

2022 Texas Panhandle Replicated Agronomic Cotton Evaluation (RACE)



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| | et of Figures Page |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Distribution of growing degree days (GDD60) accumulated from planting through |
| | October |
| Lis | st of Tables |
| | 2022 Agronomic information by location including irrigation regime, precipitation, and harvest date5 |
| 2. | Characteristics of varieties evaluated in 2022 Panhandle RACE trials6 |
| 3. | Four-week post planting stand counts by location7 |
| 4. | Four-week post planting stand counts as a fraction of the planted population8 |
| 5. | 2022 Lint yield, quality, and loan value results for the irrigated Texas A&M AgriLife RACE trial in Hutchinson County line; Craig McCloy cooperator9 |
| 6. | 2022 Lint yield, quality, and loan value results for the irrigated Texas A&M AgriLife RACE trial located in Moore County at the North Plains Groundwater Conservation District's Water Conservation Center; Stan Spain cooperator |
| 7. | 2022 Lint yield, quality, and loan value results for the irrigated Texas A&M AgriLife RACE Plots located in Moore County; Chandler Preston cooperator |
| 8. | 2022 Lint yield, quality, and loan value results for the irrigated Texas A&M AgriLife RACE trial in Swisher County; Jeremy Reed cooperator |
| 9. | 2022 Lint yield, quality, and loan value results for the established dryland Texas A&M AgriLife RACE trial in Swisher County; Jeremy Reed cooperator |
| 10 | . Comparison of company entries between irrigated locations sorted by the maximum yielding location14 |

2022 Texas Panhandle Highlights

The objective of the Texas Panhandle replicated agronomic cotton evaluations (RACE Trials) is to provide producers regional, on-farm, and unbiased comparisons of top cotton varieties marketed for Panhandle cotton production systems. The 2022 Texas Panhandle RACE trials were planted at 7 locations under varying crop rotations, row spacings, and populations (Table 1). Three locations failed; the Hansford County trial was hailed out and the Moore and Parmer County trials failed because of weather related field variability. Early to medium maturing varieties were planted at each location as a seed company entry or a cooperating producer entry (Table 2).

Regionally, above-average May temperatures and widespread drought (Image 1) resulted in poor stands and crop failure. In the southern and western Panhandle, most dryland fields failed and many cotton fields under limited irrigation reached cutout in late July because of extreme water stress, which was enhanced where irrigation was shared with corn. Dryland and irrigated fields were more uniform in the eastern Panhandle. The majority of the seasonal rainfall was received late-July to mid-August, but in most cases, the rain conributed to excess late-seaon vegetative growth and did not benefit lint production. Where early season irrigation was managed to retain early fruiting positions, timely rainfall later in the season during the bloom and boll

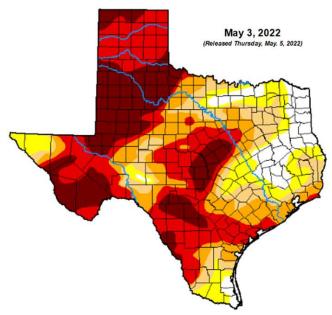


Image 1. Texas drought monitor May 3, 2022, representing D3 (extreme) and D4 (exceptional) https://droughtmonitor.unl.edu/data/png/202205 03/20220503 tx trd.png.

maturation periods enhanced lint yields and quality. Growing degree days (GDDs) were not limiting in 2022. The average 2022 cumulative GDDs were 2,496, which was 334 GDDs greater than the previous 6-year average of 2,178 for the RACE trial locations.

Cotton germination and emergence often occur for 2- or more weeks after planting under Panhandle conditions. To more accurately represent final plant stands, stand count data is collected 30-days after planting. The 2022 final plant stand was 46-67% of the planted seed (Tables 3 and 4).

The Swisher County dryland trial was an "established" dryland field trial designed by Blayne Reed. The two Swisher trials were located on one center pivot with low well capacity. To improve irrigation water efficiency by increasing yields per inch of water

applied, in-season irrigation was concentrated on half the planted acreage (the irrigated trial), but to ensure more uniform stands under dryland conditions, the "dryland" acreage received a one-inch irrigation after planting to ensure crop establishment. This irrigation ensured establishment, but because of extreme drought conditions, a yield benefit was not recognized. The highest yielding irrigated variety in 2022 was FM 1621 GL at the Hutchinson County trial (1,927 lbs. lint/acre; Tables 5 and 10).

