SCSC-2022-04

TEXAS ROLLING PLAINS COTTON TRIALS | 2021

Texas A&M AgriLife Extension

Department of
Soil and Crop Sciences
Texas A&M AgriLife
Extension Service

cotton

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ACKNOWLEDGEMENTS

Appreciation is expressed to **the producer cooperators** who provided their land, equipment, and time to assist in preparation, planting, field management, and harvesting of the plots throughout the year. All cooperators are listed in Table 3. We would like to extend our appreciation to **Cotton Incorporated** through the **Texas State Support Committee**, **NexGen**, **Deltapine, Stoneville/FiberMax and Phytogen Cottonseed** for their partial funding of these trials.

2021 HIGHLIGHT

Variety selection is the most important decision made during the year. Unlike herbicide or insecticide decisions that can be changed during the season to address specific conditions and pests, variety selection is made only once, and variety selection dictates the management of a field for the entire season. Variety decisions should be based on genetics first and transgenic technology second. Attention should be focused on agronomic characteristics such as yield, maturity, and fiber quality when selecting varieties.

May and June 2021 were wetter than normal year in the Texas Rolling Plains, which delayed cotton planting across the region. Temperatures remained lower than average for the months and maturity of cotton was delayed. Due to the increased humidity in the fields, we received more reports about seedling diseases in 2021 as compared to the previous years. It is important to select resistant varieties for 2022 season to prevent future damages from the seedling diseases observed in the fields. Prolonged wet field conditions limited timely field operations for weed control. Despite the planting delay and delayed maturity, hot and sunny weather through September helped increase accumulated heat unit. In

addition, first killing frost was in mid-November. This helped cotton crop utilize every needed heat unit to finish the crop nicely.

To assist Texas cotton producers in remaining competitive in the Rolling Plains, the Texas A&M AgriLife Extension Service Agronomy program has conducted, large plot, on-farm, replicated variety trials since 2012. This approach provides a reliable source of information to assist farmers with the variety selection process. Seven replicated agronomic cotton evaluation (RACE) trials, seven Phytogen Innovation trials, and two BASF APT trials were planted in 2021. We were able to harvest four RACE trial locations and all other trials. Final seedling emergence ranged between 96% to 40%. The low emergence was due to the flood condition immediately after planting. Mean irrigated location yields for the 2021 cotton variety trials ranged from 1523 lb/ac for the Collingsworth trial location to 971 lb/ac for the Hardeman trial site, while mean dryland location yields ranged from 767 lb/ac at the Haskell County trial site to 190 lb/ac at the Wilbarger County trial site.

Lint samples from all trials were ginned with conventional gin. The statistical analysis quantifies the variability of the test site conditions, such as soil type, harvesting, insect damage, etc. A CV (coefficient of variation) of 15% or less is generally considered acceptable and means the data are dependable. Non-statistical significance is represented as “NS” and indicates no differences among the varieties within the data column at a 90% confidence level.

Resources for Texas cotton production

- General cotton production information for new cotton growers: http://cotton.tamu.edu/index.html
- Cotton variety trial results: http://varietytesting.tamu.edu/cotton/
- Cotton trial update in the Rolling Plains of Texas: Rolng Plains Agronomy Program Blog (https://agrilife.org/txrollingplainsagronomy/)

TEXAS A&M AGRILIFE EXTENSION

Table 1. Variety characteristics/Highlights

Below are the cotton varieties entered in the 2021 Texas Rolling Plains Cotton Trials.

Maturity\Technology	XtendFlex	Enlist	GLT/GLTP
Early	DP2012B3XF		
	ST4993B3XF		
Early mid	DP1820B3XF	PHY350W3FE	FM1730GLTP
	ST4990B3XF	PHY394W3FE	FM1830GLT
	DP2020B3XF	PHY332W3FE	FM1953GLTP
Mid	DP2038B3XF	PHY400W3FE	FM2498GLT
	NG4936B3XF	PHY480W3FE	FM2398GLTP
	NG4098B3XF	PHY443W3FE	
	NG4190B3XF	PHY411W3FE	
Mid to Full	DP1948B3XF	PHY500W3FE	
	ST5707B2XF	PHY545W3FE	
	NG5150B3XF		
	ST5600B2XF		
Full		PHY580W3FE	

Table 2. FIBER EVALUATION

Parameters	Definition	Range
Micronaire (Mic)	Micronaire is a measurement of both fiber fineness and maturity.	Premium range: 3.7-4.2 Base range: 3.5-3.6 or 4.3-4.9 Discount range: 0-3.4 or >5.0
Fiber length	The average length of the longer half of the fibers.	Extra-long: >1.26 Long: 1.11-1.26 Medium: 0.99-1.10 Short: <0.99
Fiber strength	Fiber strength as measured on the High Volume Instrument is the force (in grams) required to break a bundle of fibers one - tex unit in mass.	Very strong: > 31 Strong: 29-30 Average: 26-28 Intermediate: 24-25 Weak: < 23
Length uniformity (unif)	Length uniformity index is the ratio between the "mean length" of the fibers and the "upper half mean length".	Very high: >85 High: 83-85 Intermediate: 80-82 Low: 77-79 Very low: <77

