 30, 2007
**Grower** – Kent Roblin
**County Agent** – Trent Clark, Carlos Smith

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Deltapine DP 117 B2RF | 1225 | 41.4 | 1.18 | 4.6 | 29.5 | 82.4 |
| Stoneville ST 4554B2RF | 1207 | 37.6 | 1.13 | 4.7 | 29.2 | 81.9 |
| Croplan CG 3520 B2RF | 1087 | 40.3 | 1.16 | 4.8 | 30.5 | 82.8 |
| Deltapine DP 143 B2RF | 1029 | 39.9 | 1.22 | 4.6 | 28.8 | 82.4 |
| Deltapine DP 164 B2RF | 1007 | 38.2 | 1.12 | 4.5 | 24.6 | 82.6 |
| PhytoGen PHY 485 WRF | 902 | 40.1 | 1.18 | 4.9 | 30.0 | 83.7 |
| **Mean** | **1076** | **39.6** | **1.17** | **4.7** | **28.8** | **82.6** |

**Plant stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Deltapine DP 117 B2RF | 1.93 | 1 |
| Stoneville ST 4554B2RF | 1.80 | 2 |
| Croplan CG 3520 B2RF | 2.13 | 3 |
| Deltapine DP 143 B2RF | 2.00 | 3 |
| Deltapine DP 164 B2RF | 1.83 | 2 |
| PhytoGen PHY 485 WRF | 2.17 | 3 |
| **Mean** | **1.98** | **2.3** |

**†1=best, 5=worst**

## CADDO PARISH

Belcher, LA
**Soil Type** – Silt loam, Irrigated
**Planting Date** – April 23, 2007
**Grower** – Sonny and Ryan Kirby
**County Agent** – John Levasseur

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Deltapine DP 117 B2RF | 1343 | 38.7 | 1.19 | 4.5 | 31.5 | 83.2 |
| Stoneville ST 4554B2RF | 1305* | 38.4 | 1.14 | 4.8 | 31.0 | 83.2 |
| PhytoGen PHY 485 WRF | 1192 | 38.1 | 1.15 | 4.5 | 31.3 | 84.2 |
| Deltapine DP 164 B2RF | 1035 | 36.8 | 1.21 | 4.4 | 30.1 | 82.9 |
| Deltapine DP 143 B2RF | 1004 | 36.8 | 1.21 | 4.2 | 29.0 | 81.9 |
| **$LSD_{0.10}$** | 56 | 0.8 | 0.02 | 0.2 | 0.8 | 1.0 |
| **CV (%)** | 3.1 | 1.4 | 1.3 | 3.1 | 1.8 | 0.8 |
| **Mean** | **1176** | **37.8** | **1.2** | **4.5** | **30.6** | **83.1** |

* Not significantly different from the highest yielding variety (DP 117 B2RF) in the trial.

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Deltapine DP 117 B2RF | 2.23 | 2.3 |
| Stoneville ST 4554B2RF | 2.67 | 2.3 |
| PhytoGen PHY 485 WRF | 2.83 | 2.3 |
| Deltapine DP 164 B2RF | 2.93 | 1.3 |
| Deltapine DP 143 B2RF | 2.43 | 3.3 |
| **$LSD_{0.10}$** | 0.50 | 1.2 |
| **CV (%)** | 12.5 | 34.6 |
| **Mean** | **2.62** | **2.3** |

**†1=best, 5=worst**

## CONCORDIA PARISH – CLAY SOIL

Monterey, LA
**Soil Type** – Clay, Irrigated
**Planting Date** – April 23, 2007
**Grower** – Angelina Plantation
**County Agent** – Glen Daniels

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Deltapine DP 117 B2RF | 985 | 39.9 | 1.19 | 4.2 | 31.9 | 83.0 |
| Stoneville ST 4554B2RF | 947* | 38.2 | 1.13 | 4.3 | 31.1 | 82.8 |
| Deltapine DP 164 B2RF | 928* | 37.7 | 1.18 | 4.5 | 28.2 | 82.3 |
| Deltapine DP 143 B2RF | 901 | 37.5 | 1.22 | 4.0 | 28.7 | 82.7 |
| PhytoGen PHY 485 WRF | 891 | 38.6 | 1.12 | 4.4 | 30.4 | 83.5 |
| **$LSD_{0.10}$** | 64 | 0.8 | 0.02 | 0.2 | 0.9 | 0.6 |
| **CV (%)** | 4.5 | 1.3 | 1.1 | 3.0 | 2.0 | 0.5 |
| **Mean** | **930** | **38.4** | **1.17** | **4.3** | **30.0** | **82.9** |

* Not significantly different from the highest yielding variety (DP 117 B2RF) in the trial.
NOTE: PhytoGen PHY 370 WR as a one-rep comparison yielded 1032 lb lint/acre.