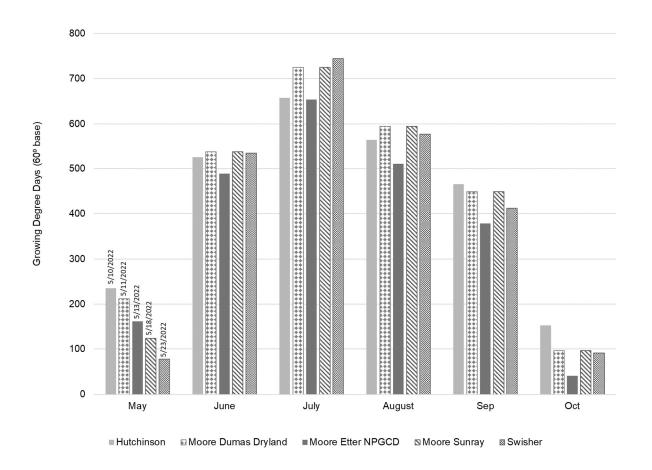


Figure 1. Distribution of growing degree days (GDD60) accumulated from planting through October. Planting date for each location noted above May bars. In November, negligible GDDs were accumulated, or defoliation had occurred. Temperature data at the Hutchinson County trial, Moore County Etter and Moore County Dumas trials was collected from a Texas A&M AgriLife weather station located at the field site. Temperature data for the Moore County Sunray trial is from the AgriLife station located ~3.5 miles SW of the field site. Temperature data for the Swisher County trial was collected from a NWS observation site at Tulia (https://www.weather.gov/wrh/Climate?wfo=lub).

 Table 1. 2022 Agronomic information by location.

| County | Hansford | Hutchinson | Moore | Moore | Moore | Parmer | Swisher | Swisher |
|------------------------------------|---------------|------------------------------------|---------------------------|---------------------------|---------------------------|----------------------------------|--------------------------------|--------------------------------|
| Location (Nearest Town) | | | Sunray | Farwell | Kress | Kress | | |
| Cooperator | Greg Slough | Craig McCloy | Justin Garrett | NPGCD (Stan Spain) | Chandler Preston | Ryan Williams | Jeremy Reed | Jeremy Reed |
| County Agent(s) | Kristy Slough | Hanna Conner & Kristy Slough | D. Coker & Fischbacher | D. Coker & Fischbacher | D. Coker & Fischbacher | John Thobe & Janelle Duffy | Blayne Reed & Jason Wade | Blayne Reed & Jason Wade |
| Irrigation Regime | Irrigated | Irrigated | Dryland | Irrigated | Irrigated | Limted Irrigated | Irrigated | Est. Dryland |
| In-Season Precipitation (in.) | | 5.0 | 8.4 | 7.6 | 7.9 | | 8.4 | 8.4 |
| Growing Degree Days (DD60s) | | 2,511 | 2,635 | 2,233 | 2,571 | | 2,438 | 2,438 |
| Herbicide Technologies | Gly, Gluf, XF | Gly, Gluf, XF | Gly, Gluf, XF | XF | Gly, Gluf, XF, Enlist | XF | XF | XF |
| Planting Date | 5/19/2022 | 5/10/2022 | 5/11/2022 | 5/13/2022 | 5/18/2022 | 5/12/2022 | 5/23/2022 | 5/23/2022 |
| Plantiong Pop (Seeds/ac) | 50,000 | 90,000 | 25,000 | 74,500 | 55,000 | 40,000 | 50,000 | 24,500 |
| Soil Temp. at Planting (°F) | 74 | 68 | 85 | 75 | 67 | | 67 | 67 |
| Harvest Date | Failed | 10/27/2022 | Failed | 11/6/2022 | 12/6/2022 | Failed | 12/1/2022 | 12/1/2022 |
| Row Spacing (in.) | 30 | 20 | 30 | 30 | 30 | 40 | 40 | 40 |

Table 2. Characteristics of varieties evaluated in 2022 Panhandle RACE trials. All variety characteristics are obtained from company variety descriptions. Varieties listed are seed company and farmer entries.

