

**2020 Southern High Plains
Replicated Agronomic Cotton Evaluation (RACE) Trial Results**

PRELIMINARY



Replicated Agronomic Cotton Evaluation (RACE) Trial at the Agricultural Complex for Advanced Research and Extension Systems (Ag-CARES) in Lamesa, TX. October 22, 2020.

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Acknowledgments

We would like to express our sincere appreciation for all the collaborators (Mark and David Appling, Erik Alvarado, Crosby and Floyd County; Seth Howard, Hockley County; Clay and David Lewis, Terry County; Andrew Sauer, Mitchell County; Lamesa Cotton Growers, Dawson County; Gregg Gerber and Dale Wilhem, Castro County) who allowed us in their land, use of their equipment, and most importantly their time. Among other things, it is because of their collaboration that we can provide up-to-date information on the performance of commercially available varieties for use by, and to the benefit of all farmers across the State of Texas. Huge thank you to Cotton Incorporated, Plains Cotton Growers, and the Texas State Support Committee for their continued support of extension activities, as well as for their tireless efforts in advocating for improvements to the cotton industry, ultimately benefiting our growers.

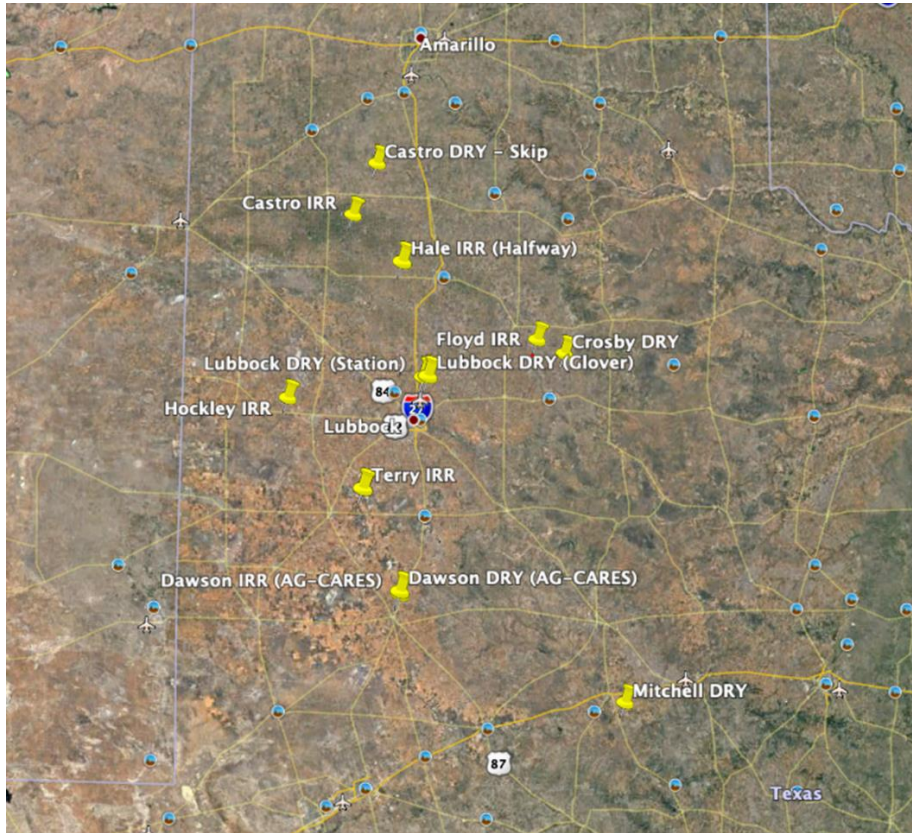
Seed companies (BASF, Bayer, WinField United, and Americot) are also acknowledged for their continued support of Texas A&M AgriLife Extension efforts in bringing reliable, non-biased information to our cotton producers. Companies graciously donate all the seed that goes into the Replicated Agronomic Cotton Evaluation (RACE) trials across the State of Texas. Appreciation is also extended to the staff at the Fiber Biopolymer Research Institute at Texas Tech University in Lubbock for HVI fiber analysis of samples, as well as their continued support of our activities.

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2020 VARIETY LIST

	Dryland	Irrigated
1	DP 1646 B2XF	ARMOR 9210 B3XF
2	DP 1822 XF	ARMOR 9598 B3XF
3	FM 1621 GL	DP 1820 B3XF
4	FM 1888 GL	DP 1845 B3XF
5	FM 2498 GLT	FM 1621 GL
6	NG 3930 B3XF	FM 2202 GL
7	NG 4098 B3XF	FM 2398 GLTP
8	NG 4777 B2XF	NG 3930 B3XF
9	NG 4792 XF	NG 4098 B3XF
10	ST 5707 B2XF	NG 4777 B2XF
11		NG 4792 XF
12		ST 5600 B2XF



2020 RACE Trial Locations. Image: Google Earth



2020 VARIETY LINEUP CHARACTERISTICS

Table 1. Characteristics of varieties included in the 2020 Replicated Agronomic Cotton Evaluation (RACE) trials in the Southern High Plains of Texas.