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Deltapine DP 117 B2RF | 2.55 | 2.0 |
| Stoneville ST 4554B2RF | 2.07 | 3.0 |
| Deltapine DP 164 B2RF | 2.53 | 2.7 |
| Deltapine DP 143 B2RF | 2.20 | 3.7 |
| PhytoGen PHY 485 WRF | 2.33 | 3.3 |
| **$LSD_{0.10}$** | 0.31 | 0.7 |
| **CV (%)** | 8.8 | 16.5 |
| **Mean** | **2.3** | **2.9** |

**†1=best, 5=worst**

## CONCORDIA PARISH – SILT LOAM

Wildsville, LA
**Soil Type** – Silt loam, non-irrigated
**Planting Date** – April 23, 2007
**Grower** – Carvel White
**County Agent** – Glen Daniels

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| PhytoGen PHY 485 WRF | 1438 | 38.7 | 1.15 | 4.6 | 29.9 | 83.6 |
| Deltapine DP 161 B2RF | 1345 | 37.1 | 1.20 | 4.5 | 29.8 | 83.0 |
| Stoneville ST 4427B2RF | 1344 | 36.5 | 1.14 | 4.5 | 28.7 | 83.5 |
| Stoneville ST 5327B2RF | 1328 | 38.7 | 1.12 | 4.6 | 29.4 | 82.9 |
| Deltapine DP 164 B2RF | 1327 | 36.9 | 1.17 | 4.5 | 27.9 | 82.7 |
| FiberMax FM 1880 B2RF | 1274 | 36.1 | 1.18 | 4.2 | 29.7 | 82.5 |
| **$LSD_{0.10}$** | 76 | 0.8 | 0.02 | 0.2 | 1.5 | 0.7 |
| **CV (%)** | 3.4 | 1.4 | 1.1 | 2.9 | 3.6 | 0.6 |
| **Mean** | **1343** | **37.3** | **1.16** | **4.5** | **29.2** | **83.0** |

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| PhytoGen PHY 485 WRF | 1.88 | 3.3 |
| Deltapine DP 161 B2RF | 1.86 | 4.0 |
| Stoneville ST 4227B2RF | 1.97 | 3.0 |
| Stoneville ST 5327B2RF | 1.73 | 3.3 |
| Deltapine DP 164 B2RF | 2.11 | 3.7 |
| FiberMax FM 1880 B2RF | 2.03 | 3.3 |
| **$LSD_{0.10}$** | NS | NS |
| **CV (%)** | 10.5 | 20.3 |
| **Mean** | **1.9** | **3.4** |

**†1=best, 5=worst**

## EAST CARROLL PARISH

Lake Providence, LA
**Soil Type** – Silt loam, irrigated
**Planting Date** – May 1, 2007
**Grower** – Bo Holt
**County Agent** – Donna Lee

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Deltapine DP 117 B2RF | 1274 | 38.5 | 1.22 | 4.0 | 30.5 | 83.8 |
| Stoneville ST 4427B2RF | 1204* | 38.0 | 1.17 | 4.3 | 29.8 | 83.4 |
| PhytoGen PHY 485 WRF | 1172* | 37.5 | 1.18 | 4.1 | 30.9 | 83.9 |
| Stoneville ST 4554B2RF | 1168* | 38.9 | 1.18 | 4.3 | 31.5 | 83.5 |
| Deltapine DP 143 B2RF | 1141* | 37.9 | 1.22 | 4.0 | 29.2 | 82.0 |
| Dyna-Gro DG 2490 B2RF | 1114 | 36.1 | 1.13 | 3.3 | 26.9 | 82.7 |
| Deltapine DP 161 B2RF | 1101 | 37.4 | 1.22 | 3.9 | 30.2 | 83.3 |
| Stoneville ST 5327B2RF | 1075 | 38.3 | 1.18 | 4.3 | 32.2 | 83.4 |
| Deltapine DP 164 B2RF | 999 | 37.4 | 1.22 | 4.4 | 30.7 | 82.5 |
| FiberMax FM 1880 B2RF | 975 | 35.5 | 1.21 | 3.9 | 31.2 | 83.6 |
| **$LSD_{0.10}$** | 136 | 0.8 | 0.01 | 0.3 | 1.6 | 1.0 |
| **CV (%)** | 8.6 | 1.5 | 0.8 | 6.0 | 3.7 | 0.9 |
| **Mean** | **1122** | **37.6** | **1.19** | **4.1** | **30.3** | **83.2** |

* Not significantly different from the highest yielding variety (DP 117 B2RF) in the trial.

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Deltapine DP 117 B2RF | 2.89 | 1.0 |
| Stoneville ST 4427B2RF | 2.67 | 2.7 |
| PhytoGen PHY 485 WRF | 2.72 | 2.0 |
| Stoneville ST 4554B2RF | 2.59 | 2.0 |
| Deltapine DP 143 B2RF | 2.87 | 2.0 |
| Dyna-Gro DG 2490 B2RF | 2.70 | 2.3 |
| Deltapine DP 161 B2RF | 2.82 | 2.7 |
| Stoneville ST 5327B2RF | 2.80 | 3.0 |
| Deltapine DP 164 B2RF | 3.20 | 2.0 |
| FiberMax FM 1880 B2RF | 2.47 | 3.0 |
| **$LSD_{0.10}$** | 0.23 | 0.5 |
| **CV (%)** | 5.8 | 14.5 |
| **Mean** | **2.77** | **2.2** |