| Variety | Maturity | Herbicide Package | Leaf Type | Storm Tolerance* | Plant Height | Mic | Verticilium Tol.** | Bacterial Blight** |
|----------------------|------------|-----------------------------------|----------------|---------------------|-----------------|---------|--------------------|-----------------------|
| Armor 9371 B3XFŧ | Early-Med | Glyphos., Glufos., and Dicamba | Semi-Smooth | 3 | Medium | 4.5-4.6 | Good | Tolerant |
| DynaGro 3469 B3XFŧ | Early-Med | Glyphos., Glufos., and Dicamba | Smooth | 9 | Medium | 4.4 | Average-Good | Very Tolerant |
| Deltapine 1820 B3XF | Early-Med | Glyphos., Glufos., and Dicamba | Semi-Smooth | 3.5 | Med-Tall | 4.1 | Moderate | Resistant |
| Deltapine 1822 XF | Early-Med | Glyphos., Glufos., and Dicamba | Semi-Smooth | 3 | Med-Tall | 4.3 | Moderate | Resistant |
| DeltaPine 1908 B3XF | Very Early | Glyphos., Glufos., and Dicamba | Smooth | 5 | Medium | 3.9 | Mod. Susceptible | Resistant |
| Deltapine 1909 B3XF | Very Early | Glyphos., Glufos., and Dicamba | Smooth | 5 | Med-Tall | 3.6 | Mod. Susceptible | Resistant |
| Deltapine 2012 B3XF | Early | Glyphos., Glufos., and Dicamba | Smooth | 4 | Med-Tall | 4.3 | Mod. Tolerance | Resistant |
| DeltaPine 2020 B2XFI | Early-Med | Glyphos., Glufos., and Dicamba | Semi-Smooth | 4 | Med-Tall | 4.3 | Mod. Tolerance | Resistant |
| DeltaPine 2115 B3XF | Early | Glyphos., Glufos., and Dicamba | Semi-Smooth | 4 | Medium | 4.6 | Mod. Susceptible | Moderate |
| DeltaPine 2123 B3XF | Early-Med | Glyphos., Glufos., and Dicamba | Semi-Smooth | 4 | Medium | 4.4 | Mod. Susceptible | Mod. Susceptible |
| DeltaPine 2127 B3XF | Early-Med | Glyphos., Glufos., and Dicamba | Smooth | 7 | Med-Tall | 4.7 | Mod. Susceptible | Susceptible |
| FiberMax 1621 GL | Early | Glyphosate and Glufosinate | Semi-Hairy | 6 | Medium | 4.2 | Fair | Resistant |
| FiberMax 1730 GLTP | Early-Med | Glyphosate and Glufosinate | Semi-Smooth | 5 | Short | 4.2 | Good | Resistant |
| FiberMax 1888 GL | Early-Med | Glyphosate and Glufosinate | Semi-Smooth | 6 | Medium | 3.6 | Fair | Resistant |
| FiberMax 2202 GL | Med | Glyphosate and Glufosinate | Semi-Smooth | 5 | Medium | 4.6 | Outstanding | Resistant |
| FiberMax 2398 GLTP | Med | Glyphosate and Glufosinate | Semi-Smooth | 5 | Med-Tall | 4.4 | Very Good | Resistant |
| NexGen 3195 B3XF | Early | Glyphos., Glufos., and Dicamba | Semi-Smooth | 9 | Medium | 4.0-4.2 | Very Good | Very Tolerant |
| NexGen 3729 B2XF | Early-Med | Glyphos., Glufos., and Dicamba | Semi-Smooth | 3 | Tall | 4.4-4.6 | Fair | Fair |
| NexGen 3930 B3XFŧ | Early-Med | Glyphos., Glufos., and Dicamba | Semi-Smooth | 7 | Med-Tall | 4.1-4.5 | Very Good | Very Tolerant |
| NexGen 3956 B3XFŧ | Early-Med | Glyphos., Glufos., and Dicamba | Semi-Smooth | 8 | Med-Tall | 4.3-4.7 | Very Good | Very Tolerant |
| Phytogen 205 W3FEł | Very Early | Glyphosate, Glufosinate, and Enli | st Semi-Smooth | Excellent | Short | 4.5 | Tolerant | Resistant |
| Stoneville 4993 B3XF | Early-Med | Glyphos., Glufos., and Dicamba | Semi-Smooth | 6 | Medium | 4.6 | Fair | Fair |
| #Farmer entry | - | | | | | | | |

#Farmer entry

^{*}Storm Tolerance (1-9): 1=Loose Boll, 9=Tight Boll from company variety descriptions.

^{**} Verticillium and bacterial bliight tolerance from company descriptions.