Source: "Classification of Upland Cotton" Adapted from Cotton Incorporated website (https://www.cottoninc.com/wp-content/uploads/2017/02/Classification-of-Cotton.pdf)

TABLE 3. BACKGROUND INFORMATION

County	Producer cooperators	County Extension Agent	Irri/dry	Planting date	Harvest date	Rows x spacing	Seeding rate	Plot size
RACE trial - Mixed technologies								
Collingsworth	Rex Henard	Kenny Patterson	Irrigated	5/22/2021	11/24/2021	6 by 40"	40000	0.7
Wilbarger	Donald Shoppa	Langdon Reagan	Dryland	6/19/2021	11/30/2021	8 by 40"	24100	0.9
RACE trial - Xtendflex technology only								
Childress	Cade Wyatt	Veronica Urbanczyk	Dryland	6/3/2021	11/20/2021	8 by 40"	45000	1.3
Haskell	Gary Thomas	-	Dryland	6/13/2021	11/22/2021	5 by 32"	45000	0.66
Kent	Dean Boyd	Brandon Cave	Dryland	6/15/2021	Abandoned*	6 by 40"	26200	-
Stonewall	Billy Kirk Meador	Cody Myers	Dryland	6/16/2021	Abandoned*	6 by 40"	26200	-
Phytogen Innovation Trial - Enlist technology only								
Childress	Cade Wyatt	Veronica Urbanczyk	Dryland	6/11/2021	12/14/2021	8 by 40"	25000	0.5
Collingsworth	Jerry Dan Davis	Kenny Patterson	Irrigated	5/24/2021	11/11/2021	6 by 40"	40000	0.6
Hardeman	Aaron Philips	Justin Gilliam	Irrigated	6/14/2021	11/8/2021	6 by 40"	29000	1.2
Jones	Michael Mclellan	Clay Cole	Dryland	6/22/2021	10/28/2021	8 by 32"	38000	1.25
Jones/Fisher	Joe Posey	Nick Dickson/Clay Cole	Irrigated	5/29/2021	11/18/2021	8 by 30"	35000	1.0
Wichita	Dwayne Pierce	David Graf	Irrigated	6/15/2021	12/13/2021	8 by 30"	45000	0.8
Wilbarger	Darren Streit	Langdon Reagan	Irrigated	5/21/2021	11/17/2021	8 by 40"	31000	1.5
BASF APT Trial - Xtendflex only (Haskell) and Xtendflex and GLTP (Wilbarger)								
Haskell	Jason Key	-	Dryland	6/22/2021	11/19/2021	6 by 40"	24000	1.1
Wilbarger	Darren Streit	Langdon Reagan	Irrigated	5/21/2021	11/17/2021	8 by 40"	31000	1.5

2021 Texas Rolling Plains Cotton Trials

PERCENT SEEDLING EMERGENCE (FINAL STAND)

	RACE trial				Phytogen innovation trial							BASF APT trial	
Variety	**Collingsworth**	**Wilbarger**	**Childress**	**Haskell**	**Collingsworth**	**Wilbarger**	**Wichita**	**Hardeman**	**Jones/Fisher**	**Childress**	**Jones**	**Haskell**	**Wilbarger**
	Irrigated	**Dryland**	**Dryland**	**Dryland**	**Irrigated**	**Irrigated**	**Irrigated**	**Irrigated**	**Irrigated**	**Dryland**	**Dryland**	**Dryland**	**Dryland**
DP1820B3XF	-	-	-	-	-	-	-	-	-	-	-	**100**	57
DP1948B3XF	**86**	**100**	74	38	-	-	-	-	-	-	-	-	-
DP2012B3XF	-	88	75	40	-	-	-	-	-	-	-	-	-
DP2020B3XF	78	**100**	68	38	-	-	-	-	-	-	-	-	-
DP2038B3XF	84	-	-	-	-	-	-	-	-	-	-	-	-
NG4098B3XF	-	86	**88**	48	-	-	-	-	-	-	-	-	-
NG4190B3XF	66	80	61	41	-	-	-	-	-	-	-	-	-
NG4936B3X	81	79	60	26	-	-	-	-	-	-	-	-	-
NG5150B3XF	74	-	-	-	-	-	-	-	-	-	-	-	-
ST4990B3XF	-	-	-	-	-	-	-	-	-	-	-	**100**	74
ST4993B3XF	83	88	68	34	-	-	-	-	-	-	-	**100**	70
ST5600B2XF	-	94	74	48	-	-	-	-	-	-	-	**100**	63
ST5707B2XF	-	96	83	**50**	-	-	-	-	-	-	-	**100**	**82**
ST4595B3XF	-	-	-	-	-	-	-	-	-	-	-	**100**	61
BX2296B3X	-	-	-	-	-	-	-	-	-	-	-	**100**	68
BX2297B3X	-	-	-	-	-	-	-	-	-	-	-	84	55
BX2298B3X	-	-	-	-	-	-	-	-	-	-	-	79	63
FM 1730GLTP	-	-	-	-	-	-	-	-	-	-	-	-	78
FM 1830GLT	-	-	-	-	-	-	-	-	-	-	-	-	63
FM 1953GLTP	-	-	-	-	-	-	-	-	-	-	-	-	74
FM2398GLTP	77	-	-	-	-	-	-	-	-	-	-	-	80
FM2498GLT	84	-	-	-	-	-	-	-	-	-	-	-	63
PHY332W3FE	76	**100**	-	-	82	93	64	71	82	93	64	-	-
PHY350W3FE	-	-	-	-	**96**	96	65	77	**96**	96	65	-	-
PHY400W3FE	79	**100**	-	-	91	**99**	**74**	76	91	**99**	**74**	-	-
PHY411W3FE	-	-	-	-	83	83	69	77	83	83	69	-	-
PHY443W3FE	-	-	-	-	85	91	68	63	85	91	68	-	-
PHY480W3FE	79	89	-	-	84	93	61	**80**	84	93	61	-	-
PX3E33W3FE	-	-	-	-	78	71	61	67	78	71	61	-	-
PHY545W3FE	-	-	-	-	84	98	65	63	84	98	65	-	-
Average	**79**	**92**	**72**	**40***	**85**	**91**	**66**	72	**85**	**91**	**66**	**96**	**68**