Variety	Maturity	Herbicide Package	Leaf Type	Plant Height	MIC	Verticillium	Bacterial Blight	ST ¹
Armor 9210 B3XF	Early-Mid	Glufos, Glyphos, and Dicamba	Semi-Smooth	Medium-Tall	4.5 - 4.8	Susceptible	Resistant	4
DeltaPine 1820 B3XF	Early-Mid	Glufos, Glyphos and Dicamba	Semi-Smooth	Medium-Tall	4.1	Moderate	Resistant	3.5
DeltaPine 1822 XF	Early-Mid	Glyphosate and Dicamba	Semi-Smooth	Medium-Tall	4.3	Moderate	Resistant	4
FiberMax 1621 GL	Early	Glyphosate and Glufosinate	Semi Hairy	Medium/Moderate	4.2	Fair	Resistant	6
FiberMax 1888 GL	Early-Mid	Glyphosate and Glufosinate	Semi-Smooth	Medium/Moderate	3.6	Fair	Resistant	6
NexGen 3930 B3XF	Early-Mid	Glufos, Glyphos, and Dicamba	Semi-Smooth	Medium-Tall	4.1 - 4.5	Good	Mod. Resistance	7
Armor 9598 B3XF	Medium	Glufos, Glyphos, and Dicamba	Smooth	Medium	4.3 - 4.7	Susceptible	Resistant	3
FiberMax 2202 GL	Medium	Glyphosate and Glufosinate	Semi-Smooth	Moderate	4.6	Outstanding	Resistant	5
FiberMax 2398 GLTP	Medium	Glyphosate and Glufosinate	Semi-Smooth	Medium/Moderate	4.4	Very Good	Resistant	5
FiberMax 2498 GLT	Medium	Glyphosate and Glufosinate	Semi-Smooth	Medium-Tall/Vigorous	4.4	Very Good	Resistant	6
NexGen 4098 B3XF	Medium	Glufos, Glyphos, and Dicamba	Semi-Smooth	Medium-Tall	4.3 - 4.5	Good	Resistant	8
NexGen 4777 B2XF	Medium	Glufos, Glyphos, and Dicamba	Smooth	Tall	4.0 - 4.7	Very Good	Mod. Resistance	6
NexGen 4792 XF	Medium	Glufos, Glyphos, and Dicamba	Smooth	Medium-Tall	3.7 - 4.6	Very Good	Mod. Resistance	6
DeltaPine 1646 B2XF	Mid-Full	Glufos, Glyphos, and Dicamba	Smooth	Medium-Tall	4.1	Mod. Susceptibility	Mod. Resistance	5
DeltaPine 1845 B3XF	Mid-Full	Glufos, Glyphos, and Dicamba	Semi-Smooth	Medium	3.8	Mod. Susceptibility	Resistant	4
Stoneville 5600 B2XF	Mid-Full	Glufos, Glyphos, and Dicamba	Semi-Smooth	Tall/Vigorous	4.7	Good	Susceptible	5
Stoneville 5707 B2XF	Mid-Full	Glufos, Glyphos, and Dicamba	Semi-Smooth	Tall/Vigorous	4.2	Fair	Resistant	4

Variety descriptions, rankings and characteristics obtained from each seed company website.

¹ Storm Tolerance

2020 TRIAL LOCATION DETAILS

Table 2. Location, Cooperator, and remarks for the 2020 Southern High Plains Replicated Agronomic Cotton (RACE) Evaluation trials.

	Location	Irrigation	Cooperator	Planting Date	Harvest Date	Seeding Rate seeds/a	Remarks
1	Castro	-	Dale Wilhelm	5/13/2020	-	12,250	Skip Row/Lost - Drought
2	Castro	-	Dale Wilhelm	5/13/2020	-	24,500	Lost - Drought
3	Crosby	-	Alvarado/Appling	6/2/2020	11/2/2020	35,000	Skip row, 2 in, 1 out
4	Dawson	-	AG-CARES	6/15/2020	-	31,000	Replanted, Lost - Drought
5	Lubbock	-	Glover-AREC*	5/27/2020	9/30/2020	29,040	Hail + Sand Damage Early
6	Lubbock	-	Lubbock-AREC	6/16/2020	11/12/2020	29,040	Late Planting
7	Mitchell	-	Andrew Sauer	6/11/2020	-	23,000	Lost - Drought
8	Castro	I	Gregg Gerber	5/15/2020	11/11/2020	58,000	Round Bale Harvester
9	Dawson	I	AG-CARES	5/21/2020	10/23/2020	51,000	Sand Damage Early
10	Floyd	I	Alvarado/Appling	5/26/2020	11/10/2020	40,000	Limited Irrigation
11	Hale	I	Halfway-AREC	5/19/2020	11/9/2020	49,000	Hail + Sand Damage Early
12	Hockley	I	Seth Howard	5/20/2020	11/6/2020	39,000	None
13	Terry	I	Clay & David Lewis	5/23/2020	11/16/2020	30,400	Limited Irrigation

*AREC = Station/Facility managed by AgriLife

HEAT UNIT ACCUMULATION AND IN-SEASON PRECIPITATION

Table 3. Weather summary and in-season precipitation for 2020 RACE trials locations.

	Crosbyton, TX (June 2nd - Nov. 2nd)					Lubbock, TX (May 19th - Nov. 12th)					Lamesa, TX (May 21st - Oct. 23rd)				
	Precip.	Temp (° F)		DD60	# of 100°F Days	Precip.	Temp (° F)		DD60	# of 100°F Days	Precip.	Temp (° F)		DD60	# of 100°F Days
		Min	Max				Min	Max				Min	Max		
May	–	–	–	–	–	1.13	58	87	172	1	0.39	59	89	14	–
June	1.65	64	92	557	1	1.85	65	93	584	4	0.39	67	96	614	5
July	0.7	70	98	761	12	1.85	72	98	792	13	1.98	72	99	791	13
August	0.48	67	97	691	9	0.54	69	97	720	8	0.43	71	98	756	12
September	1.3	54	84	284	–	1.04	56	84	304	1	1.36	58	84	346	–
October	0.54	42	74	131	–	0.78	44	76	20	–	–	53	87	226	–
November	–	39	74	–	–	–	44	76	–	–	–	–	–	–	–
	4.67		2,423		22	7.19		2,591		27	4.55		2,747		30

