



Replicated Agronomic Cotton Evaluation Mixed Technology

Grower Cooperator: Justin Garrett
County Agents: Dennis Coker, Ph.D.; Marcel Fischbacher
Texas A&M AgriLife: Ken Legé, Ph.D.
Location: Sunray, TX (Moore Co)
Replicates: 3
Plot Size: 8 rows x 1/2 mile
Row Spacing: 30"
Beds: No
Previous crop(s): Wheat, strip tilled
Soil type: Sunray Loam/Gruver Clay Loam
Irrigation: Pivot (3.1 gpma)

Planting Date: 5/19/2025
Seed Treatments: Various fungicide+insecticide
Moist. @ planting: Good
Soil Temp @ planting: 67 F
Seed/Acre: 77,000
GPS Lat: 35.935862
GPS Long: -101.762884
Elevation: 3472
Harvest Date: 11-12/13-25



*NOTE: PHY205W3FE & PHY415W3FE were originally entered at this location; an error by AgriLife prevented their being planted; a grower standard variety replaced those entries (DP1820B3XF).

**NOTE: severe hail occurred at this site in early August, completely defoliating the crop, but fruit load was less affected.

Crop Stage*	Avg High Temp (°F)	Avg Low Temp (°F)	DD60 (95°F max)	Long Term DD60	Rain (in)	Solar Radiation (W/m ²)	Total ET (in)	# Hours>95°F	Avg Dev>95°F
Planting to PHS	84.9	60.1	508.5	535.0	2.95	242935	9.62	25	0.14
PHS to First Bloom	89.8	66.1	499.0	544.0	1.62	170901	6.54	23	0.14
First Bloom to Cutout	91.0	66.2	511.0	533.0	1.18	166252	6.21	27	0.41
Cutout to Defoliation	81.4	55.9	550.5	550.5	5.29	257356	8.96	2	0.02
Defoliation to Harvest	67.4	37.3	3.0	23.0	0.60	68294	1.98	0	
Total			2072.0	2185.5	11.64	905738	33.31	77	

*PHS @ ≥ 500DD60s; first bloom @ ≥ 1000 DD60s; Cutout = first bloom + 28 d; ET=evapotranspiration; Avg Dev>95°F=average degrees above 95°F when the daily high was ≥ 95°F

Variety	Lint Yield (lbs/A)	Turnout (%)	Mic	Length (in)	Staple (1/32 in)	Strength (g/tex)	Uniformity (%)	Color Grades	Leaf Grade	Loan Value (\$/lb)	Lint Value (\$/A)	Total Crop Value (\$/A)	Net Return (\$/A)
DP1822XF	1320	34.9	3.38	1.19	37.9	34.7	82.8	21, 11, 22	2.3	0.5415	715	919	793
FM765AX	1306	36.7	3.30	1.15	36.9	33.3	82.4	21, 21, 21	3.0	0.5345	700	876	761
NG3434B3XF	1246	37.1	3.25	1.19	38.0	30.2	81.8	21, 11, 21	2.7	0.5397	674	834	687
DP2525B3XF	1181	36.4	3.53	1.23	39.3	35.9	82.6	12, 12, 12	2.0	0.5590	660	821	679
NG3576XF	1172	38.1	3.44	1.22	39.2	32.8	83.1	21, 22, 22	4.0	0.5213	612	786	660
DP1820B3XF (Grower Std)	1180	36.7	3.46	1.22	39.0	34.5	82.5	12, 12, 12	2.0	0.5388	637	800	652
FM757AXTP	1151	33.7	3.33	1.17	37.5	30.9	80.6	11, 11, 21	2.3	0.5403	623	787	619
Mean	1222	36.2	3.38	1.20	38.3	33.2	82.3		2.6	0.5393	660	832	693
LSD	40	1.1	ns	0.01	0.4	0.7	0.9		0.4	ns	ns	55	55
R-square	0.89	0.78	0.66	0.94	0.94	0.95	0.72		0.85	0.41	0.70	0.75	0.80
CV (%)	2.8	2.7	4.6	0.8	0.8	1.9	0.9		14.0	5.0	6.8	5.7	6.8
Prob>F, variety	0.0002	0.0023	0.3705	<0.0001	<0.0001	<0.0001	0.0235		0.0003	0.7912	0.1160	0.0370	0.0078

Planting Seed Quality

Variety	Plant Population (#/A)	% Stand Establishment	Seed/lb	Warm Germ (%)	Cool Germ (%)	Planting Seed Cost (\$/A)	Seed Yield (lbs/A)	Seed Turnout (%)	Seed Value (\$/A)
DP1822XF	61468	79.8	4700	93	79	125.54	1817	48.0	204
FM765AX	52466	68.1	5201	94	60	115.50	1573	44.2	177
NG3434B3XF	58274	75.7	4938	93	75	147.30	1429	43.7	161
DP2525B3XF	59822	77.7	5400	93	71	142.28	1432	45.0	161
NG3576XF	55273	71.8	4994	95	85	125.54	1551	44.6	174
DP1820B3XF (Grower Std)	61371	79.7				147.30	1442	43.8	162
FM757AXTP	40172	52.2	5419	92	49	168.00	1454	45.9	164
Mean	55549	72.1					1528	45.1	172
LSD	6623	8.6					60	1.3	7
R-square	0.73	0.73					0.92	0.72	0.92
CV (%)	10.2	10.2					3.4	2.5	3.4
Prob>F, variety	0.0071	0.0071					<0.0001	0.0078	<0.0001

Planting seed costs from PCG Seed Cost Calculator; * FM823AXTP cost substituted for FM757AXTP; * NG4792XF cost substituted for NG3576XF.

Values in bold are best within each column; values in green-shaded cells are not significantly different from the best value; total crop value = seed value + lint value; net return = total crop value - seed cost

Seed value = seed yield x \$248/metric ton (Feb 2025 price, according to US Cotton, Cottonseed Price Received Monthly Trends: USDA Farm Price Received | Ycharts)