*Trial was flooded after planting

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2021 Texas Rolling Plains Cotton Trials

AVERAGE YIELDS

	RACE trial				Phytogen innovation trial							BASF APT trial*	
Variety	Collingsworth	Wilbarger	Childress	Haskell	Collingsworth	Wilbarger	Wichita	Hardeman	Jones/Fisher	Childress	Jones	Haskell	Wilbarger
	Irrigated	Dryland	Dryland	Dryland	Irrigated	Irrigated	Irrigated	Irrigated	Irrigated	Dryland	Dryland	Dryland	Dryland
DP1820B3XF	-	-	-	-	-	-	-	-	-	-	-	802	112
DP1948B3XF	1343	441	756	363	-	-	-	-	-	-	-	-	-
DP2012B3XF	-	366	746	583	-	-	-	-	-	-	-	-	-
DP2020B3XF	**1665**	434	684	528	-	-	-	-	-	-	-	-	-
DP2038B3XF	1527	-	-	-	-	-	-	-	-	-	-	-	-
NG4098B3XF	-	421	774	603	-	-	-	-	-	-	-	-	-
NG4190B3XF	1465	421	638	447	-	-	-	-	-	-	-	-	-
NG4936B3X	1545	365	629	347	-	-	-	-	-	-	-	-	-
NG5150B3XF	1412	-	-	-	-	-	-	-	-	-	-	-	-
ST4990B3XF	-	-	-	-	-	-	-	-	-	-	-	746	229
ST4993B3XF	1583	454	807	533	-	-	-	-	-	-	-	**842**	202
ST5600B2XF	-	449	756	**652**	-	-	-	-	-	-	-	758	209
ST5707B2XF	-	483	**814**	611	-	-	-	-	-	-	-	701	138
ST4595B3XF	-	-	-	-	-	-	-	-	-	-	-	763	114
BX2296B3X	-	-	-	-	-	-	-	-	-	-	-	797	122
BX2297B3X	-	-	-	-	-	-	-	-	-	-	-	723	151
BX2298B3X	-	-	-	-	-	-	-	-	-	-	-	774	142
FM 1730GLTP	-	-	-	-	-	-	-	-	-	-	-	-	199
FM 1830GLT	-	-	-	-	-	-	-	-	-	-	-	-	241
FM 1953GLTP	-	-	-	-	-	-	-	-	-	-	-	-	231
FM2398GLTP	1574	-	-	-	-	-	-	-	-	-	-	-	**296**
FM2498GLT	1545	-	-	-	-	-	-	-	-	-	-	-	270
PHY332W3FE	1536	479	-	-	1292	1507	1648	959	1293	750	549	-	-
PHY350W3FE	-	-	-	-	1259	1467	1532	1002	1252	631	457	-	-
PHY400W3FE	1630	**487**	-	-	**1440**	**1688**	1787	**1076**	1262	626	544	-	-
PHY411W3FE	-	-	-	-	1340	1646	**1924**	987	**1434**	688	540	-	-
PHY443W3FE	-	-	-	-	1184	1548	1806	1005	1302	672	468	-	-
PHY480W3FE	1454	476	-	-	1281	1489	1555	914	1280	**754**	**574**	-	-
PX3E33W3FE	-	-	-	-	1207	1456	1575	930	1422	520	507	-	-
PHY545W3FE	-	-	-	-	1255	1418	1573	891	1338	669	434	-	-
Average	**1523**	**440**	**734**	**519**	**1282**	**1527**	**1675**	**971**	**1323**	**664**		**767**	**190**

*Not replicated.

Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

RACE trial agronomic information

County	Collingsworth			
Cooperator	Rex Henard			
Technologies	Mixed			
Irrigation	Irrigated			
Plant	5/22/2021			
Harvest	11/24/2021			
GDD	186	days		
Population	40000			
Rows and width	6 by 40"			
Plot size	0.7	ac		

Precipitation

Month	Precip. (in)
April	0.40
May	4.20
June	6.30
July	4.20
August	1.96
September	0.56
October	1.76
Total	19.4

Variety	Lint (Lbs/ac)	Gin turnout (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value (cents/lb)	Lint Value ($/acre)
DP2020B3XF	1665	26.2	3.1	1.19	29.9	81.2	50.5	842
FM2398GLTP	1574	26.1	3.3	1.15	30.3	80.8	52.9	835
PHY400W3FE	1630	26.9	3.2	1.18	31.9	80.9	50.8	828
NG4936B3X	1545	26.1	3.3	1.18	29.5	81.5	52.9	820
ST4993B3XF	1583	25.0	3.1	1.14	31.9	82.6	50.4	803
FM2498GLT	1545	24.8	3.4	1.18	29.9	80.5	51.5	795
DP2038B3XF	1527	27.2	3.1	1.10	28.6	79.3	51.2	784
NG4190B3XF	1465	25.1	2.9	1.17	29.8	81.3	48.0	703
PHY332W3FE	1536	25.1	2.9	1.14	30.3	79.0	44.7	688
NG5150B3XF	1412	24.1	2.8	1.14	28.1	78.7	47.3	667
PHY480W3FE	1454	23.2	2.8	1.14	29.8	81.9	44.5	656
DP1948B3XF	1343	23.7	2.8	1.21	29.7	79.6	44.2	593
Mean	**1523**	**25**	**3.0**	**1.16**	**30.0**	**80.6**	**49.1**	**751**
CV %	**6.7**	**4.9**	**9.9**	**1.1**	**2.7**	**0.9**	**7.5**	**11.7**
P>F	**NS**	**NS**	**NS**	**0.0002**	**0.020**	**0.003**	**NS**	**NS**
STD DEV	**91**	**1**	**0.2**	**0.03**	**1.1**	**1.2**	**3.2**	**85**

Notes: Highlighted values are significantly same as the highest value at P<0.1

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Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

RACE trial agronomic information

County	Childress			
Cooperator	Cade Wyatt			
Technologies	Xtendflex			
Irrigation	Dryland			
Plant	6/3/2021			
Harvest	11/20/2021			
GDD	170	days		
Population	45000			
Rows and width	8 by 40"			
Plot size	1.3	ac		

Precipitation

Month	Precip. (in)
April	0.66
May	3.40
June	1.40
July	1.70
August	2.60
September	1.70
October	0.90
Total	12.36

Variety	Lint (Lbs/ac)	Gin TO (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value (cents/lb)	Lint Value* ($/acre)
ST5707B2XF	814	30.8	4.4	1.11	30.9	81.1	55.7	454
NG4098B3XF	774	29.0	4.0	1.15	33.5	80.3	57.1	442
ST4993B3XF	807	36.5	4.8	1.06	31.1	81.0	53.9	435
DP1948B3XF	756	31.6	4.1	1.17	31.3	81.8	57.4	434
ST5600B2XF	756	33.4	4.9	1.09	30.5	81.0	55.7	421
DP2012B3XF	746	31.9	4.2	1.08	28.4	80.8	54.9	409
DP2020B3XF	684	32.0	4.0	1.10	27.7	80.4	56.2	385
NG4936B3XF	629	31.0	4.2	1.12	28.5	81.0	56.9	358
NG4190B3XF	638	32.5	3.9	1.10	28.1	81.1	56.0	357
Mean	**734**	**32**	**4**	**1**	**30**	**81**	**56**	**411**
CV %	**7.5**	**3.0**	**2.7**	**1.0**	**3.1**	**0.8**	**1.1**	**7.9**
P>F	**0.0**	**<.0001**	**<.0001**	**<.0001**	**<.0001**	**NS**	**0.0**	**0.0**
STD DEV	**68**	**2.0**	**0.4**	**0.03**	**1.9**	**0.4**	**1.1**	**36**

Notes:

Highlighted values are significantly same as the highest value at P<0.1

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RACE trial agronomic information

County	Haskell			
Cooperator	Gary Thomas			
Technologies	Mixed			
Irrigation	Dryland			
Plant	6/13/2021			
Harvest	11/22/2021			
GDD	162	days		
Population	45000			
Rows and width	5 by 32"			
Plot size	0.66	ac		

Precipitation

Month	Precip. (in)
April	4.3
May	5.6
June	4
July	3.7
August	1.2
September	0.3
October	1.48
Total	20.6

Variety	Lint (Lbs/ac)	Gin turnout (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value (cents/lb)	Lint Value ($/acre)
ST5600B2XF	652	36.3	4.9	1.11	30.2	81.8	55.3	361
ST5707B2XF	611	31.7	4.6	1.14	32.4	82.9	57.4	350
NG4098B3XF	603	30.2	3.9	1.17	33.7	80.9	57.3	346
DP2012B3XF	583	36.2	4.4	1.11	28.9	81.3	56.4	328
DP2020B3XF	528	36.4	4.5	1.16	29.5	82.1	57.3	302
ST4993B3XF	533	36.5	4.7	1.11	31.8	82.5	56.6	301
NG4190B3XF	447	34.9	4.0	1.13	28.9	82.2	57.0	255
DP1948B3XF	363	32.5	3.8	1.18	31.2	81.4	57.5	209
NG4936B3XF	347	32.1	4.3	1.15	29.4	82.7	57.4	199
Mean	**519**	**34**	**4.3**	**1.14**	**30.7**	**82.0**	**56.9**	**295**
CV %	**11.4**	**6.9**	**3.6**	**1.2**	**2.4**	**0.9**	**1.2**	**11.8**
P>F	**<.0001**	**0.010**	**<.0001**	**<.0001**	**<.0001**	**0.024**	**0.015**	**<.0001**
STD DEV	**110**	**2**	**0.4**	**0.03**	**1.7**	**0.7**	**0.7**	**61**

