

The University of Arizona 2021 Cotton Variety Testing Program

UArizona Cooperative Extension and
Experiment Station

Trial Results

Funded in part by the Arizona Cotton Growers Association,
Cotton Incorporated, and Participating Seed Companies

Prepared by:
Dr. Randy Norton

Introduction

Variety selection is one of the most important decisions a grower will make contributing to the success of a cotton crop. It is critical, that a grower have as much information as possible in order to make an informed decision regarding variety selection. In an effort to help supply reliable variety performance information, the University of Arizona conducts a statewide cotton variety testing program. This program consists of a few different types of trials. The first is a small plot evaluation of commercially available varieties along with experimental varieties and is conducted in 3 locations across Arizona including Yuma, Maricopa, and Safford. This testing program is called the University of Arizona Upland Cotton Advanced Strains Testing Program.

Another type of University sponsored trial is a large plot, replicated strip trial conducted on grower-cooperator farms in a wide variety of locations across Arizona. These large plot strip trials consist of replicated plots extending the full length of the irrigation run at each location. This program is titled the University of Arizona Upland Cotton Variety Testing Program (UCVT). Seven locations across the state were conducted in 2020.

Testing of commercial and experimental ELS (Pima) varieties were also conducted in 3 locations in 2021. Two of the locations were small plot trials (Pima Cotton Advanced Strain Testing Program – PCAST), while the other location was a strip trial conducted on a grower cooperator field (Pima Cotton Variety Testing Program – PCVT).

Each trial is summarized in this publication with a series of tables and graphs. The first table contains location, planting date, along with various other location characteristics for each of the trials conducted across Arizona in 2021. The second table for each location contains early season data collected including early season stand count (plants per foot) and plant vigor rating (1-9 low-high). The second table also contain mid-season data collected including nodes above white flower (NAWF) for a measurement of relative earliness and plant height (inches). The third table for each location contains yield and fiber quality data. Statistical analysis for all parameters is also presented at the bottom of each table. Finally, for each location a figure plotting lint yield as a function of fiber premium/discount is presented. The vertical line in the figure represents the average of the trial for fiber premium and the horizontal line represents the trial average for yield. Any varieties falling in the upper right quadrant performed better than average for both lint yield and fiber quality at that location.

If you have any questions regarding these trials or this publication please direct them to Dr. Randy Norton, Regional Extension Specialist and Director of the Safford Ag Center at rnorton@cals.arizona.edu.

The work performed over the course of the 2021 cotton season to produce the results contained in this booklet was funded in part by Cotton Incorporated through the Arizona Cotton Growers Association and also by participating seed companies. A special Thank You is extended to the Grower-Cooperators who participate in these testing programs. This program would not be successful without them.

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Yuma, AZ	
Soil Type	Clay
Irrigation	Furrow/flood
Tillage	Conventional
Planting Rate	46,000
Planting Date	3/5/21
Defoliation Date	8/5/21
Harvest Date	8/30/21

Variety	Plant Population (plants/foot)	Plant Vigor Rating (0-9 L-H)
DP2115B3XF	3.5	5.3
DP2127B3XF	3.1	6.3
DT5091B3XF	2.5	5.0
NG3195B3XF	2.7	5.0
NG4190B3XF	3.1	6.0
PHY400W3FE	2.4	5.3
PX4B08W3FE	2.4	5.7
ST4990B3XF	2.8	5.3
Mean	2.8	5.5