	Hart, TX (May 15th - Nov. 11th)					Levelland, TX (May 20th - Nov. 6th)					Plainview, TX (May 19th - Nov. 9th)				
	Precip.	Temp (° F)		DD60	# of 100°F Days	Precip.	Temp (° F)		DD60	# of 100°F Days	Precip.	Temp (° F)		DD60	# of 100°F Days
		Min	Max				Min	Max				Min	Max		
May	0.72	52	87	165	–	0.02	54	89	144	1	0.57	54	87	145	–
June	0.46	59	90	453	2	1.45	62	92	530	3	1.01	63	91	519	1
July	1.97	64	95	609	6	0.25	68	96	710	11	0.58	69	96	721	9
August	0.57	61	93	544	4	0.65	95	65	622	4	1.4	66	95	643	4
September	0.39	49	81	166	–	0.07	82	52	222	1	0.74	53	82	233	1
October	0.43	38	72	44	–	0.44	41	74	106	–	1.2	41	72	99	–
November	–	37	74	–	–	–	39	77	–	–	–	42	75	–	–
	4.54		1,980		12	2.88		2,333		20	5.5		2,359		15

	Brownfield, TX (May 23rd - Nov. 16th)				
	Precip.	Temp (° F)		DD60	# of 100°F Days
		Min	Max		
May	0.01	55	87	103	–
June	1.77	64	94	575	4
July	0.98	70	98	766	15
August	0.44	98	67	707	12
September	0.3	54	84	289	1
October	1.08	43	76	161	–
November	–	40	74	–	–
	4.58		2,600		32

FINAL PLANT POPULATION BY VARIETY AT DRYLAND LOCATIONS

Table 4. Final plant population at dryland Replicated Agronomic Cotton Evaluation (RACE) Trial locations in 2020.

Variety	LBB_STATION		LBB_GLOVER		CROSBY	
	plants/a	(in %)	plants/a	(in %)	plants/a	(in %)
DP 1646 B2XF	14,810	51	12,854	44	2,397	7
DP 1822 XF	17,424	60	21,133	73	13,508	39
FM 1621 GL	16,335	56	27,451	95	14,161	40
FM 1888 GL	18,295	63	25,272	87	17,211	49
FM 2498 GLT	11,979	41	24,837	86	19,172	55
NG 3930 B3XF	23,522	81	24,619	85	18,736	54
NG 4098 B3XF	18,513	64	23,747	82	13,726	39
NG 4777 B2XF	18,077	62	20,044	69	9,150	26
NG 4792 XF	16,335	56	16,994	59	17,647	50
ST 5707 B2XF	18,295	63	29,194	100	18,519	53
Mean	17,359		22,614		14,423	
STDEV	3,964		6,990		6,411	
CV, %	23		31		44	
p-value	0.0481		0.1056		0.0064	
LSD¹	3,292		n.s. ²		4,684	

¹ Least Significant Difference at 5% probability.

² Not statistically significant.

FINAL PLANT POPULATION BY VARIETY AT IRRIGATED LOCATIONS

Table 5. Final plant population at irrigated Replicated Agronomic Cotton Evaluation (RACE) Trial locations in 2020.

Variety	DAWSON		CASTRO		FLOYD		HALE		HOCKLEY		TERRY	
	plants/a	(in %)	plants/a	(in %)	plants/a	(in %)	plants/a	(in %)	plants/a	(in %)	plants/a	(in %)
ARMOR 9210 B3XF	25,490	50	30,488	53	25,272	63	22,004	45	28,322	73	18,954	62
ARMOR 9598 B3XF	27,233	53	22,648	39	23,529	59	26,144	53	16,558	42	15,468	51
DP 1820 B3XF	25,272	50	27,439	47	21,787	54	29,412	60	24,837	64	15,033	49
DP 1845 B3XF	25,490	50	16,115	28	22,440	56	30,501	62	16,340	42	13,726	45
FM 1621 GL	23,529	46	36,585	63	29,848	75	21,569	44	34,205	88	22,440	74
FM 2202 GL	27,451	54	37,892	65	23,312	58	32,026	65	25,272	65	19,826	65
FM 2398 GLTP	32,680	64	41,812	72	26,797	67	20,261	41	32,244	83	23,094	76
NG 3930 B3XF	21,787	43	40,941	71	31,590	79	25,708	52	29,848	77	21,351	70
NG 4098 B3XF	29,848	59	34,408	59	28,540	71	24,401	50	14,815	38	18,519	61
NG 4777 B2XF	25,490	50	27,004	47	31,155	78	18,083	37	19,390	50	15,686	52
NG 4792 XF	20,479	40	28,310	49	31,590	79	28,758	59	24,183	62	18,519	61
ST 5600 B2XF	22,658	44	39,199	68	36,166	90	23,094	47	28,976	74	18,301	60
Mean	25,617		31,903		27,669		25,163		24,582		18,410	
STDEV	7,320		8,557		6,129		7,392		7,081		3,848	
CV, %	29		27		22		29		29		21	
p-value	0.8397		0.005		0.0423		0.4231		<0.0001		0.0141	
LSD¹	n.s. ²		4,465		4,591		n.s.		3,407		2,708	

¹ Least Significant Difference at 5% probability.

² Not statistically significant.

Table 6. Crosby County dryland RACE trial. Cooperators Mark and David Appling, Erik Alvarado.

Ranked by highest to lowest lint yield values. Seeding rate (35,000 seed/A). Skip-row pattern, 2in, 1 out.