Notes: Highlighted values are significantly same as the highest value at P<0.1

TEXAS A&M AGRILIFE EXTENSION

Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

RACE trial agronomic information

County	Wilbarger			
Cooperator	Donald Shoppa			
Technologies	Mixed			
Irrigation	Dryland			
Plant	6/19/2021			
Harvest	11/30/2021			
GDD	164	days		
Population	45000			
Rows and width	8 by 40"			
Plot size	0.9	ac		

Precipitation

Month	Precip. (in)
April	3.9
May	5.7
June	3.4
July	4.1
August	2.33
September	1.03
October	2.22
Total	22.68

Variety	Lint (Lbs/ac)	Gin TO (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value (cents/lb)	Lint Value* ($/acre)
ST5707B2XF	483	32.5	4.5	1.06	30.3	80.8	53.3	257
PHY332W3FE	479	31.1	4.1	1.06	28.3	79.0	53.2	255
DP1948B3XF	441	30.6	4.0	1.11	31.1	80.8	56.5	249
PHY400W3FE	487	31.9	3.9	1.04	27.7	78.6	51.2	249
PHY480W3FE	476	31.0	3.9	1.05	29.6	81.1	51.9	247
NG4098B3XF	421	31.0	3.8	1.09	31.7	78.6	54.4	229
ST5600B2XF	449	33.0	4.5	1.04	28.4	79.4	51.0	229
ST4993B3XF	454	33.3	4.2	1.01	30.2	80.0	50.1	228
DP2020B3XF	434	30.3	3.8	1.06	27.0	79.6	50.8	220
NG4190B3XF	421	31.8	3.9	1.05	26.6	79.6	52.0	219
NG4936B3XF	365	28.5	3.9	1.07	28.2	80.1	53.5	195
DP2012B3XF	366	30.0	4.0	1.04	26.9	79.4	51.3	188
Mean	**440**	**31**	**4.0**	**1.06**	**28.8**	**79.8**	**52.4**	**231**
CV %	**10.9**	**8.2**	**3.5**	**1.2**	**3.3**	**0.8**	**3.2**	**11.5**
P>F	**0.0489**	**NS**	**<.0001**	**<.0001**	**<.0001**	**0.0004**	**0.006**	**0.1**
STD DEV	**42**	**1**	**0.2**	**0.03**	**1.7**	**0.8**	**1.8**	**23**

Notes: Highlighted values are significantly same as the highest value at *P* <0.1

TEXAS A&M AGRILIFE EXTENSION

Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

Phytogen Innovation trial agronomic information

County	Collingsworth			
Cooperator	Jerry Dan Davis			
Technologies	Enlist			
Irrigation	Irrigated			
Plant	5/24/2021			
Harvest	11/11/2021			
GDD	171	days		
Population	40000			
Rows and width	6 by 40"			
Plot size	0.6	ac		

Precipitation

Month	Precip. (in)
April	0.4
May	4.2
June	6.3
July	4.2
August	1.96
September	0.56
October	1.76
Total	19.38

Variety	Lint (Lbs/ac)	Gin turnout (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value ($/lb)	Lint Value* ($/acre)
PHY400W3FE	**1440**	**40.4**	4.00	1.11	32.3	80.8	0.5632	**811**
PHY332W3FE	1292	38.8	4.15	**1.13**	31.0	81.8	**0.5720**	739
PHY411W3FE	1340	39.1	4.37	1.05	31.1	81.1	0.5313	712
PHY350W3FE	1259	38.5	4.08	1.11	29.4	81.7	0.5648	711
PHY480W3FE	1281	38.8	4.07	1.08	30.2	81.8	0.5503	705
PX3E33W3FE	1207	39.3	4.32	1.11	**32.5**	**82.4**	0.5678	685
PHY545W3FE	1255	**40.4**	4.09	1.07	30.5	81.3	0.5448	684
PHY443W3FE	1184	38.6	**4.42**	1.06	30.9	81.1	0.5377	636
Mean	**1282**	**39**	**4.2**	**1.09**	**31.0**	**81.5**	**0.6**	**710**
CV %	**4.9**	**2.4**	**3.0**	**1.7**	**0.71**	**0.71**	**2.2**	**4.9**
P>F	**0.0054**	**0.1360**	**0.0067**	**0.0012**	**2.6**	**0.5**	**0.0082**	**0.0017**
STD DEV	**80**	**1**	**0.2**	**0.03**	**1.0**	**0.5**	**0.015**	**50**

Notes:

Highlighted values are significantly same as the highest value at P<0.1

TEXAS A&M AGRILIFE EXTENSION

Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

Phytogen Innovation trial agronomic information

County	Childress			
Cooperator	Cade Wyatt			
Technologies	Enlist			
Irrigation	Dryland			
Plant	6/11/2021			
Harvest	12/14/2021			
GDD	186	days		
Population	25000			
Rows and width	8 by 40"			
Plot size	0.5	ac		