Yield and fiber quality results from the University of Arizona Upland Cotton Variety Testing (UCVT) program, Yuma, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)	Percent Lint	Color Grade	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Leaf Grade	Uniformity Index (%)	Premium (cents/lb)	Value** (\$/acre)	
Deltapine	DP2012B3XF	2000.7	a*	39.4	11	35	4.9	28.8	1.10	2	79.3	3.3	\$1,105.05
Stoneville	ST5091B3XF	1866.1	ab	38.1	11	34	5.1	27.2	1.05	2	78.6	-2.3	\$925.33
NexGen	NG3195B3XF	1771.5	ab	38.0	21	35	5.1	30.3	1.09	2	81.0	1.1	\$940.73
Stoneville	ST4990B3XF	1769.0	ab	35.1	11	37	5.0	29.3	1.14	1	80.1	3.2	\$977.32
NexGen	NG4190B3XF	1748.6	abc	37.2	11	36	4.9	30.0	1.13	1	80.4	4.1	\$980.10
Deltapine	DP2115B3XF	1664.8	bc	36.6	11	36	5.2	30.9	1.12	2	80.9	1.7	\$893.53
Phytogen	PHY400W3FE	1613.9	bc	37.5	11	35	5.0	30.6	1.08	2	79.6	1.0	\$853.32
Phytogen	PX4B08W3FE	1448.7	c	34.9	21	34	4.8	30.9	1.08	2	79.6	2.1	\$783.04
	Mean	1735.4		37.1	---	35	5.0	29.7	1.10	2	79.9	1.8	\$932.30
	LSD[§]	311.6		1.5	---	1	0.3	0.9	0.02	1	1.2	2.5	\$163.49
	OSL[†]	0.0910		0.0002	---	0.0002	0.0196	<0.0001	<0.0001	0.0335	0.0120	0.0022	0.0695
	CV[‡]	10.3		2.2	---	1.6	2.9	1.7	1.2	26.5	0.9	81.8	10.0

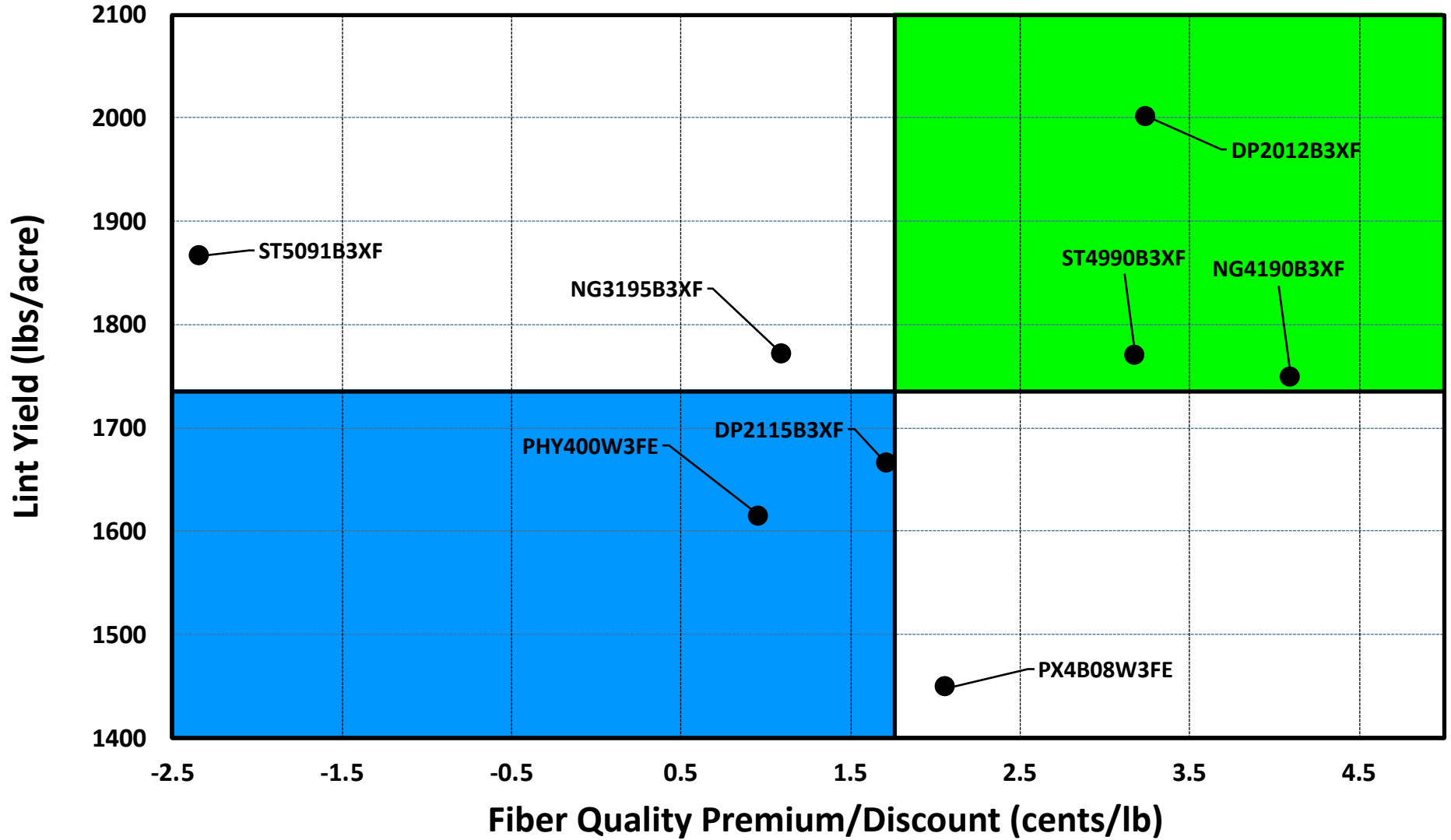
*Lint yield means followed by the same letter are not statistically different according to Fisher's LSD (Least Significance Difference) means separation ($\alpha = 0.05$)