Variety	Lint Yield (lb/A)	Turnout (%)	MIC	Length (in.)	Uniformity (%)	Strength (g/tex)	Color	Leaf	Loan Value (cents/lb)	Lint Value (\$/A)
FM 1888 GL	107	35	4.8	1.04	80.0	27.9	11, 11, 11	1, 2, 3	51.0	54
DP 1822 XF	106	34	4.5	1.06	78.9	28.3	11, 11, 11	1, 2, 1	52.3	55
FM 1621 GL	104	35	4.8	1.02	79.7	28.5	21, 21, 21	2, 2, 3	50.6	63
ST 5707 B2XF	99	33	4.4	1.05	79.2	28.4	11, 21, 11	3, 4, 2	51.7	51
NG 4098 B3XF	98	33	4.7	1.03	80.2	28.7	11, 11, 11	2, 1, 1	50.7	50
NG 3930 B3XF	97	33	4.6	1.03	79.9	28.0	11, 11, 11	2, 3, 3	50.1	49
DP 1646 B2XF	95	32	4.7	1.04	79.5	28.1	21, 11, 11	3, 2, 1	51.7	49
FM 2498 GLT	85	27	4.7	1.06	79.5	28.8	21, 11, 11	2, 1, 1	52.2	45
NG 4792 XF	83	34	4.4	1.05	79.7	27.5	11, 11, 11	2, 3, 1	52.2	43
NG 4777 B2XF	79	35	4.4	1.07	80.0	28.1	11, 11, 11	2, 1, 1	53.7	42
Mean	95	32.93	4.6	1.04	79.7	28.2			51.6	50
STDEV	16	3.81	0.3	0.03	0.9	1.4			1.9	10
CV, %	17	11.58	5.6	2.65	1.2	4.8			3.8	19
p-value	0.4196	0.2576	0.4020	0.4614	0.8865	0.9897			0.5937	0.2798
LSD	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.			n.s.	n.s.

Loan value calculated using the Cotton Incorporated Upland Loan Calculator Program (\$52.0 cents/lb base for 41 color, 4 leaf, 34 staple)

STDEV (standard deviation). CV (coefficient of variation). LSD (least significant difference, p <0.05).

<https://www.cottoninc.com/cotton-production/ag-resources/cotton-farming-decision-aids/2020-upland-cotton-loan-calculator/>

Table 7. Lubbock County dryland RACE trial located at the Glover Farm, east of the Texas A&M AgriLife Research and Extension Center – Lubbock.

Ranked by highest to lowest lint yield values. Seeding rate (29,040 seed/A).

Variety	Lint Yield (lb/A)	Turnout (%)	MIC	Length (in.)	Uniformity (%)	Strength (g/tex)	Color	Leaf	Loan Value (cents/lb)	Lint Value (\$/A)
FM 2498 GLT	280	40	4.5	0.99	77.7	25.2	11, 11, 11	2, 2, 2	46.8	132
FM 1888 GL	218	34	4.0	1.00	78.2	25.9	11, 11, 11	1, 2, 1	46.9	103
FM 1621 GL	213	36	4.2	0.96	77.3	24.8	11, 11, 11	2, 1, 1	45.1	96
ST 5707 B2XF	201	34	4.3	1.04	79.0	29.2	11, 12, 11	2, 1, 2	51.3	104
NG 4792 XF	184	36	4.3	0.99	79.1	28.7	12, 11, 11	1, 1, 1	47.8	89
NG 4098 B3XF	182	35	3.8	1.03	77.2	27.0	11, 11, 11	1, 2, 2	49.6	91
NG 3930 B3XF	177	31	4.1	1.03	79.0	26.0	11, 11, 11	2, 1, 1	50.7	88
DP 1822 XF	168	32	3.9	1.02	78.0	28.0	11, 11, 11	1, 1, 1	50.3	85
NG 4777 B2XF	140	33	4.2	0.97	77.7	24.6	11, 11, 11	1, 1, 1	45.1	63
DP 1646 B2XF	138	38	4.0	1.04	77.9	26.5	11, 11, 11	2, 1, 1	49.9	69
Mean	190	34.87	4.1	1.01	78.1	26.6			48.3	92
STDEV	65	3.95	0.3	0.03	1.0	1.9			2.8	32
CV, %	34	11.32	6.8	3.26	1.3	7.1			5.8	35
p-value	0.2676	0.1338	0.1105	0.0016	0.1491	0.0021			0.0064	0.4318
LSD	n.s.	n.s.	n.s.	0.02	n.s.	1.2			1.9	n.s.

Loan value calculated using the Cotton Incorporated Upland Loan Calculator Program (\$52.0 cents/lb base for 41 color, 4 leaf, 34 staple)

STDEV (standard deviation). CV (coefficient of variation). LSD (least significant difference, $p < 0.05$).

<https://www.cottoninc.com/cotton-production/ag-resources/cotton-farming-decision-aids/2020-upland-cotton-loan-calculator/>

Table 8. Lubbock County dryland RACE trial located at the Texas A&M AgriLife Research and Extension Center – Lubbock.

Ranked by highest to lowest lint yield values. Seeding rate (29,040 seed/A).

