



Replicated Agronomic Cotton Evaluation ELS vs Upland Systems Trial

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 USDA-ARS
 Texas A&M AgriLife: Ken Legé, Ph.D.
 Location: Petersburg
 Replicates: 3
 Plot Size: 24 rows x ~2640 ft
 Row Spacing: 40 in
 Beds: Yes
 Previous crop(s): Cotton
 Soil type: Pullman Clay Loam
 Irrigation: LEPA

Planting Date: 4/28/2025
 Seed Treatments:
 Moist. @ planting: Adequate
 Soil Temp @ planting: 68.7F @2"; 67.4F @6"
 Seed/Acre: 46,000
 GPS Lat: 33.916
 GPS Long: -101.75328
 Elevation: 3332
 Harvest Date: 10/30/2025

Crop Stage*	Avg High Temp (°F)	Avg Low Temp (°F)	DD60 (95°F max)	Long Term DD60	Rain (in)	Total ET (in)	# Hours>95F	Avg Dev>95F
Planting to PHS	83.4	58.0	515.0	555.0	6.57	n/a	n/a	
PHS to First Bloom	88.1	68.5	490.0	576.0	4.03	5.98	6	4.33
First Bloom to Cutout	94.3	67.6	564.0	615.0	0.00	7.50	66	2.15
Cutout to Defoliation	87.6	60.6	862.0	901.0	2.55	10.89	33	1.73
Defoliation to Harvest	76.5	48.1	98.0	82.0	0.38	2.77	0	
Total			2529.0	2729.0	13.53	27.14	105	

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

NOTE: Site experienced moderate hail damage on 3 occasions throughout season.

Treatment	Lint Yield (lbs/A)	Turnout (%)	Micronaire	Length (in)	Staple (1/32 in)	Strength (g/tex)	Uniformity (%)	Color Grades	Leaf Grade	Based on Loan Value			
										Loan Value (\$/lb)	Lint Value (\$/A)	Total Crop Value (\$/A)	Net Return (\$/A)
DP1822XF (AUP)	1024	32.5	3.49	1.19	38.0	33.6	82.2	21, 11, 21	2.0	0.5653	578	749	674
Gowan1432 (ELS)	735	36.5	3.37	1.38	47.3	37.8	86.2	2, 2, 2	2.7	0.9022	663	805	687
Mean	879	34.5	3.43	1.28	41.0	35.7	84.2		2.3	0.7338	621	777	681
LSD	216	1.9	ns	0.04	1.3	1.1	1.3		ns	0.1340	63	ns	ns
R-square	0.96	0.98	0.32	1.00	1.00	1.00	0.99		0.75	0.99	0.97	0.87	0.80
CV (%)	5.7	1.3	5.1	0.7	0.7	0.7	0.4		17.5	4.2	2.4	3.1	3.5
Prob>F, variety	0.0197	0.0079	0.4701	0.0013	0.0013	0.0024	0.0039		0.1835	0.0057	0.0197	0.1040	0.5845

Treatment	Plant Population (#/A)	% Stand Establishment	Seed Yield (lbs/A)	Seed Turnout (%)	Seed Value (\$/A)	Planting Seed Cost (\$/A)	Based on Spot Price, 12/15/25			
							Spot Price (\$/lb, 12/15/25)	Lint Value (\$/A)	Total Crop Value (\$/A)	Net Return (\$/A)
DP1822XF (AUP)	18803	40.88	1518	48.2	171	74.98	0.6200	635	805	730
Gowan1432 (ELS)	15028	32.67	1261	62.5	142	117.85	1.4008	1031	1173	1055
Mean	16916	36.77	1389	55.3	156		1.0104	833	989	893
LSD	ns	ns	ns	1.0	ns		0.0615	316	356	68
R-square	0.47	0.47	0.88	1.00	0.88		1.00	0.96	0.94	0.92
CV (%)	22.6	22.6	6.2	0.4	6.2		1.4	8.8	8.4	9.3
Prob>F, variety	0.3501	0.3500	0.0676	0.0002	0.0676		0.0002	0.0221	0.0322	0.0407

Values in bold are best within each column; values in green-shaded cells are not significantly different from the best value.

Planting seed costs from PCG Seed Cost Calculator for DP1822XF, and from personal correspondence with Gowan Co. for Gowan1432.

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)

ELS was spindle picked, roller ginned, and classed as ELS at the USDA-AMS cotton classing office at Visalia, CA; AUP (upland) was stripper harvested, saw ginned and classed as AUP at the Texas Tech University Fiber & Biopolymer Research Institute.

ELS base loan value is \$0.95/lb, and AUP base loan is \$0.52/lb, +/- premiums/discounts, according to 2025 CCC loan charts. Spot prices source: <https://www.ams.usda.gov/mnreports/cnddsq.pdf>