**Value calculated from CCC loan schedule base price of \$0.52/lb + premium/discount

§Least Significant Difference

†Observed Significance Level

‡Coefficient of Variation



Yield and fiber quality graph for the University of Arizona Upland Cotton Variety Testing (UCVT) program, Yuma, AZ, 2021.

Goodyear, AZ	
Soil Type	Loam
Irrigation	Flat/Flood
Tillage	Minimum
Planting Rate	52,000
Planting Date	6/1/21
Defoliation Date	11/15/21
Harvest Date	12/15/21

Variety	Plant Population (plants/foot)	Plant Vigor Rating (0-9 L-H)
DG3402B3XF	2.0	6.5
DG3469B3XF	2.6	6.0
DP1725B2XF	2.0	6.0
DP2012B3XF	2.7	7.0
FM1730GLTP	2.6	6.5
NG4936B3XF	2.1	5.5
NG5150B3XF	2.0	5.5
PHY350W3FE	2.8	7.5
PHY400W3FE	2.9	7.5
ST4993B3XF	2.3	7.0
Mean	2.4	6.5

Yield and fiber quality results from the University of Arizona Upland Cotton Variety Testing (UCVT) program, Goodyear, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)	Percent Lint	Color Grade	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Leaf Grade	Uniformity Index (%)	Premium (cents/lb)	Value** (\$/acre)	
DynaGro	DG3469B3XF	1165.3	a*	31.8	31	38	3.1	30.1	1.19	3	80.9	-2.8	\$572.61
Stoneville	ST4993B3XF	1142.6	a	32.7	21	38	3.3	34.5	1.19	2	82.0	0.1	\$595.35
Deltapine	DP1725B2XF	1138.6	a	34.0	31	38	3.5	31.5	1.20	3	81.0	2.7	\$624.69
Deltapine	DP2012B3XF	1113.6	a	29.8	31	39	3.1	30.9	1.20	3	81.0	-1.4	\$563.59
DynaGro	DG3402B3XF	965.3	b	29.9	31	39	3.5	32.4	1.20	3	81.3	3.0	\$530.43
Phytogen	PHY400W3FE***	946.0	bc	32.3	31	37	3.1	32.1	1.16	4	80.1	-2.7	\$465.92
NexGen	NG5150B3XF	872.3	bcd	28.5	31	39	2.7	32.4	1.21	3	80.5	-4.2	\$417.17
Phytogen	PHY350W3FE***	824.8	cd	28.3	41	39	2.7	31.6	1.21	5	81.3	-7.6	\$365.67
NexGen	NG4936B3XF	741.3	d	26.9	31	40	3.1	32.5	1.23	3	82.0	-1.4	\$375.49
Mean		990.0		30.5	---	38	3.1	32.0	1.20	3	81.1	-1.6	\$501.21
LSD [§]		140.1		1.5	---	1.0	0.2	NS	NS	NS	NS	5.4	\$95.18
OSL [†]		0.0007		<0.0001	---	0.0240	0.0002	0.1427	0.0924	0.0741	0.0668	0.0327	0.0013
CV [‡]		6.1		2.1	---	1.2	2.8	3.7	1.3	24.7	0.6	-147.2	8.2