Precipitation

Month	Precip. (in)
April	0.90
May	3.80
June	3.20
July	3.30
August	1.38
September	0.63
October	2.69
Total	15.9

Variety	Lint (Lbs/ac)	Gin turnout (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value ($/lb)	Lint Value* ($/acre)
PHY332W3FE	750	37.7	4.64	**1.08**	29.9	80.7	**0.5480**	**410**
PHY480W3FE	**754**	37.8	4.56	1.01	28.2	81.3	0.5013	378
PHY443W3FE	672	36.2	4.66	1.03	29.3	80.9	0.5248	354
PHY411W3FE	688	37.3	4.62	1.01	29.4	80.9	0.5073	349
PHY350W3FE	631	34.8	4.47	1.04	29.0	80.3	0.5213	330
PHY400W3FE	626	38.7	**4.28**	1.06	29.5	80.6	0.5305	329
PHY545W3FE	669	**39.2**	4.49	1.00	27.8	79.5	0.4883	327
PX3E33W3FE	520	35.1	4.45	1.05	**30.4**	**81.4**	0.5288	274
Mean	**664**	**37**	**4.5**	**1.04**	**29.2**	**80.7**	**0.5**	**344**
CV %	**11.0**	**4.3**	**3.0**	**3.7**	**4.2**	**1.2**	**4.6**	**10.9**
P>F	**0.0322**	**0.0332**	**0.0610**	**0.2362**	**0.2651**	**0.3974**	**0.1521**	**0.0234**
STD DEV	**75**	**2**	**0.1**	**0.03**	**0.9**	**0.6**	**0.019**	**40**

Notes:

Highlighted values are significantly same as the highest value at P<0.1

TEXAS A&M AGRILIFE EXTENSION

Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

Phytogen Innovation trial agronomic information

County	Hardeman			
Cooperator	Aaron Philips			
Technologies	Enlist			
Irrigation	Irrigated			
Plant	6/14/2021	Double cropped behind wheat		
Harvest	11/8/2021			
GDD	147	days		
Population	29000			
Rows and width	6 by 40"			
Plot size	1.2	ac		

Precipitation

Month	Precip. (in)
April	1.57
May	4.85
June	6.54
July	3.09
August	1.15
September	0.27
October	2.20
Total	19.67

Variety	Lint (Lbs/ac)	Gin turnout (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value ($/lb)	Lint Value* ($/acre)
PHY400W3FE	**1076**	**34.7**	3.54	1.14	31.9	81.4	0.5355	**575**
PHY350W3FE	1002	33.1	3.88	1.13	30.6	**83.2**	**0.5668**	568
PHY443W3FE	1005	33.8	3.85	1.09	31.8	82.3	0.5633	566
PHY411W3FE	987	34.0	**3.97**	1.07	31.7	82.3	0.5457	538
PHY332W3FE	959	32.9	3.58	**1.17**	**33.1**	82.0	0.5598	538
PX3E33W3FE	930	32.4	3.61	1.15	31.9	82.9	0.5498	511
PHY480W3FE	914	31.5	3.44	1.14	31.1	82.3	0.5343	490
PHY545W3FE	891	34.6	3.71	1.08	30.0	81.1	0.5395	481
Mean	**971**	**33**	**3.7**	**1.12**	**31.5**	**82.2**	**0.5**	**533**
CV %	**4.9**	**4.2**	**5.9**	**1.7**	**1.3**	**0.7**	***3.0***	***6.7***
P>F	**0.0064**	**0.1476**	**0.0952**	**0.0001**	**<0.0001**	**0.0132**	***0.1571***	***0.0334***
STD DEV	**60**	**1**	**0.2**	**0.04**	**0.9**	**0.7**	**0.013**	**36**

Notes:

Highlighted values are significantly same as the highest value at P<0.1

TEXAS A&M AGRILIFE EXTENSION

Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

Phytogen Innovation trial agronomic information

County	Jones/Fisher			
Cooperator	Joe Posey			
Technologies	Enlist			
Irrigation	Irrigated			
Plant	5/29/2021			
Harvest	11/18/2021			
GDD	173	days		
Population	35000			
Rows	8 by 30"	rows	40"	width
Plot size	1.0	ac		

Precipitation

Month	Precip. (in)
April	3.82
May	7.65
June	6.12
July	4.99
August	0.23
September	0.06
October	0.54
Total	23.41

Variety	Lint (Lbs/ac)	Gin turnout (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value ($/lb)	Lint Value* ($/acre)
PHY411W3FE	1434	33.1	3.9	1.05	29.0	80.8	0.5730	$822
PX3E33W3FE	1422	33.2	3.7	1.08	29.1	80.4	0.5548	$791
PHY443W3FE	1302	32.8	3.8	1.07	29.1	80.6	0.5558	$724
PHY545W3FE	1338	33.5	3.4	1.08	28.6	79.3	0.5368	$720
PHY332W3FE	1293	31.2	3.6	1.13	29.4	80.7	0.5555	$706
PHY480W3FE	1280	30.9	3.4	1.11	28.2	81.6	0.5497	$706
PHY350W3FE	1252	30.4	3.6	1.09	28.3	80.2	0.5473	$678
PHY400W3FE	1262	33.1	3.4	1.10	29.1	79.9	0.5285	$668
Mean	**1323**	**32.28**	**3.60**	**1.09**	**28.85**	**80.44**	**0.6**	**726.88**
CV %	.	.	.	.	.	.	.	.
P>F	.	.	.	.	.	.	.	.
STD DEV	**70**	**1.228**	**0.19**	**0.02**	**0.43**	**0.68**	**0.013**	**53**