**†1=best, 5=worst**

## MADISON PARISH

Tallulah, LA
**Soil Type** – Clay, Non-Irrigated
**Planting Date** – April 24, 2007
**Grower** – John Hildebrand
**County Agent** – R.L. Frazier

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| PhytoGen PHY 485 WRF | 1484 | 38.1 | 1.16 | 4.6 | 29.7 | 83.8 |
| Deltapine DP 117 B2RF | 1421 | 38.5 | 1.18 | 4.4 | 30.5 | 82.7 |
| Stoneville ST 4554B2RF | 1379 | 37.9 | 1.10 | 4.4 | 29.2 | 82.7 |
| Deltapine DP 143 B2RF | 1290 | 37.6 | 1.21 | 4.2 | 26.9 | 81.5 |
| Deltapine DP 164 B2RF | 1142 | 36.5 | 1.14 | 4.2 | 28.2 | 81.7 |
| **Mean** | **1343** | **37.7** | **1.16** | **4.4** | **28.9** | **82.5** |

NOTE: Deltapine DP 555 BG/RR as a comparison in the same field yielded 978 lb lint/acre.

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| PhytoGen PHY 485 WRF | 2.50 | 2 |
| Deltapine DP 117 B2RF | 2.43 | 1 |
| Stoneville ST 4554B2RF | 2.63 | 2 |
| Deltapine DP 143 B2RF | 2.40 | 2 |
| Deltapine DP 164 B2RF | 1.76 | 3 |
| **Mean** | **2.35** | **2** |

**†1=best, 5=worst**

## MOREHOUSE PARISH

Oak Ridge, LA
**Soil Type** – Silt loam, irrigated
**Planting Date** – May 1, 2007
**Grower** – Macon Lafoe, Sr.
**County Agent** – Terry Erwin

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Deltapine DP 117 B2RF | 1013 | 39.8 | 1.17 | 4.4 | 31.5 | 83.0 |
| Dyna-Gro DG 2490 B2RF | 980* | 37.0 | 1.13 | 3.8 | 27.7 | 82.9 |
| Stoneville ST 4554B2RF | 972* | 38.9 | 1.16 | 4.8 | 32.4 | 83.0 |
| Croplan CG 3220 B2RF | 966* | 38.7 | 1.19 | 4.6 | 30.3 | 84.0 |
| Stoneville ST 5327B2RF | 937 | 39.1 | 1.16 | 4.6 | 31.2 | 83.8 |
| Croplan CG 3035 RF | 925 | 40.7 | 1.17 | 4.5 | 30.4 | 83.6 |
| PhytoGen PHY 485 WRF | 917 | 38.9 | 1.16 | 4.6 | 31.8 | 83.6 |
| Stoneville ST 4427B2RF | 913 | 38.1 | 1.16 | 4.6 | 30.4 | 83.1 |
| Deltapine DP 161 B2RF | 884 | 38.4 | 1.20 | 4.6 | 30.6 | 83.6 |
| Deltapine DP 164 B2RF | 847 | 38.1 | 1.21 | 4.4 | 29.5 | 83.4 |
| Deltapine DP 143 B2RF | 844 | 37.9 | 1.23 | 4.1 | 29.4 | 82.8 |
| FiberMax FM 1880 B2RF | 785 | 37.3 | 1.20 | 4.4 | 30.0 | 83.2 |
| FiberMax FM 9063 B2RF | 688 | 37.1 | 1.21 | 4.3 | 30.3 | 83.5 |
| **$LSD_{0.10}$** | 72 | 1.1 | 0.02 | 0.2 | 2.1 | 0.8 |
| **CV (%)** | 4.5 | 1.6 | 0.8 | 2.2 | 3.9 | 0.6 |
| **Mean** | **898** | **38.4** | **1.18** | **4.4** | **30.4** | **83.3** |

* Not significantly different from the highest yielding variety (DP 117 B2RF) in the trial.

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Deltapine DP 117 B2RF | 2.87 | 1.0 |
| Dyna-Gro DG 2490 B2RF | 2.65 | 3.0 |
| Stoneville ST 4554B2RF | 2.52 | 2.5 |
| Croplan CG 3220 B2RF | 2.38 | 4.5 |
| Stoneville ST 5327B2RF | 2.59 | 2.0 |
| Croplan CG 3035 RF | 2.42 | 4.5 |
| PhytoGen PHY 485 WRF | 2.22 | 2.5 |
| Stoneville ST 4427B2RF | 2.50 | 3.0 |
| Deltapine DP 161 B2RF | 2.99 | 3.0 |
| Deltapine DP 164 B2RF | 3.28 | 2.5 |
| Deltapine DP 143 B2RF | 2.37 | 3.0 |
| FiberMax FM 1880 B2RF | 3.00 | 3.5 |
| FiberMax FM 9063 B2RF | 2.67 | 3.0 |
| **$LSD_{0.10}$** | 0.36 | 1.2 |
| **CV (%)** | 7.8 | 23.4 |
| **Mean** | **2.65** | **2.92** |

**†1=best, 5=worst**

## OUACHITA PARISH

Monroe, LA
**Soil Type** – Silt loam, irrigated
**Planting Date** – May 7, 2007
**Grower** – Tripp Faulk
**County Agent** – Richard Letlow