Variety	Lint Yield (lb/A)	Turnout (%)	MIC	Length (in.)	Uniformity (%)	Strength (g/tex)	Color	Leaf	Loan Value (cents/lb)	Lint Value (\$/A)
NG 4792 XF	243	30	4.0	1.04	80.4	29.1	23, 23, 23	2, 1, 1	46.2	113
NG 4777 B2XF	186	26	3.9	1.04	79.9	28.3	22, 12, 13	1, 1, 1	49.8	94
NG 3930 B3XF	171	29	3.7	1.08	80.2	26.9	13, 13, 23	1, 2, 1	53.0	91
NG 4098 B3XF	158	26	3.4	1.11	79.5	30.7	22, 12, 12	3, 2, 3	47.3	74
DP 1646 B2XF	135	29	3.6	1.07	79.7	27.2	12, 12, 13	1, 1, 1	48.8	65
FM 2498 GLT	131	31	4.0	1.08	79.7	28.3	12, 22, 12	1, 1, 1	48.5	64
FM 1621 GL	130	29	3.8	1.04	78.9	28.4	12, 23, 12	2, 3, 2	48.7	64
DP 1822 XF	128	26	3.9	1.06	79.3	27.9	11, 23, 12	1, 1, 1	51.1	66
FM 1888 GL	123	29	3.8	1.06	79.5	28.1	12, 23, 12	2, 2, 1	52.2	64
ST 5707 B2XF	107	23	3.2	1.06	79.0	29.3	23, 23, 24	1, 2, 1	40.9	44
Mean	151	27.78	3.7	1.07	79.6	28.4			48.6	74
STDEV	54	3.35	0.3	0.02	0.8	1.2			4.0	28
CV, %	36	12.06	7.9	2.32	1.0	4.2			8.2	38
p-value	0.0540	0.0782	<0.0001	0.0015	0.4260	<0.0001			0.0015	0.0904
LSD	n.s.	n.s.	0.1	0.02	n.s.	0.6			2.5	n.s.

Loan value calculated using the Cotton Incorporated Upland Loan Calculator Program (\$52.0 cents/lb base for 41 color, 4 leaf, 34 staple)

STDEV (standard deviation). CV (coefficient of variation). LSD (least significant difference, p <0.05).

<https://www.cottoninc.com/cotton-production/ag-resources/cotton-farming-decision-aids/2020-upland-cotton-loan-calculator/>

Table 9. Castro County irrigated RACE trial. Cooperator Gregg Gerber.

Ranked by highest to lowest lint yield values. Center pivot. Seeding rate (58,000 seed/A). Round bale on-board scale, 2 replications.

Variety	Lint Yield (lb/A)	Turnout (%)	MIC	Length (in.)	Uniformity (%)	Strength (g/tex)	Color	Leaf	Loan Value (cents/lb)	Lint Value (\$/A)
FM 2202 GL	1,579	31	3.3	1.09	81.9	31.4	21, 11	2, 2	49.8	785
NG 4792 XF	1,523	29	3.3	1.09	81.9	30.2	11, 11	1, 2	49.7	757
FM 2398 GLTP	1,418	30	3.6	1.13	81.4	28.4	11, 31	1, 4	55.4	786
NG 3930 B3XF	1,338	28	2.9	1.13	80.6	28.2	11, 11	1, 2	45.9	612
FM 1621 GL	1,337	28	3.4	1.13	80.6	29.3	21, 11	3, 3	51.3	685
DP 1820 B3XF	1,292	29	3.1	1.17	80.1	29.8	11, 11	1, 1	50.2	648
NG 4098 B3XF	1,219	26	2.8	1.15	80.2	29.9	21, 11	4, 4	46.1	562
NG 4777 B2XF	1,209	26	2.8	1.09	79.6	28.7	11, 11	1, 1	44.6	538
ARMOR 9598 B3XF	1,118	29	2.8	1.11	80.6	27.9	11, 11	3, 1	43.9	491
ST 5600 B2XF	1,082	25	2.7	1.12	80.1	29.6	11, 11	4, 3	43.8	473
ARMOR 9210 B3XF	1,053	25	2.6	1.11	79.9	27.6	11, 11	1, 1	42.3	447
DP 1845 B3XF	942	24	2.4	1.15	79.3	28.3	11, 11	4, 3	36.9	347
Mean	1,259	27.52	3.0	1.12	80.5	29.1			46.6	594
STDEV	198	2.47	0.4	0.03	1.0	1.2			5.4	145
CV, %	16	8.96	13.0	2.55	1.2	4.1			11.6	24
p-value	0.0001	0.0148	0.0013	0.0135	0.0720	0.0019			0.0119	<0.0001
LSD	75	1.43	0.2	0.02	n.s.	0.6			3.1	50

Loan value calculated using the Cotton Incorporated Upland Loan Calculator Program (\$52.0 cents/lb base for 41 color, 4 leaf, 34 staple)

STDEV (standard deviation). CV (coefficient of variation). LSD (least significant difference, p <0.05).

<https://www.cottoninc.com/cotton-production/ag-resources/cotton-farming-decision-aids/2020-upland-cotton-loan-calculator/>

Table 10. Dawson County irrigated RACE trial located at the Agricultural Complex for Advanced Research and Extension Systems (Ag-CARES) in Lamesa, TX. Cooperator Lamesa Cotton Growers.

Ranked by highest to lowest lint yield values. Sub-surface drip. Seeding rate (51,000 seed/A).