Note:

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Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

Phytogen Innovation trial agronomic information

County	Jones			
Cooperator	Michael Mclellan			
Technologies	Enlist			
Irrigation	Dryland			
Plant	6/22/2021			
Harvest	10/28/2021			
GDD	128	days		
Population	38000			
Rows and width	8 by 32"			
Plot size	1.25	ac		

Precipitation

Month	Precip. (in)
April	3.82
May	7.65
June	6.12
July	4.99
August	0.23
September	0.06
October	0.54
Total	23.41

Variety	Lint (Lbs/ac)	Gin turnout (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value ($/lb)	Lint Value* ($/acre)
PHY480W3FE	**574**	35.2	4.5	1.04	30.6	82.2	0.5698	**$327**
PHY332W3FE	549	33.7	4.5	**1.09**	**31.9**	**82.4**	**0.5733**	$315
PHY400W3FE	544	**36.0**	**4.4**	1.03	29.6	80.9	0.5675	$309
PX4B08W3FE	540	34.8	4.7	0.99	30.0	80.7	0.5620	$303
PX3E33W3FE	507	34.8	4.6	1.05	31.2	81.5	0.5712	$290
PHY443W3FE	468	33.8	4.7	1.04	30.7	82.2	0.5707	$267
PHY350W3FE	457	32.0	4.6	1.05	28.9	81.8	0.5675	$260
PHY545W3FE	434	34.2	4.5	1.02	29.3	80.8	0.5532	$240
Mean	**509**	**34**	**4.6**	**1.04**	**30.3**	**81.6**	**0.6**	**289**
CV %	.	.	.	.	.	.	.	.
P>F	.	.	.	.	.	.	.	.
STD DEV	**51**	**1**	**0.1**	**0.03**	**1.0**	**0.7**	**0.006**	**30**

Notes:

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Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

Phytogen Innovation trial agronomic information

County	Wichita			
Cooperator	Dwayne Pierce			
Technologies	Enlist			
Irrigation	Irrigated			
Plant	6/15/2021			
Harvest	12/13/2021			
GDD	181	days		
Population	45000			
Rows	8 by 30"	rows	40"	width
Plot size	0.8	ac		

Precipitation

Month	Precip. (in)
April	5.7
May	4
June	5.2
July	2.3
August	2.19
September	0.13
October	2.23
Total	21.75

Variety	Lint (Lbs/ac)	Gin turnout (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value ($/lb)	Lint Value* ($/acre)
PHY411W3FE	**1924**	40.2	3.49	1.16	**31.2**	82.8	0.5248	**1010**
PHY443W3FE	1806	40.6	**3.61**	1.16	30.6	82.5	**0.5527**	1000
PHY400W3FE	1787	40.5	3.22	1.22	31.0	81.4	0.4938	887
PHY332W3FE	1648	38.1	3.07	**1.22**	30.7	81.5	0.4978	820
PX3E33W3FE	1575	38.5	3.16	1.19	31.1	82.4	0.4983	785
PHY545W3FE	1573	**40.8**	3.34	1.16	30.6	82.0	0.4938	776
PHY350W3FE	1532	36.5	3.09	1.20	29.5	82.1	0.4862	745
PHY480W3FE	1555	37.7	2.87	1.22	29.7	**83.6**	0.4457	698
Mean	**1675**	**39.11**	**3.23**	**1.19**	**30.55**	**82.29**	**0.5**	**840.13**
CV %	**4.9**	**3.7**	**4.8**	**1.0**	**2.5**	**0.8**	**5.4**	**8.3**
P>F	**0.0002**	**0.0152**	**0.0009**	**<0.0001**	**0.1313**	**0.0163**	**0.0151**	**0.0005**
STD DEV	**145**	**1.621**	**0.24**	**0.03**	**0.63**	**0.71**	**0.031**	**116**

Note:

Highlighted values are significantly same as the highest value at *P* <0.1

Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

Phytogen Innovation trial agronomic information

County	Wilbarger			
Cooperator	Darren Streit			
Technologies	Enlist			
Irrigation	Irrigated			
Plant	5/21/2021			
Harvest	11/17/2021			
GDD	180	days		
Population	31000			
Rows	8 by 40"	rows	40"	width
Plot size	1.5	ac		

Precipitation

Month	Precip. (in)
April	3.9
May	5.7
June	3.4
July	4.1
August	2.33
September	1.03
October	2.22
Total	22.68