Table 3. Four-week post planting stand counts by location.

| | | | Moore | | | | |
|----------------------|---------|---------|--------|--------------|---------|---------|---------|
| | Hutch - | Moore | Etter | Moore | Parmer | | Swisher |
| | inson | Dumas | NPGCD | Sunray | Deficit | Swisher | Est. |
| | Irrig. | Dryland | Irrig. | Irrig. | Irrig. | Irrig. | Dryland |
| Planted Seeds/Acre | 90,000 | 25,000 | 74,500 | 55,000 | 40,000 | 50,000 | 24,500 |
| | | | Meas | sured plants | s/acre | | |
| Armor 9371 B3XFŧ | | | | | 23,032 | | |
| DynaGro 3469 B3XFŧ | | | 43,996 | | * | | |
| DeltaPine 1820 B3XF | 54,886 | | 43,342 | 41,818 | 21,072 | 27,770 | |
| DeltaPine 1822 XF | | 10,890 | | | | 39,640 | 18,186 |
| DeltaPine 1908 B3XF | 52,708 | | 53,143 | 39,785 | 26,463 | 32,343 | |
| DeltaPine 1909 XF | | 15,827 | | | | | 16,117 |
| DeltaPine 2012 B3XF | | 4,211 | | | | | 16,226 |
| DeltaPine 2020 B2XFŧ | | | | 39,640 | | | |
| DeltaPine 2115 B3XF | 49,005 | | 47,698 | 36,155 | 24,339 | 25,592 | |
| DeltaPine 2123 B3XF | | 9,148 | | | | | 13,939 |
| DeltaPine 2127 B3XF | 58,153 | | 52,272 | 36,736 | 26,953 | 27,334 | |
| FiberMax 1621 GL | 57,717 | 15,827 | | | | | |
| FiberMax 1730 GLTP | 59,677 | | | | | | |
| FiberMax 1888 GL | | 15,101 | | | | | |
| FiberMax 2202 GL | | 12,197 | | | | | |
| FiberMax 2398 GLTP | 50,747 | | | | | | |
| NexGen 3195 B3XF | 56,682 | 11,906 | 48,787 | 40,656 | 23,522 | 30,710 | 12,959 |
| NexGen 3299 B3XF | 45,411 | 11,471 | 32,017 | 26,717 | 18,949 | 17,860 | 8,930 |
| NexGen 3930 B3XFŧ | | 11,761 | | | | | |
| NexGen 3956 B3XFŧ | | 12,778 | | | | | |
| Phytogen 205 W3FEł | 66,429 | | | | | | |
| Stoneville 4993 B3XF | 51,945 | 7,550 | 45,883 | 34,703 | 22,052 | 28,641 | 11,217 |
| Trial Average | 54,851 | 11,556 | 45,892 | 37,026 | 23,298 | 28,736 | 13,939 |
| CV, % | 9.8 | 16.1 | 10.8 | 10.4 | 12.9 | 9.7 | 14.4 |
| p-value | 0.0016 | <0.0001 | 0.0703 | 0.0049 | 0.2689 | <0.0001 | 0.0007 |
| LSD | 9,225 | 3,155 | NS | 6,668 | NS | 4,809 | 3,546 |

^{*}Varieties not planted at the respective location.

#Farmer entry

Stand counts were measured approximately 30 days post planting. All locations represent stand counts from all 3 replications with the exception of Parmer County and Moore County at NPGCD which represent 2 replications.

Table 4. Four-week post planting stand counts as a fraction of the planted population.