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| PhytoGen PHY 485 WRF | 1396 | 41.1 | 1.14 | 4.9 | 30.8 | 84.0 |
| Stoneville ST 4554B2RF | 1333* | 38.9 | 1.12 | 5.0 | 30.6 | 82.6 |
| Deltapine DP 143 B2RF | 1232 | 39.1 | 1.23 | 4.4 | 29.3 | 83.6 |
| Deltapine DP 117 B2RF | 1224 | 40.0 | 1.15 | 4.5 | 30.9 | 83.2 |
| Deltapine DP 164 B2RF | 1129 | 37.1 | 1.19 | 4.7 | 29.2 | 82.8 |
| Dyna-Gro DG 2490 B2RF | 1126 | 37.3 | 1.09 | 3.7 | 27.2 | 82.4 |
| **$LSD_{0.10}$** | 136 | 1.2 | 0.05 | 0.2 | 1.9 | 0.9 |
| **CV (%)** | 5.5 | 1.5 | 2.0 | 2.1 | 3.1 | 0.6 |
| **Mean** | **1240** | **38.9** | **1.15** | **4.5** | **29.6** | **83.1** |

* Not significantly different from the highest yielding variety (PHY 485 WRF) in the trial.

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| PhytoGen PHY 485 WRF | 2.55 | 2.0 |
| Stoneville ST 4554B2RF | 2.22 | 2.0 |
| Deltapine DP 143 B2RF | 2.10 | 2.0 |
| Deltapine DP 117 B2RF | 2.02 | 2.0 |
| Deltapine DP 164 B2RF | 2.40 | 2.5 |
| Dyna-Gro DG 2490 B2RF | 2.35 | 2.0 |
| **$LSD_{0.10}$** | 0.26 | 0.6 |
| **CV (%)** | 5.6 | 13.9 |
| **Mean** | **2.27** | **2.1** |

**†1=best, 5=worst**

## POINTE COUPEE – SILT LOAM

Bachelor, LA
**Soil Type** – Silt loam, non-irrigated
**Planting Date** – April 24, 2007
**Grower** – George Lacour
**County Agent** – Mile Brashier

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Deltapine DP 117 B2RF | 1133 | 42.6 | 1.15 | 4.6 | 29.5 | 82.8 |
| PhytoGen PHY 485 WRF | 1083* | 40.2 | 1.15 | 4.8 | 30.2 | 83.8 |
| Stoneville ST 4554B2RF | 1034 | 39.2 | 1.13 | 4.8 | 29.9 | 83.3 |
| Stoneville ST 4427B2RF | 1011 | 39.3 | 1.13 | 4.6 | 27.9 | 83.1 |
| Deltapine DP 164 B2RF | 982 | 37.8 | 1.17 | 4.5 | 26.9 | 82.2 |
| Deltapine DP 161 B2RF | 979 | 40.9 | 1.17 | 4.7 | 28.5 | 83.1 |
| Stoneville ST 5327B2RF | 975 | 41.2 | 1.14 | 4.7 | 30.7 | 83.1 |
| FiberMax FM 1880 B2RF | 935 | 38.2 | 1.19 | 4.1 | 29.0 | 82.7 |
| Deltapine DP 143 B2RF | 933 | 37.9 | 1.21 | 4.3 | 26.2 | 81.8 |
| **$LSD_{0.10}$** | 77 | 2.0 | 0.02 | 0.2 | 1.2 | 0.6 |
| **CV (%)** | 5.4 | 3.6 | 1.3 | 2.8 | 0.5 | 0.5 |
| **Mean** | **1007** | **39.6** | **1.16** | **4.6** | **28.8** | **82.9** |

* Not significantly different from the highest yielding variety (DP 117 B2RF) in the trial.

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Deltapine DP 117 B2RF | 2.30 | 2 |
| PhytoGen PHY 485 WRF | 2.05 | 4 |
| Stoneville ST 4554B2RF | 1.87 | 3 |
| Stoneville ST 4427B2RF | 1.90 | 3 |
| Deltapine DP 164 B2RF | 2.23 | 2 |
| Deltapine DP 161 B2RF | 1.75 | 4 |
| Stoneville ST 5327B2RF | 1.98 | 3 |
| FiberMax FM 1880 B2RF | 2.08 | 3 |
| Deltapine DP 143 B2RF | 2.02 | 4 |
| **$LSD_{0.10}$** | 0.24 | 1 |
| **CV (%)** | 8.2 | 22.2 |
| **Mean** | **2.02** | **3** |

**†1=best, 5=worst**

## POINTE COUPEE – DOUBLE-CROP FOLLOWING WHEAT

Lettsworth, LA
**Soil Type** – Silt loam, Non-Irrigated
**Planting Date** – May 14, 2007
**Grower** – Tammy, Kevin, Brooke, and Damien Leonards
**County Agent** – Miles Brashier