Variety	Lint Yield (lb/A)	Turnout (%)	MIC	Length (in.)	Uniformity (%)	Strength (g/tex)	Color	Leaf	Loan Value (cents/lb)	Lint Value (\$/A)
DP 1820 B3XF	945	35	4.7	1.12	81.3	30.8	11, 11, 21	1, 1, 4	55.5	524
ARMOR 9210 B3XF	931	36	4.6	1.15	81.0	31.7	11, 11, 11	1, 1, 2	56.2	523
ST 5600 B2XF	906	35	5.0	1.06	81.0	29.9	11, 11, 21	1, 1, 2	52.8	476
NG 4792 XF	882	34	4.7	1.10	81.0	30.5	11, 11, 11	2, 1, 2	54.5	481
NG 3930 B3XF	872	37	4.7	1.13	80.5	31.9	11, 11, 11	1, 1, 1	56.5	492
NG 4777 B2XF	865	36	4.8	1.11	80.9	30.7	11, 11, 21	1, 2, 2	54.2	469
NG 4098 B3XF	862	36	4.8	1.11	80.5	31.0	21, 11, 21	1, 2, 2	56.1	483
FM 2398 GLTP	856	37	4.7	1.07	81.4	30.4	11, 11, 21	1, 1, 1	53.8	460
ARMOR 9598 B3XF	793	33	4.6	1.12	80.5	31.6	11, 11, 21	2, 1, 2	55.4	440
FM 1621 GL	756	35	4.8	1.09	80.5	30.6	21, 21, 21	2, 3, 1	55.1	416
FM 2202 GL	739	35	4.8	1.08	80.9	31.0	11, 11, 21	1, 1, 3	54.1	400
DP 1845 B3XF	707	34	4.5	1.12	80.3	31.8	11, 11, 11	1, 1, 1	55.5	393
Mean	843	35.14	4.7	1.11	80.8	31.0			55.0	463
STDEV	114	2.14	0.3	0.03	0.6	1.7			1.8	64
CV, %	14	6.10	6.8	3.06	0.7	5.6			3.2	14
p-value	0.1518	0.4900	0.9393	0.0226	0.4142	0.9714			0.2439	0.1483
LSD	n.s.	n.s.	n.s.	0.02	n.s.	n.s.			n.s.	n.s.

Loan value calculated using the Cotton Incorporated Upland Loan Calculator Program (\$52.0 cents/lb base for 41 color, 4 leaf, 34 staple)

STDEV (standard deviation). CV (coefficient of variation). LSD (least significant difference, $p < 0.05$).

<https://www.cottoninc.com/cotton-production/ag-resources/cotton-farming-decision-aids/2020-upland-cotton-loan-calculator/>

Table 11. Floyd County irrigated RACE trial. Cooperators Mark and David Appling, Erik Alvarado.

Ranked by highest to lowest lint yield values. Center pivot, limited water. Seeding rate (40,000 seed/A).

Variety	Lint Yield (lb/A)	Turnout (%)	MIC	Length (in.)	Uniformity (%)	Strength (g/tex)	Color	Leaf	Loan Value (cents/lb)	Lint Value (\$/A)
NG 3930 B3XF	254	32	4.4	0.99	78.8	23.7	11, 21, 21	1, 1, 2	45.9	117
DP 1845 B3XF	229	33	4.3	1.03	78.6	26.5	21, 21, 11	3, 2, 2	49.2	112
FM 1621 GL	190	35	4.6	0.94	78.0	24.1	21, 21, 31	4, 3, 5	43.5	83
FM 2202 GL	190	37	4.4	0.96	79.4	26.7	21, 21, 21	3, 3, 3	47.9	91
NG 4792 XF	182	32	4.3	0.95	78.1	25.1	21, 21, 21	2, 2, 2	45.4	83
ARMOR 9598 B3XF	171	32	4.6	0.95	77.6	22.8	11, 21, 11	1, 2, 1	44.8	77
DP 1820 B3XF	168	33	4.4	1.02	78.7	25.1	11, 11, 11	1, 1, 1	48.3	82
NG 4098 B3XF	167	30	4.1	1.01	76.9	26.3	21, 21, 21	4, 5, 5	47.0	79
FM 2398 GLTP	166	34	4.4	0.96	77.8	23.6	21, 11, 21	1, 2, 3	45.0	75
NG 4777 B2XF	157	31	4.3	0.95	78.2	23.5	21, 11, 11	1, 1, 1	45.0	71
ST 5600 B2XF	144	34	4.8	0.99	79.1	26.1	21, 21, 21	2, 3, 2	48.3	69
ARMOR 9210 B3XF	133	38	4.8	1.01	78.7	26.8	11, 21, 11	1, 1, 2	48.2	64
Mean	179	33.51	4.4	0.98	78.3	25.0			46.5	83
STDEV	50	2.99	0.3	0.03	0.8	1.8			2.5	24
CV, %	28	8.91	6.1	3.54	1.1	7.1			5.4	29
p-value	0.1227	0.0292	0.0074	0.0001	0.0024	0.0054			0.0558	0.1398
LSD	n.s.	2.07	0.2	0.02	0.5	1.1			n.s.	n.s.

Loan value calculated using the Cotton Incorporated Upland Loan Calculator Program (\$52.0 cents/lb base for 41 color, 4 leaf, 34 staple)

STDEV (standard deviation). CV (coefficient of variation). LSD (least significant difference, p <0.05).

<https://www.cottoninc.com/cotton-production/ag-resources/cotton-farming-decision-aids/2020-upland-cotton-loan-calculator/>

Table 12. Hale County irrigated RACE trial located at the Texas A&M AgriLife Research and Extension Center –Halfway.

Ranked by highest to lowest lint yield values. Center pivot. Seeding rate (49,000 seed/A).