| | | | Moore | | | | | | | | |
|----------------------|---------|----------------------|--------|--------|---------|---------|---------|--|--|--|--|
| | Hutch - | Moore | Etter | Moore | Parmer | | Swisher | | | | |
| | inson | Dumas | NPGCD | Sunray | Deficit | Swisher | Est. | | | | |
| | Irrig. | Dryland | Irrig. | Irrig. | Irrig. | Irrig. | Dryland | | | | |
| Planted Seeds/Acre | 90,000 | 25,000 | 74,500 | 55,000 | 40,000 | 50,000 | 24,500 | | | | |
| | | Measured plants/acre | | | | | | | | | |
| Armor 9371 B3XFŧ | | | | | 0.58 | | | | | | |
| DynaGro 3469 B3XFŧ | | | 0.59 | | * | | | | | | |
| DeltaPine 1820 B3XF | 0.61 | | 0.58 | 0.76 | 0.53 | 0.56 | | | | | |
| DeltaPine 1822 XF | | 0.44 | | | | 0.79 | 0.74 | | | | |
| DeltaPine 1908 B3XF | 0.59 | | 0.71 | 0.72 | 0.66 | 0.65 | | | | | |
| DeltaPine 1909 XF | | 0.63 | | | | | 0.66 | | | | |
| DeltaPine 2012 B3XF | | 0.17 | | | | | 0.66 | | | | |
| DeltaPine 2020 B2XFŧ | | | | 0.72 | | | | | | | |
| DeltaPine 2115 B3XF | 0.54 | | 0.64 | 0.66 | 0.61 | 0.51 | | | | | |
| DeltaPine 2123 B3XF | | 0.37 | | | | | 0.57 | | | | |
| DeltaPine 2127 B3XF | 0.65 | | 0.70 | 0.67 | 0.67 | 0.55 | | | | | |
| FiberMax 1621 GL | 0.64 | 0.63 | | | | | | | | | |
| FiberMax 1730 GLTP | 0.66 | | | | | | | | | | |
| FiberMax 1888 GL | | 0.60 | | | | | | | | | |
| FiberMax 2202 GL | | 0.49 | | | | | | | | | |
| FiberMax 2398 GLTP | 0.56 | | | | | | | | | | |
| NexGen 3195 B3XF | 0.63 | 0.48 | 0.65 | 0.74 | 0.59 | 0.61 | 0.53 | | | | |
| NexGen 3299 B3XF | 0.50 | 0.46 | 0.43 | 0.49 | 0.47 | 0.36 | 0.36 | | | | |
| NexGen 3930 B3XFŧ | | 0.47 | | | | | | | | | |
| NexGen 3956 B3XFŧ | | 0.51 | | | | | | | | | |
| Phytogen 205 W3FEł | 0.74 | | | | | | | | | | |
| Stoneville 4993 B3XF | 0.58 | 0.30 | 0.62 | 0.63 | 0.55 | 0.57 | 0.46 | | | | |
| Trial Average | 0.61 | 0.46 | 0.62 | 0.67 | 0.58 | 0.57 | 0.57 | | | | |

^{*}Varieties not planted at the respective location.

#Farmer entry

Stand counts were measured approximately 30 days post planting. All locations represent stand counts from all 3 replications with the exception of Parmer County and Moore County at NPGCD which represent 2 replications.

Table 5. 2022 Lint yield, quality, and loan value results for the Texas A&M AgriLife irrigated RACE Trial located in Hutchinson County, Craig McCloy Cooperator.

| | Seed Cotton | | Lint | Seed | | Fiber | | | Lint loan | Lint |
|---------------|-------------|---------|---------|---------|--------|---------|----------|------------|-----------|---------|
| | Yield | Turnout | Yield | Yield | Micro- | Length | Strength | Uniformity | Value | Value |
| Variety | Ib/acre | % | Ib/acre | lb/acre | naire | (in.) | (g/tex) | % | cents/lb | \$/acre |
| FM 1621 GL | 4763 | 40 | 1927 | 2721 | 3.6 | 1.21 | 30 | 82 | 50.3 | 969 |
| NG 3195 B3XF | 4879 | 36 | 1752 | 2474 | 3.5 | 1.21 | 29 | 83 | 51.3 | 899 |
| DP 1820 B3XF | 4882 | 35 | 1725 | 2435 | 3.5 | 1.31 | 30 | 83 | 52.5 | 906 |
| FM 2398 GLTP | 4606 | 36 | 1660 | 2343 | 3.3 | 1.23 | 29 | 83 | 50.0 | 830 |
| PHY 205 W3FE* | 4961 | 32 | 1604 | 2264 | 3.7 | 1.18 | 32 | 83 | 55.8 | 894 |
| DP 2127 B3XF | 4228 | 38 | 1588 | 2243 | 3.4 | 1.18 | 29 | 83 | 51.7 | 821 |
| DP 2115 B3XF | 4006 | 39 | 1555 | 2196 | 3.3 | 1.20 | 29 | 82 | 47.0 | 734 |
| FM 1730 GLTP | 4534 | 34 | 1532 | 2163 | 3.3 | 1.28 | 31 | 83 | 49.9 | 762 |
| DP 1908 B3XF | 4642 | 32 | 1497 | 2114 | 3.6 | 1.26 | 30 | 83 | 51.1 | 764 |
| NG 3299 B3XF | 4131 | 35 | 1440 | 2033 | 3.3 | 1.22 | 31 | 83 | 50.5 | 727 |
| ST 4993 B3XF | 4369 | 32 | 1392 | 1965 | 3.3 | 1.21 | 31 | 83 | 51.7 | 717 |
| Test Average | 4545 | 35 | 1606 | 2268 | 3.4 | 1.23 | 30 | 83 | 51.1 | 820 |
| CV, % | 3.0 | 5.7 | 6.0 | 6.0 | 5.9 | 1.2 | 2.7 | 0.55 | 6.7 | 9.0 |
| p-value | <0.0001 | 0.0003 | <0.0001 | <0.0001 | 0.1517 | <0.0001 | 0.0032 | 0.0613 | 0.3529 | 0.0025 |
| LSD | 228 | 3.4 | 163 | 230 | NS | 0.02 | 1.4 | NS | 5.80 | 124 |