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Stoneville ST 4554B2RF | 876 | 37.9 | 1.08 | 5.0 | 29.4 | 81.8 |
| Deltapine DP 117 B2RF | 865 | 38.5 | 1.14 | 4.8 | 29.7 | 82.4 |
| Deltapine DP 164 B2RF | 786 | 36.5 | 1.15 | 4.8 | 29.0 | 82.6 |
| PhytoGen PHY 485 WRF | 714 | 38.1 | 1.09 | 4.8 | 27.7 | 83.4 |
| Deltapine DP 143 B2RF | 707 | 37.6 | 1.17 | 4.4 | 26.3 | 80.6 |
| **Mean** | **790** | **37.7** | **1.13** | **4.8** | **28.4** | **82.2** |

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Stoneville ST 4554B2RF | 1.93 | 2 |
| Deltapine DP 117 B2RF | 1.97 | 1 |
| Deltapine DP 164 B2RF | 1.83 | 2 |
| PhytoGen PHY 485 WRF | 1.90 | 3 |
| Deltapine DP 143 B2RF | 1.43 | 3 |
| **Mean** | **1.81** | **2.2** |

**†1=best, 5=worst**

## RAPIDES PARISH

Alexandria, LA (Dean Lee Research Station)
**Soil Type** – Silt loam, Non-irrigated
**Planting Date** – April 30, 2007
**Grower** – Chris Deloach and Darrell Franks
**County Agent** – Matt Martin

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Dyna-Gro DG 2490 B2RF | 808 | 37.5 | 1.08 | 4.2 | 27.5 | 82.4 |
| PhytoGen PHY 485 WRF | 754 | 39.8 | 1.15 | 4.9 | 30.1 | 83.7 |
| Deltapine DP 161 B2RF | 730 | 40.1 | 1.18 | 4.9 | 29.2 | 82.7 |
| Deltapine DP 164 B2RF | 714 | 38.6 | 1.17 | 4.9 | 27.9 | 82.9 |
| Croplan CG 3220 B2RF | 676 | 39.2 | 1.14 | 5.0 | 28.5 | 83.0 |
| Stoneville ST 5327B2RF | 665 | 40.0 | 1.12 | 4.8 | 30.7 | 82.9 |
| Stoneville ST 4427B2RF | 663 | 38.3 | 1.12 | 4.9 | 28.5 | 83.2 |
| FiberMax FM 1880 B2RF | 627 | 37.9 | 1.17 | 4.6 | 29.0 | 82.4 |
| Croplan CG 3035 RF | 512 | 41.3 | 1.14 | 4.9 | 29.7 | 83.6 |
| **$LSD_{0.10}$** | 42 | 1.4 | 0.02 | 0.1 | 1.0 | 0.6 |
| **CV (%)** | 4.3 | 2.5 | 1.0 | 1.3 | 2.3 | 0.5 |
| **Mean** | **683** | **39.2** | **1.14** | **4.8** | **29.0** | **83.0** |

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Dyna-Gro DG 2490 B2RF | 2.64 | 3 |
| PhytoGen PHY 485 WRF | 2.67 | 2 |
| Deltapine DP 161 B2RF | 2.23 | 2 |
| Deltapine DP 164 B2RF | 2.85 | 2 |
| Croplan CG 3220 B2RF | 2.39 | 3 |
| Stoneville ST 5327B2RF | 2.36 | 2 |
| Stoneville ST 4427B2RF | 2.49 | 2 |
| FiberMax FM 1880 B2RF | 2.65 | 2 |
| Croplan CG 3035 RF | 1.77 | 3 |
| **$LSD_{0.10}$** | 0.6 | 0.5 |
| **CV (%)** | 17.9 | 14.3 |
| **Mean** | **2.45** | **2.3** |

**†1=best, 5=worst**

## RED RIVER PARISH

Evelyn, LA
**Soil Type** – Silt loam, irrigated
**Planting Date** – May 8, 2007
**Grower** – Donnie Powell
**County Agent** – Hubert Wilkerson

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Stoneville ST 4554B2RF | 1397 | 39.7 | 1.12 | 4.4 | 29.4 | 82.5 |
| Stoneville ST 5327B2RF | 1357 | 39.8 | 1.14 | 4.6 | 30.4 | 84.2 |
| Deltapine DP 117 B2RF | 1351 | 40.1 | 1.17 | 4.5 | 28.9 | 82.7 |
| Deltapine DP 164 B2RF | 1339 | 39.0 | 1.16 | 4.4 | 29.1 | 83.3 |
| Deltapine DP 161 B2RF | 1293 | 38.9 | 1.18 | 4.6 | 30.0 | 84.4 |
| Dyna-Gro DG 2490 B2RF | 1248 | 37.4 | 1.09 | 3.8 | 26.6 | 82.2 |
| PhytoGen PHY 485 WRF | 1226 | 40.1 | 1.15 | 4.7 | 31.5 | 84.2 |
| Stoneville ST 4427B2RF | 1183 | 38.1 | 1.14 | 4.5 | 28.9 | 83.9 |
| Deltapine DP 143 B2RF | 1168 | 38.6 | 1.19 | 4.1 | 28.0 | 82.7 |
| FiberMax FM 1880 B2RF | 1128 | 37.1 | 1.15 | 4.3 | 29.4 | 84.1 |
| **Mean** | **1269** | **38.9** | **1.15** | **4.4** | **29.2** | **83.4** |