Variety	Lint Yield (lb/A)	Turnout (%)	MIC	Length (in.)	Uniformity (%)	Strength (g/tex)	Color	Leaf	Loan Value (cents/lb)	Lint Value (\$/A)
ARMOR 9598 B3XF	679	41	3.9	1.03	78.7	28.1	21, 11, 11	2, 2, 2	48.6	330
NG 3930 B3XF	598	35	4.1	1.06	80.9	30.2	11, 11, 11	2, 1, 1	53.4	319
DP 1845 B3XF	581	36	4.0	1.07	80.2	28.6	11, 11, 11	1, 1, 1	53.9	313
DP 1820 B3XF	572	36	4.0	1.07	80.0	29.0	21, 11, 11	3, 2, 1	53.7	307
ARMOR 9210 B3XF	530	33	4.1	1.05	80.6	29.9	11, 11, 11	3, 1, 1	52.7	278
NG 4098 B3XF	525	37	4.1	1.05	80.2	28.7	11, 21, 11	1, 2, 2	50.8	267
ST 5600 B2XF	519	35	3.7	1.10	80.8	30.1	11, 11, 11	1, 1, 1	53.2	276
NG 4777 B2XF	510	36	3.8	1.09	80.2	29.0	11, 11, 11	1, 1, 2	50.8	260
NG 4792 XF	503	34	3.9	1.06	80.6	29.7	11, 11, 11	2, 1, 2	53.6	270
FM 2398 GLTP	447	33	4.0	1.08	79.6	29.8	21, 11, 11	4, 1, 1	53.8	239
FM 1621 GL	446	36	4.0	1.08	80.5	29.0	11, 11, 11	1, 1, 1	55.2	246
FM 2202 GL	384	35	3.7	1.10	79.4	30.3	21, 11, 11	4, 2, 1	52.8	204
Mean	525	35.54	3.9	1.07	80.1	29.4			52.7	276
STDEV	128	3.33	0.5	0.04	1.0	1.4			2.4	64
CV, %	24	9.37	11.6	3.75	1.2	4.8			4.5	23
p-value	0.3508	0.3223	0.9911	0.6388	0.2662	0.7128			0.0329	0.4800
LSD	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.			1.7	n.s.

Loan value calculated using the Cotton Incorporated Upland Loan Calculator Program (\$52.0 cents/lb base for 41 color, 4 leaf, 34 staple)

STDEV (standard deviation). CV (coefficient of variation). LSD (least significant difference, p <0.05).

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Table 13. Hockley County irrigated RACE trial. Cooperator Seth Howard.

Ranked by highest to lowest lint yield values. Center pivot. Seeding rate (39,000 seed/A). Fibermax varieties cultivated due to weed pressure at early bloom.

Variety	Lint Yield (lb/A)	Turnout (%)	MIC	Length (in.)	Uniformity (%)	Strength (g/tex)	Color	Leaf	Loan Value (cents/lb)	Lint Value (\$/A)
DP 1820 B3XF	1,012	35	4.6	1.13	81.3	30.7	11, 11, 11	1, 1, 1	55.9	565
NG 3930 B3XF	1,005	34	4.7	1.12	81.9	27.9	11, 11, 11	1, 1, 1	55.9	562
ARMOR 9210 B3XF	968	35	4.3	1.12	81.2	29.6	11, 11, 11	1, 2, 1	52.0	506
NG 4792 XF	924	33	4.5	1.08	82.3	30.0	11, 11, 11	1, 1, 2	54.6	505
DP 1845 B3XF	917	32	3.8	1.16	80.8	29.6	11, 11, 11	3, 1, 2	54.6	499
ARMOR 9598 B3XF	911	34	4.7	1.10	81.1	28.1	11, 11, 11	1, 1, 1	55.9	509
FM 2398 GLTP	906	38	4.5	1.11	80.6	28.8	21, 21, 11	3, 3, 2	55.4	501
NG 4098 B3XF	885	30	3.7	1.17	80.6	31.8	11, 21, 21	2, 4, 4	56.2	497
ST 5600 B2XF	847	33	4.4	1.11	81.8	30.3	12, 11, 11	1, 1, 1	55.8	472
NG 4777 B2XF	820	30	4.2	1.08	79.9	28.7	11, 11, 11	1, 1, 1	54.2	444
FM 2202 GL	760	32	4.4	1.10	81.8	30.5	11, 11, 21	2, 2, 3	55.7	423
FM 1621 GL	724	29	4.1	1.11	81.1	30.5	21, 11, 11	4, 3, 3	55.5	401
Mean	890	33.03	4.3	1.12	81.2	29.7			55.1	490
STDEV	131	3.72	0.5	0.03	0.8	1.3			2.0	72
CV, %	15	11.27	12.6	3.07	1.0	4.3			3.6	15
p-value	0.1362	0.1605	0.4161	0.0081	0.0044	<0.0001			0.3712	0.1307
LSD	n.s.	n.s.	n.s.	0.02	0.5	0.6			n.s.	n.s.

Loan value calculated using the Cotton Incorporated Upland Loan Calculator Program (\$52.0 cents/lb base for 41 color, 4 leaf, 34 staple)

STDEV (standard deviation). CV (coefficient of variation). LSD (least significant difference, p <0.05).

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Table 14. Terry County irrigated RACE trial. Cooperators Clay and David Lewis.

Ranked by highest to lowest lint yield values. Center pivot, limited water. Seeding rate (30,400 seed/A). Weed pressure on Fibermax varieties.