Lint loan value calculated from the 2022 Upland Cotton Loan Evaluation Model from Cotton Incorporated using a \$0.52/pound base.

Samples ginned on a Compass gin at TTU-FBRI.

^{*}Farmer Entry

Table 6. 2022 Lint yield, quality, and loan value results for the Texas A&M AgriLife irrigated RACE Plots located at North Plains Groundwater Conservation District's Water Conservation Center in Moore County, Stan Spain Cooperator.

| | Seed Cotton Yield | Turnout | Lint Yield | Seed Yield | Micro- | Fiber | Strongth | Uniformity | Lint Ioan Value | Lint Value |
|---------------|----------------------|---------|---------------|---------------|--------|--------|----------|------------|--------------------|---------------|
| Variety | lb/acre | | | lb/acre | | (in.) | (g/tex) | % | cents/lb | \$/acre |
| DP 2127 B3XF | 4022 | 33 | 1328 | 1875 | 3.9 | 1.16 | 29.2 | 83 | 56.9 | 755 |
| ST 4993 B3XF | 3809 | 35 | 1326 | 1872 | 4.0 | 1.18 | 30.1 | 83 | 57.4 | 760 |
| DG 3469 B3XF* | 3652 | 35 | 1271 | 1794 | 3.9 | 1.18 | 28.6 | 83 | 56.0 | 713 |
| DP 2115 B3XF | 3365 | 37 | 1239 | 1750 | 3.7 | 1.19 | 28.9 | 83 | 56.0 | 693 |
| DP 1820 B3XF | 3948 | 31 | 1228 | 1733 | 4.0 | 1.29 | 30.8 | 84 | 57.2 | 702 |
| NG 3299 B3XF | 3362 | 36 | 1204 | 1701 | 4.0 | 1.20 | 31.6 | 84 | 57.3 | 690 |
| NG 3195 B3XF | 3831 | 31 | 1170 | 1652 | 3.8 | 1.21 | 29.3 | 83 | 57.0 | 667 |
| DP 1908 B3XF | 3583 | 31 | 1113 | 1571 | 3.5 | 1.25 | 29.9 | 83 | 52.6 | 583 |
| Test Average | 3697 | 34 | 1235 | 1744 | 3.8 | 1.21 | 29.8 | 83 | 56.3 | 695 |
| CV, % | 20.9 | 6.1 | 16.5 | 16.5 | 3.4 | 1.2 | 0.8 | 0.4 | 2.3 | 15.9 |
| p-value | 0.9733 | 0.0988 | 0.9514 | 0.9514 | 0.0414 | 0.0003 | <0.0001 | 0.1140 | 0.0761 | 0.8048 |
| LSD | NS | NS | NS | NS | 0.3 | 0.03 | 0.50 | NS | NS | NS |

Lint loan value calculated from the 2022 Upland Cotton Loan Evaluation Model from Cotton Incorporated using a \$0.52/pound base.

Samples ginned on a Compass gin at TTU-FBRI.