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Stoneville ST 4554B2RF | 2.27 | 1 |
| Stoneville ST 5327B2RF | 1.73 | 2 |
| Deltapine DP 117 B2RF | 2.20 | 1 |
| Deltapine DP 164 B2RF | 2.37 | 2 |
| Deltapine DP 161 B2RF | 2.10 | 3 |
| Dyna-Gro DG 2490 B2RF | 2.07 | 2 |
| PhytoGen PHY 485 WRF | 2.20 | 2 |
| Stoneville ST 4427B2RF | 2.10 | 1 |
| Deltapine DP 143 B2RF | 2.00 | 2 |
| FiberMax FM 1880 B2RF | 2.47 | 3 |
| **Mean** | **2.15** | **1.9** |

**†1=best, 5=worst**

## TENSAS PARISH – SILT LOAM

Waterproof, LA
**Soil Type** – Silt loam, Non-irrigated
**Planting Date** – April 21, 2007
**Grower** – Truman Goldman
**County Agent** – Randy Smith

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Stoneville ST 4427B2RF | 1537 | 40.3 | 1.14 | 4.5 | 28.6 | 82.7 |
| Stoneville ST 4554B2RF | 1501* | 40.9 | 1.13 | 4.4 | 28.5 | 82.3 |
| Croplan CG 3520 B2RF | 1488* | 39.6 | 1.17 | 4.0 | 25.6 | 82.7 |
| Deltapine DP 161 B2RF | 1485* | 40.5 | 1.23 | 4.3 | 29.5 | 84.2 |
| Stoneville ST 5327B2RF | 1374 | 40.9 | 1.16 | 4.3 | 28.8 | 84.3 |
| PhytoGen PHY 485 WRF | 1367 | 41.1 | 1.15 | 4.7 | 28.5 | 83.7 |
| Americot AM 1504 B2RF | 1350 | 38.4 | 1.16 | 3.8 | 26.1 | 84.0 |
| Deltapine DP 164 B2RF | 1324 | 39.4 | 1.24 | 4.2 | 29.3 | 84.7 |
| Americot AM 1532 B2RF | 1316 | 39.3 | 1.17 | 4.0 | 26.4 | 83.0 |
| Croplan CG 4020 B2RF | 1226 | 39.1 | 1.19 | 4.0 | 25.6 | 82.7 |
| Deltapine DP 143 B2RF | 1131 | 39.4 | 1.25 | 4.3 | 28.2 | 83.7 |
| Deltapine DP 117 B2RF | 1086 | 41.5 | 1.19 | 4.3 | 29.9 | 84.4 |
| FiberMax FM 1880 B2RF | 1027 | 38.4 | 1.19 | 3.9 | 28.6 | 82.9 |
| **$LSD_{0.10}$** | 105 | 0.4 | 0.02 | 0.2 | 1.2 | 1.2 |
| **CV (%)** | 6.7 | 0.9 | 1.4 | 4.0 | 3.1 | 1.1 |
| **Mean** | **1324** | **39.9** | **1.18** | **4.2** | **28.0** | **83.5** |

* Not significantly different from the highest yielding variety (ST 4427B2RF) in the trial.

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Stoneville ST 4427B2RF | 3.13 | 1.5 |
| Stoneville ST 4554B2RF | 3.25 | 1.4 |
| Croplan CG 3520 B2RF | 3.30 | 1.4 |
| Deltapine DP 161 B2RF | 3.28 | 2.0 |
| Stoneville ST 5327B2RF | 3.30 | 1.4 |
| PhytoGen PHY 485 WRF | 3.50 | 1.3 |
| Americot AM 1504 B2RF | 3.55 | 2.1 |
| Deltapine DP 164 B2RF | 3.65 | 1.3 |
| Americot AM 1532 B2RF | 3.35 | 1.8 |
| Croplan CG 4020 B2RF | 2.93 | 1.1 |
| Deltapine DP 143 B2RF | 3.13 | 1.9 |
| Deltapine DP 117 B2RF | 3.23 | 1.0 |
| FiberMax FM 1880 B2RF | 3.33 | 1.6 |
| **$LSD_{0.10}$** | 0.43 | 0.5 |
| **CV (%)** | 11.0 | 30.3 |
| **Mean** | **3.30** | **1.5** |

**†1=best, 5=worst**

## TENSAS PARISH - CLAY

Somerset, LA
**Soil Type** – Clay, Non-irrigated
**Planting Date** – April 30, 2007
**Grower** – Jay Hardwick
**County Agent** – Randy Smith