Variety	Lint Yield (lb/A)	Turnout (%)	MIC	Length (in.)	Uniformity (%)	Strength (g/tex)	Color	Leaf	Loan Value (cents/lb)	Lint Value (\$/A)
NG 3930 B3XF	223	35	4.7	1.02	79.2	24.8	11, 11, 21	1, 1, 2	47.4	106
NG 4098 B3XF	205	34	4.1	1.07	77.8	28.9	21, 11, 11	2, 2, 2	53.1	109
NG 4792 XF	196	36	4.7	1.03	80.4	28.2	11, 11, 11	1, 1, 1	51.0	100
ARMOR 9598 B3XF	193	37	4.7	1.01	79.1	24.8	21, 11, 11	1, 1, 1	46.2	89
NG 4777 B2XF	180	37	4.9	1.04	80.2	27.1	11, 11, 11	1, 1, 1	49.7	89
ARMOR 9210 B3XF	177	37	4.8	1.08	80.6	28.6	11, 11, 11	1, 1, 1	53.2	94
DP 1845 B3XF	173	36	4.6	1.08	80.0	28.5	11, 11, 11	1, 3, 1	54.5	95
ST 5600 B2XF	170	35	4.6	1.06	79.2	28.4	11, 11, 11	2, 1, 1	52.4	89
DP 1820 B3XF	154	37	4.7	1.03	79.4	28.4	11, 21, 11	1, 3, 1	51.1	78
FM 2202 GL*	147	35	4.4	0.99	79.5	27.9	21, 21	3, 3	48.6	71
FM2398GTLP	136	36	4.8	1.00	78.8	25.3	21, 21, 11	3, 2, 1	46.8	63
FM 1621 GL	128	39	4.6	0.97	78.0	24.3	21, 21, 21	3, 1, 5	44.0	56
Mean	174	36.06	4.6	1.03	79.3	27.1			49.9	87
STDEV	43	3.38	0.3	0.04	1.0	1.9			3.5	22
CV, %	25	9.38	6.4	3.82	1.3	7.2			7.0	26
p-value	0.2024	0.9605	0.0543	<0.0001	0.0002	<0.0001			<0.0001	0.0651
LSD	n.s.	n.s.	n.s.	0.02	0.5	0.9			1.3	n.s.

Loan value calculated using the Cotton Incorporated Upland Loan Calculator Program (\$52.0 cents/lb base for 41 color, 4 leaf, 34 staple)

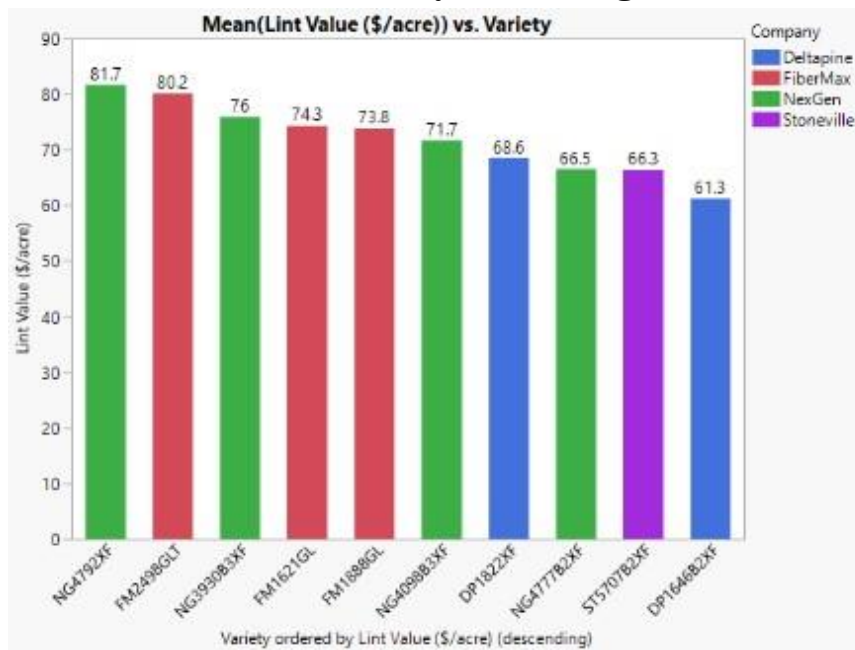
STDEV (standard deviation). CV (coefficient of variation). LSD (least significant difference, $p < 0.05$).

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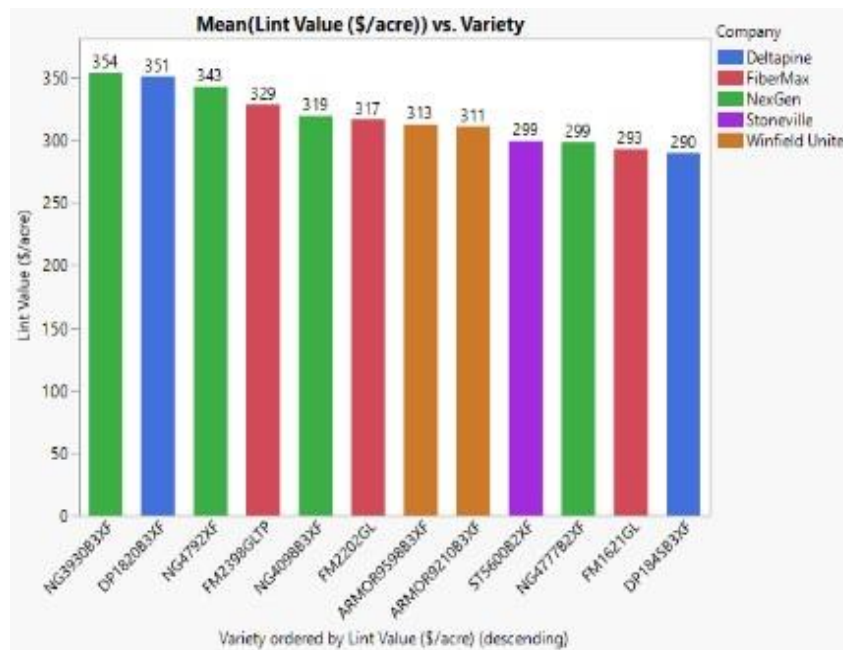
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AVERAGE LINT VALUE (\$/A) BY VARIETY FOR DRYLAND AND IRRIGATED TRIALS

3-Location Dryland Average



6-Location Irrigated Average





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Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Edward G. Smith, Director, Texas A&M AgriLife Extension Service, The Texas A&M University System.

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