^{*}Farmer Entry

Table 7. 2022 Lint yield, quality, and loan value results for the irrigated Texas A&M AgriLife RACE Plots located in Moore County, Chandler Preston Cooperator.

| | Seed Cotton | | Lint | Seed | | Fiber | | | Lint loan | Lint |
|---------------|--------------------|---------|---------|---------|---------|--------|----------|------------|-----------|---------|
| | Yield | Turnout | Yield | Yield | Micro- | Length | Strength | Uniformity | Value | Value |
| Variety | Ib/acre | % | lb/acre | lb/acre | naire | (in.) | (g/tex) | % | cents/lb | \$/acre |
| DP 1820 B3XF | 4604 | 36 | 1649 | 2328 | 3.9 | 1.22 | 29.7 | 82 | 56.9 | 938 |
| ST 4993 B3XF | 4905 | 33 | 1611 | 2275 | 4.1 | 1.16 | 30.9 | 83 | 57.3 | 924 |
| DP 1908 B3XF | 5002 | 32 | 1602 | 2261 | 3.5 | 1.21 | 30.2 | 82 | 53.3 | 853 |
| DP 2127 B3XF | 4450 | 35 | 1554 | 2194 | 3.9 | 1.14 | 27.4 | 82 | 56.6 | 879 |
| NG 3299 B3XF | 4530 | 33 | 1490 | 2104 | 4.0 | 1.19 | 30.9 | 83 | 57.4 | 856 |
| NG 3195 B3XF | 4767 | 31 | 1480 | 2090 | 3.8 | 1.20 | 29.8 | 82 | 56.8 | 841 |
| DP 2115 B3XF | 4370 | 33 | 1430 | 2020 | 3.7 | 1.17 | 27.9 | 82 | 57.0 | 816 |
| DP 2020 B2XF* | 4298 | 32 | 1359 | 1919 | 3.4 | 1.18 | 27.1 | 81 | 53.6 | 728 |
| Test Average | 4616 | 33 | 1522 | 2149 | 3.79 | 1.18 | 29.2 | 82 | 56.1 | 854 |
| CV, % | 6.1 | 5.3 | 7.9 | 7.9 | 3.0 | 2.2 | 1.9 | 0.5 | 2.6 | 9.3 |
| p-value | 0.0751 | 0.0560 | 0.1175 | 0.1175 | <0.0001 | 0.0312 | <0.0001 | 0.0005 | 0.0129 | 0.1130 |
| LSD | NS | NS | NS | NS | 0.2 | 0.04 | 0.96 | 0.8 | 2.60 | NS |

Lint loan value calculated from the 2022 Upland Cotton Loan Evaluation Model from Cotton Incorporated using a \$0.52/pound base.

Samples ginned on a Compass gin at TTU-FBRI.

^{*}Farmer Entry

Table 8. 2022 Lint yield, quality, and loan value results for the Texas A&M AgriLife irrigated RACE Plots located in Swisher County, Jeremy Reed Cooperator.

| | Seed Cotton | | Lint | Seed | | Fiber | | | Lint Ioan | Lint |
|--------------|-------------|---------|---------|---------|--------|--------|----------|------------|-----------|---------|
| | Yield | Turnout | Yield | Yield | Micro- | Length | Strength | Uniformity | Value | Value |
| Variety | lb/acre | % | Ib/acre | lb/acre | naire | (in.) | (g/tex) | % | cents/lb | \$/acre |
| NG 3299 B3XF | 2168 | 35 | 764 | 1079 | 4.9 | 1.16 | 30.2 | 83 | 54.9 | 596 |
| DP 1908 B3XF | 2357 | 31 | 739 | 1043 | 4.7 | 1.23 | 30.9 | 83 | 55.5 | 578 |
| DP 2127 B3XF | 2054 | 35 | 723 | 1021 | 5.1 | 1.17 | 28.3 | 83 | 55.1 | 561 |
| DP 2115 B3XF | 2050 | 34 | 704 | 994 | 4.8 | 1.20 | 28.9 | 83 | 56.5 | 561 |
| ST 4993 B3XF | 1836 | 37 | 673 | 950 | 5.3 | 1.12 | 30.2 | 83 | 53.1 | 504 |
| NG 3195 B3XF | 1956 | 34 | 672 | 949 | 4.6 | 1.18 | 29.7 | 83 | 56.0 | 532 |
| DP1822 B3XF | 2058 | 31 | 645 | 911 | 4.7 | 1.24 | 32.0 | 82 | 56.2 | 512 |
| DP 1820 B3XF | 1921 | 32 | 605 | 855 | 4.9 | 1.24 | 31.9 | 84 | 56.2 | 480 |
| Test Average | 2050 | 34 | 691 | 975 | 4.9 | 1.19 | 30.3 | 83 | 55.4 | 541 |
| CV, % | 15.1 | 7.0 | 18.3 | 18.3 | 4.1 | 2.8 | 3.4 | 8.0 | 2.8 | 19.1 |
| p-value | 0.5998 | 0.0886 | 0.8169 | 0.8169 | 0.0171 | 0.0044 | 0.0037 | 0.3525 | 0.2359 | 0.8560 |
| LSD | NS | NS | NS | NS | 0.3 | 0.06 | 1.8 | NS | NS | NS |

Lint loan value calculated from the 2022 Upland Cotton Loan Evaluation Model from Cotton Incorporated using a \$0.52/pound base.