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Deltapine DP 117 B2RF | 1616 | 41.7 | 1.21 | 4.5 | 30.3 | 85.0 |
| Stoneville ST 4554B2RF | 1583* | 41.0 | 1.16 | 4.7 | 29.0 | 83.8 |
| Deltapine DP 143 B2RF | 1583* | 41.0 | 1.24 | 4.1 | 28.4 | 83.4 |
| Stoneville ST 5327B2RF | 1569* | 41.0 | 1.19 | 4.7 | 29.5 | 84.7 |
| Deltapine DP 161 B2RF | 1566 | 40.6 | 1.21 | 4.6 | 29.8 | 84.0 |
| PhytoGen PHY 485 WRF | 1560 | 40.9 | 1.18 | 4.5 | 29.8 | 83.9 |
| Stoneville ST 4427B2RF | 1546 | 40.4 | 1.16 | 4.5 | 29.5 | 83.2 |
| Deltapine DP 164 B2RF | 1542 | 40.6 | 1.20 | 4.2 | 28.9 | 83.5 |
| FiberMax FM 1880 B2RF | 1526 | 39.7 | 1.21 | 3.9 | 29.0 | 83.8 |
| Croplan CG 3520 B2RF | 1503 | 38.9 | 1.20 | 4.1 | 26.8 | 84.5 |
| Americot AM 1532 B2RF | 1490 | 39.3 | 1.20 | 4.1 | 26.7 | 83.8 |
| Americot AM 1504 B2RF | 1426 | 37.5 | 1.15 | 3.9 | 26.2 | 83.8 |
| **$LSD_{0.10}$** | 49 | 1.1 | 0.03 | 0.3 | 1.1 | 0.8 |
| **CV (%)** | 2.3 | 1.9 | 1.18 | 5.7 | 2.7 | 0.7 |
| **Mean** | **1542** | **40.2** | **1.19** | **4.3** | **28.6** | **84.0** |

* Not significantly different from the highest yielding variety (DP 117 B2RF) in the trial.

**Plant Stand data collected 35 days after planting.**

| Variety | Plant stand | Vigor Rating |
|---|---|---|
| | plants/foot | 1-5† |
| Deltapine DP 117 B2RF | 3.60 | 1.0 |
| Stoneville ST 4554B2RF | 3.10 | 1.2 |
| Deltapine DP 143 B2RF | 3.10 | 2.0 |
| Stoneville ST 5327B2RF | 3.27 | 1.2 |
| Deltapine DP 161 B2RF | 3.00 | 2.0 |
| PhytoGen PHY 485 WRF | 3.13 | 1.0 |
| Stoneville ST 4427B2RF | 2.53 | 1.7 |
| Deltapine DP 164 B2RF | 3.20 | 1.5 |
| FiberMax FM 1880 B2RF | 3.00 | 1.5 |
| Croplan CG 3520 B2RF | 3.10 | 1.5 |
| Americot AM 1532 B2RF | 3.03 | 2.0 |
| Americot AM 1504 B2RF | 3.13 | 2.3 |
| **$LSD_{0.10}$** | 0.58 | 0.8 |
| **CV (%)** | 13.2 | 36.8 |
| **Mean** | **3.10** | **1.6** |

**†1=best, 5=worst**

## WEST CARROLL PARISH

Pioneer, LA
**Soil Type** – Silt loam, Irrigated
**Planting Date** – May 10, 2007
**Grower** – Ty Rogers
**County Agent** – Myrl Sistrunk

| Variety | Lint yield | Lint percent | UHM | mic | Strength | Uniformity |
|---|---|---|---|---|---|---|
| | lb/acre | | inch | | g/tex | index |
| Stoneville ST 4554B2RF | 1378 | 39.7 | 1.16 | 4.5 | 29.7 | 83.3 |
| Deltapine DP 117 B2RF | 1317 | 40.0 | 1.11 | 4.9 | 31.1 | 83.3 |
| PhytoGen PHY 485 WRF | 1250 | 39.1 | 1.14 | 5.0 | 30.6 | 83.1 |
| Deltapine DP 164 B2RF | 1188 | 38.2 | 1.19 | 4.8 | 29.9 | 83.5 |
| Deltapine DP 143 B2RF | 1170 | 38.4 | 1.18 | 4.8 | 32.3 | 84.4 |
| **Mean** | **1261** | **39.1** | **1.16** | **4.8** | **30.7** | **83.5** |

NOTE: Deltapine DP 444 BG/RR was included in the same field as a check variety and yielded 1084 lb lint/acre.

### Maturity

Maturity, or earliness, is an important agronomic characteristic of cotton varieties. Neither early nor full-season maturity is perfect for all situations. Early maturing varieties tend to bloom earlier, have shorter bloom periods, are generally shorter in stature, and have a compressed season. These characteristics can ease management and provide some insurance against late-season storms. However, early-maturing varieties also tend to have less stress tolerance due to a compressed bloom period. Conversely, full-season varieties often bloom later, have longer bloom periods, and are taller. Full-season varieties tend to extend the time in which fruiting structures must be protected and can be subject to increasing late-season pest pressure. However, full-season varieties are generally thought to have more stress tolerance and an increased ability to compensate for early fruit loss through an extended bloom period.