*Lint yield means followed by the same letter are not statistically different according to Fisher's LSD (Least Significance Difference) means separation ($\alpha = 0.05$)

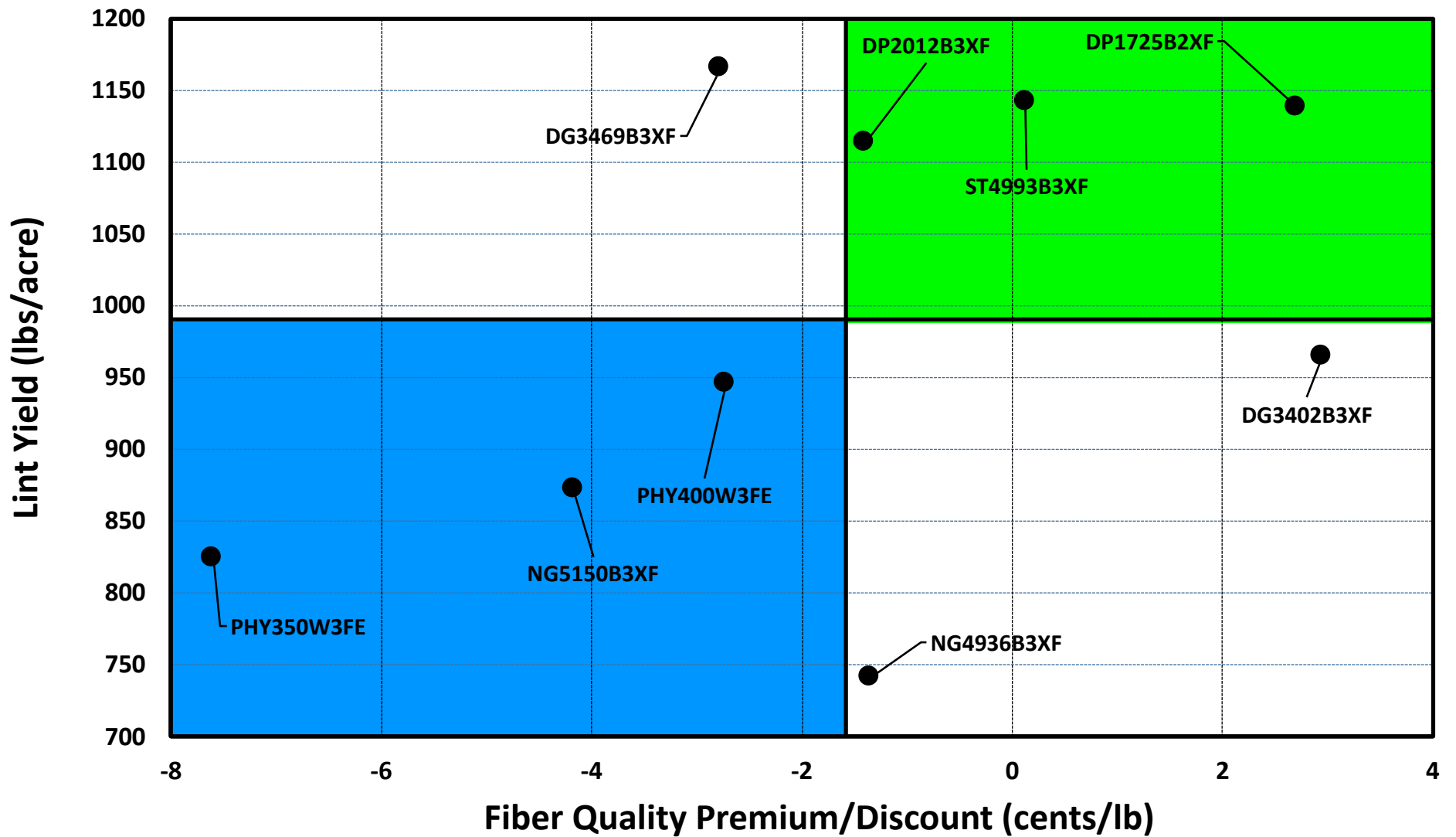
**Value calculated from CCC loan schedule base price of \$0.52/lb + premium/discount