Variety	Lint (Lbs/ac)	Gin turnout (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value ($/lb)	Lint Value* ($/acre)
PHY400W3FE	**1688**	34.4	3.59	1.17	33.0	81.4	0.5578	**943**
PHY411W3FE	1646	33.8	**3.91**	1.12	34.1	82.3	0.5682	935
PHY443W3FE	1548	33.8	3.74	1.14	34.2	82.2	0.5730	887
PHY332W3FE	1507	32.5	3.66	**1.20**	**34.3**	81.9	0.5740	865
PX3E33W3FE	1456	31.6	3.74	1.17	**34.3**	82.4	**0.5743**	836
PHY480W3FE	1489	32.5	3.42	1.16	32.3	**82.7**	0.5400	805
PHY545W3FE	1418	**34.5**	3.59	1.13	32.7	81.5	0.5667	804
PHY350W3FE	1467	30.9	3.53	1.15	31.7	81.4	0.5365	787
Mean	**1527**	**33.00**	**3.65**	**1.16**	**33.33**	**81.98**	**0.6**	**857.75**
CV %	**6.6**	**4.0**	**3.5**	**1.1**	**3.2**	**0.9**	**3.2**	**8.4**
P>F	**0.0599**	**0.0345**	**0.0114**	**<0.0001**	**0.0427**	**0.3448**	**0.1028**	**0.0965**
STD DEV	**95**	**1.329**	**0.15**	**0.03**	**1.03**	**0.50**	**0.0**	**60**

Note:

Highlighted values are significantly same as the highest value at *P* <0.1

Updated on 1.28.2022

2021 Texas Rolling Plains Cotton Trials

BASF APT Trial agronomic information (Not replicated)

County	Haskell			
Cooperator	Jason Key			
Technologies	XtendFlex			
Irrigation	Dryland			
Plant	6/22/2021			
Harvest	11/19/2021			
GDD	162	days		
Population	24000			
Rows and width	6 by 40"			
Plot size		ac		

Precipitation

Month	Precip. (in)
April	3.9
May	5.7
June	3.4
July	4.1
August	2.33
September	1.03
October	2.22
Total	22.68

Variety	Lint (Lbs/ac)	Gin TO (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value ($/lb)	Lint Value* ($/acre)
DP 1820 B3XF	802	39.0	4.82	**1.16**	**34.90**	**82.40**	**55.70**	**447**
BX 2296B3X	797	**42.0**	4.76	1.07	28.20	80.80	52.50	418
ST 5600B2XF	758	41.0	**5.33**	1.05	30.90	80.90	48.80	370
ST 4595B3XF	763	39.0	4.84	1.05	29.00	80.90	47.05	359
ST 4990B3XF	746	38.0	4.60	1.06	27.90	81.10	47.45	354
ST 5707B2XF	701	37.0	5.00	1.07	32.60	80.80	50.50	354
ST 4993B3XF	**842**	**42.0**	5.05	1.02	31.90	81.00	41.70	351
BX 2297B3X	723	38.0	4.77	1.04	27.40	80.50	43.70	316
BX 2298B3X	774	40.0	5.07	1.00	27.40	80.40	40.55	314
Mean	**767**	**40**	**4.92**	**1.06**	**30**	**81**	**48**	**365**

***Trial was not replicated.**

Updated on 2.8.2022

2021 Texas Rolling Plains Cotton Trials

BASF APT Trial agronomic information (Not replicated)

County	Wilbarger			
Cooperator	Donald Shoppa			
Technologies	Mixed			
Irrigation	Dryland			
Plant	6/19/2021			
Harvest	11/30/2021			
GDD	164	days		
Population	45000			
Rows and width	8 by 40"			
Plot size	0.91	ac		

Precipitation

Month	Precip. (in)
April	3.9
May	5.7
June	3.4
July	4.1
August	2.33
September	1.03
October	2.22
Total	22.68

Variety	Lint (Lbs/ac)	Gin TO (%)	Micronaire	Fiber Length (inch)	Strength (g/tex)	Unif	Loan Value (cents/lb)	Lint Value* ($/acre)
FM 2398GLTP	**296**	33.0	**3.82**	1.08	29.1	80.7	54.85	**163**
FM 2498GLT	270	33.0	3.75	1.08	29.1	80.4	54.65	147
FM 1830GLT	241	30.1	3.63	1.12	31.3	80.4	56.40	136
ST 4990B3XF	229	30.0	3.61	1.09	30.4	80.9	55.05	126
ST 5600B2XF	209	32.0	3.74	1.12	33.1	**82.7**	**56.60**	118
FM 1953GLTP	231	30.0	3.46	1.09	31.3	80.8	50.30	116
ST 4993B3XF	202	31.0	3.54	1.06	32.7	82.3	53.40	108
FM 1730GLTP	199	27.0	3.42	1.09	32.2	81.5	50.15	100
BX 2298B3X	142	29.0	3.53	1.06	29.6	80.6	53.00	75
BX 2297B3X	151	**34.0**	3.3	1.08	27.5	79.5	49.00	74
ST 5707B2XF	138	28.0	3.43	1.11	**34.3**	81.6	51.50	71
DP 1820 B3XF	112	28.0	3.18	**1.14**	33.8	80.6	50.25	56
ST 4595B3XF	114	28.0	3.41	1.10	29.1	80.5	48.50	55
BX 2296B3X	122	31.0	2.97	1.08	29.5	80.1	45.35	55
Mean	**190**	**30**	**3**	**1**	**31**	**81**	**52**	**100**

***Trial was not replicated.**

Updated on 2.8.2022

http://cotton.tamu.edu/

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