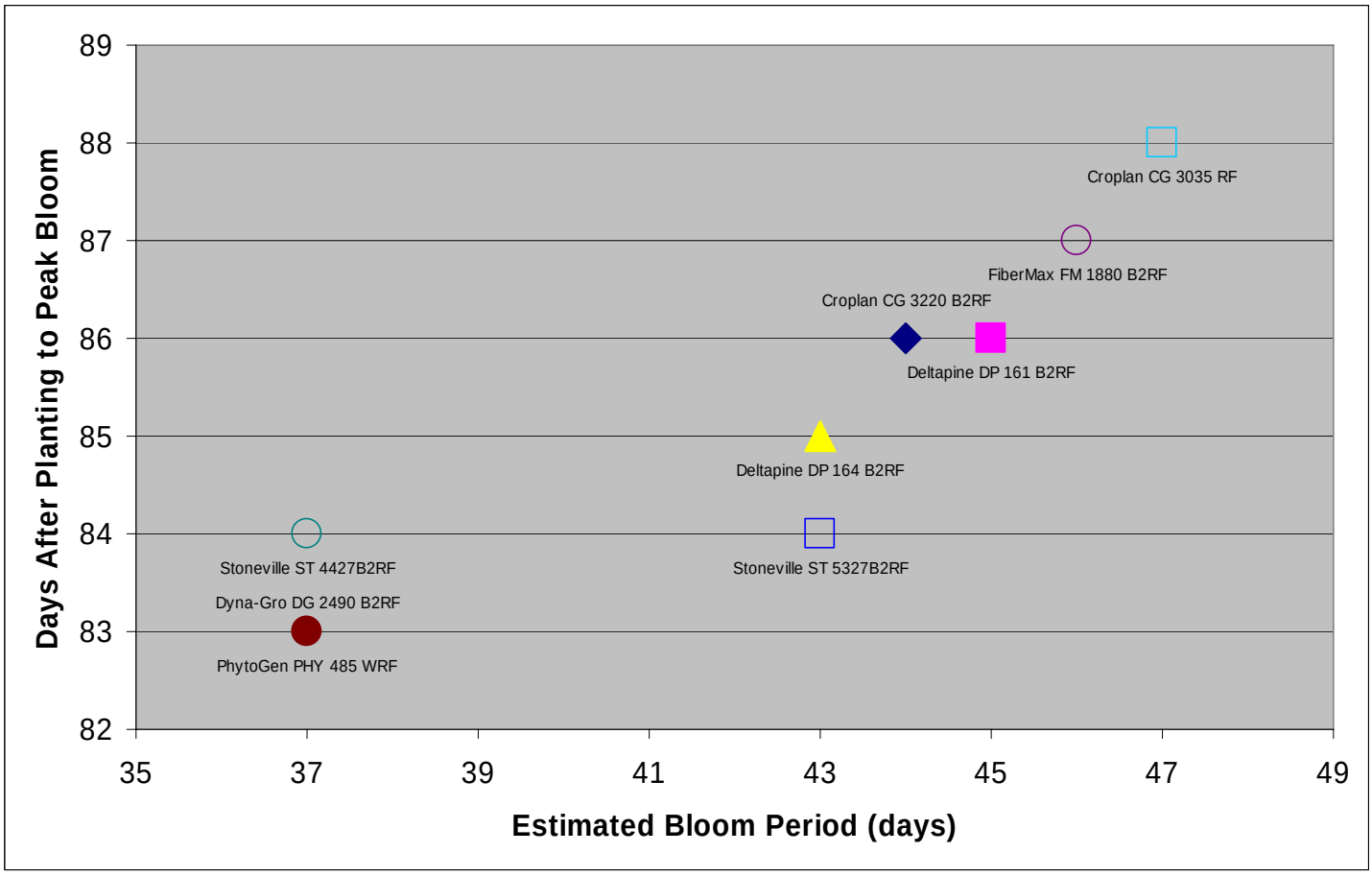
Characterizing maturity of cotton varieties is difficult to do. Generic terms such as early, or early-mid, or mid-full are often used with little explanation as to what they actually mean or how they were derived. Many measurements are “snapshots in time” and do not adequately relate to how maturity affects management.

For management purposes, earliness is important as it relates to when peak bloom occurs and how long the bloom period lasts. These two factors dictate to a large degree how a particular variety will be managed and protected. Therefore, a pilot program of recording the bloom period at one location was initiated in 2007. Through counting white flowers on a weekly basis, the date of peak bloom could be established, and the estimated time required for 95% of the blooms to appear on a plant could be calculated. The following table reflects these two values for varieties in the Rapides Parish trial.

## Relative Maturity – Dean Lee Research Station

| Variety | Estimated Bloom Period | Days to Peak Bloom |
|---|---|---|
| | days | days |
| Croplan CG 3035 RF | 47 | 88 |
| Croplan CG 3220 B2RF | 44 | 86 |
| Deltapine DP 161 B2RF | 45 | 86 |
| Deltapine DP 164 B2RF | 43 | 85 |
| Dyna-Gro DG 2490 B2RF | 37 | 83 |
| FiberMax FM 1880 B2RF | 46 | 87 |
| PhytoGen PHY 485 WRF | 37 | 83 |
| Stoneville ST 4427B2RF | 37 | 84 |
| Stoneville ST 5327B2RF | 43 | 84 |
| **Mean** | **42** | **85** |
| $LSD_{0.10}$ | 2 | 2 |
| CV (%) | 2.5 | 1.5 |

These data can also be shown graphically. As a variety moves up and to the right on the graph, it could be characterized as progressively more full-season. These data should represent a logical method of comparing the maturity of these varieties. Unfortunately, not all varieties were included in this trial. In future seasons, more varieties will be included in this type of analysis. These values are not absolute and will change slightly in different environments, management systems, and plant populations. Therefore, they should be used only as a guide and a means of comparing maturity among selected varieties.



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|---|---|
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