§Least Significant Difference

†Observed Significance Level

‡Coefficient of Variation

***Varieties affected by an early season dicamba application.



Yield and fiber quality graph for the University of Arizona Upland Cotton Variety Testing (UCVT) program, Goodyear, AZ, 2021.

Stanfield, AZ	
Soil Type	Sandy loam
Irrigation	Sub-Surface Drip
Tillage	Minimum
Planting Rate	45,000
Planting Date	4/20/21
Defoliation Date	11/3/21
Harvest Date	1/6/22

Variety	Plant Population (plants/foot)	Plant Vigor Rating (0-9 L-H)
DG3535B3XF	2.2	6.3
DG3644B3XF	2.4	6.7
DP2012B3XF	2.2	7.7
DP2038B3XF	2.1	6.3
NG4190B3XF	1.9	6.3
NG4936B3XF	2.0	5.7
PHY480W3FE	2.3	6.7
PX4B08W3FE	2.4	5.7
ST4990B3XF	2.6	6.3
ST4993B3XF	2.1	7.0
Mean	2.2	6.5

Yield and fiber quality results from the University of Arizona Upland Cotton Variety Testing (UCVT) program, Stanfield, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)	Percent Lint	Color Grade	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Leaf Grade	Uniformity Index (%)	Premium (cents/lb)	Value** (\$/acre)
Deltapine	DP2038B3XF	1508.2 a*	37.4	31	34	4.5	28.6	1.05	2	78.7	-0.3	\$782.34
Stoneville	ST4993B3XF	1444.7 ab	33.6	21	36	4.5	32.1	1.12	2	81.8	5.2	\$826.16
Deltapine	DP2012B3XF	1436.5 ab	36.3	21	36	4.1	29.1	1.12	2	79.9	4.5	\$811.54
DynaGro	DG3535B3XF	1417.2 ab	35.4	21	35	4.2	30.4	1.10	2	80.8	3.4	\$784.73
Phytogen	PX4B08W3FE	1370.3 bc	37.1	21	35	4.2	32.8	1.10	2	80.9	3.4	\$759.43
NexGen	NG4190B3XF	1289.9 cd	34.2	31	37	4.4	32.1	1.15	3	80.6	4.5	\$728.26
Phytogen	PHY480W3FE	1244.9 d	32.7	21	35	4.2	30.7	1.10	2	80.6	3.8	\$694.82
Stoneville	ST4990B3XF	1233.2 de	33.6	21	36	4.3	30.2	1.12	2	81.5	4.3	\$694.24
NexGen	NG4936B3XF	1131.1 ef	31.1	31	36	4.2	29.6	1.14	2	80.8	4.3	\$636.20
DynaGro	DG3644B3XF	1115.5 f	32.5	21	36	4.6	31.5	1.11	1	80.2	4.4	\$629.54
Mean		1319.1	34.4	---	35.5	4.3	30.7	1.11	2.1	80.6	3.8	\$734.73
LSD[§]		103.1	1.3	---	1.3	0.3	1.6	0.04	0.5	1.3	2.2	\$72.72
OSL[†]		<0.0001	<0.0001	---	0.0133	0.0068	0.0005	0.0136	0.0014	0.0060	0.0053	<0.0001
CV[‡]		4.6	2.1	---	2.2	3.7	3.1	2.2	15.1	0.9	34.3	5.8