Samples ginned on a Compass gin at TTU-FBRI.

Table 9. 2022 Lint yield, quality, and loan value results for the Texas A&M AgriLife established dryland RACE Plots located in Swisher County, Jeremy Reed Cooperator. The established dryland plots received irrigation to establish the trial then the field was "dryland" the remainder of the season. All three reps were combined to make one round module when harvesting.

| | Seed Cotton | | Lint | Seed | | Fiber | | | Lint loan | Lint |
|--------------|--------------------|---------|---------|---------|--------|--------|----------|------------|-----------|---------|
| | Yield | Turnout | Yield | Yield | Micro- | Length | Strength | Uniformity | Value | Value |
| Variety | Ib/acre | % | lb/acre | Ib/acre | naire | (in.) | (g/tex) | % | cents/lb | \$/acre |
| NG 3299 B3XF | 903 | 31 | 282 | 398 | 4.3 | 1.22 | 32.4 | 83 | 55.7 | 157 |
| ST 4993 B3XF | 773 | 32 | 251 | 354 | 4.3 | 1.21 | 31.3 | 83 | 57.0 | 143 |
| DP 1820 XF | 856 | 29 | 249 | 352 | 4.5 | 1.24 | 30.7 | 82 | 55.0 | 137 |
| NG 3195 B3XF | 762 | 30 | 227 | 320 | 4.2 | 1.22 | 29.2 | 82 | 56.4 | 128 |
| DP 2123 B3XF | 765 | 29 | 221 | 313 | 4.7 | 1.17 | 29.4 | 80 | 52.6 | 116 |
| DP 2012 B3XF | 873 | 25 | 218 | 308 | 4.4 | 1.29 | 31.5 | 82 | 56.6 | 123 |
| DP 1822 XF | 686 | 29 | 196 | 277 | 4.5 | 1.25 | 32.4 | 81 | 55.2 | 108 |
| DP 1909 XF | 668 | 29 | 191 | 269 | 4.3 | 1.22 | 29.7 | 81 | 54.9 | 105 |
| Test Average | 786 | 29 | 229 | 324 | 4.4 | 1.23 | 30.8 | 82 | 55.4 | 127 |

Lint loan value calculated from the 2022 Upland Cotton Loan Evaluation Model from Cotton Incorporated using a \$0.52/pound base. Samples ginned on a Compass gin at TTU-FBRI.

Table 10. Comparison of company entries between irrigated locations sorted by the maximum yielding location.

| | I lost a latin | N 4 | Moore | |
|--------------|----------------|------------|-----------|---------|
| | Hutchin- | Moore | Etter | |
| | son | Sunray | NPGCD | Swisher |
| Variety | | Lint Yiel | d (lb/ac) | |
| FM 1621 GL | 1927 | * | | |
| NG 3195 B3XF | 1752 | 1480 | 1170 | 672 |
| DP 1820 B3XF | 1725 | 1649 | 1228 | 605 |
| FM 2398 GLTP | 1660 | | | |
| DP 2127 B3XF | 1588 | 1554 | 1328 | 723 |
| DP 2115 B3XF | 1555 | 1430 | 1239 | 704 |
| FM 1730 GLTP | 1532 | | | |
| DP 1908 B3XF | 1497 | 1602 | 1113 | 739 |
| NG 3299 B3XF | 1440 | 1490 | 1204 | 764 |
| ST 4993 B3XF | 1392 | 1611 | 1326 | 673 |

^{*}XF only trial (FiberMax varieties not at the respective locations)

Texas A&M AgriLife collaborated with North Plains Groundwater Conservation District to provide weekly video updates rotating between RACE trials within District boundaries. The weekly video series, Cotton and Conservation, provided NPGCD cotton producers real-time agronomic updates from Jourdan Bell, Dennis Coker, and Marcel Fischbacher under the respective environmental and management systems. Videos are available at:

http://northplainsqcd.org/conservationprograms/agricultural-conservation/cotton/

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http://cotton.tamu.edu