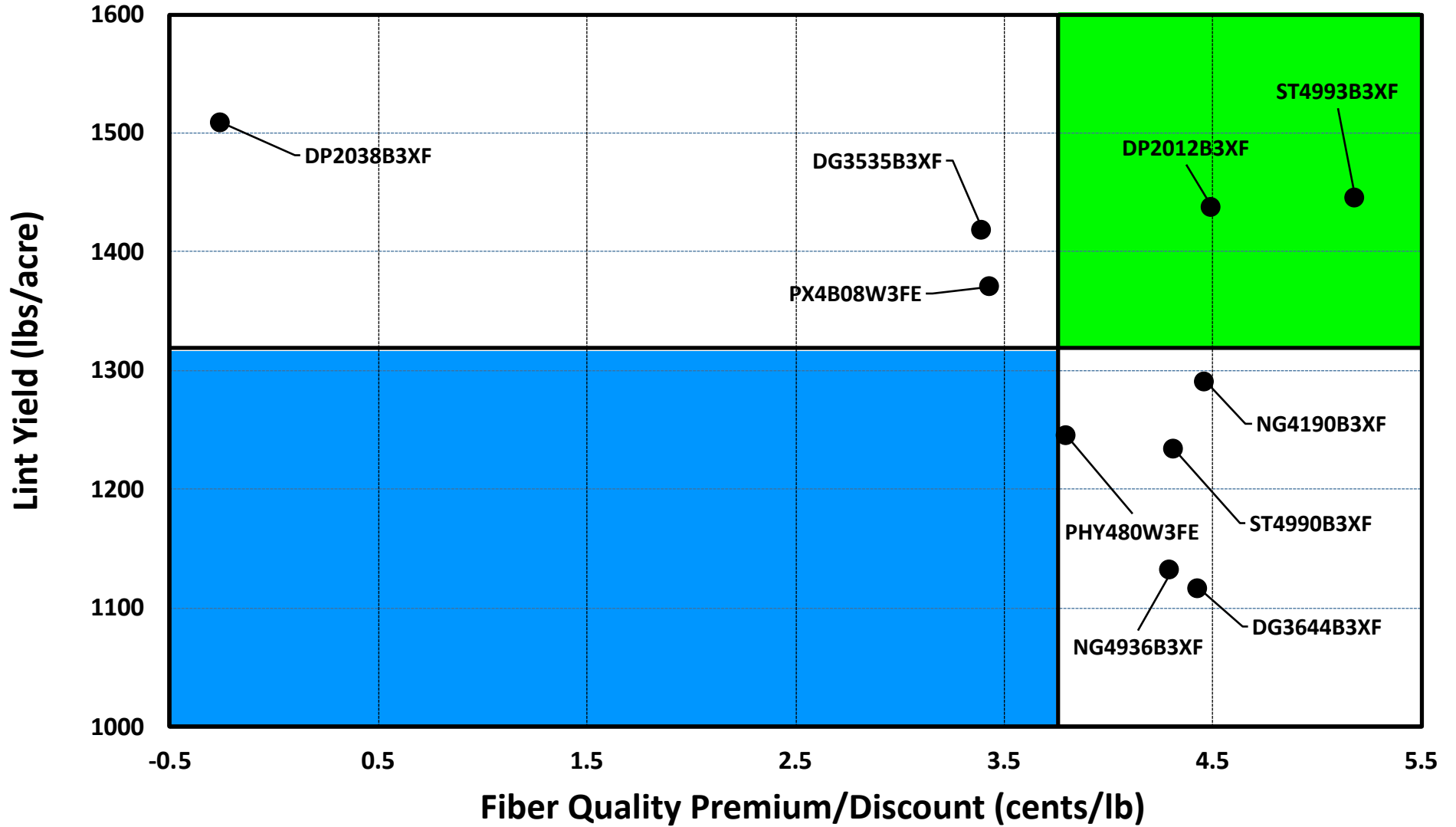
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‡Coefficient of Variation



Yield and fiber quality graph for the University of Arizona Upland Cotton Variety Testing (UCVT) program, Stanfield, AZ, 2021.

Stanfield, AZ	
Soil Type	Silty loam
Irrigation	Furrow/Flood
Tillage	Conventional
Planting Rate	58,000
Planting Date	4/12/21
Defoliation Date	9/20/21
Harvest Date	10/25/21

Variety	Plant Population (plants/foot)	Plant Vigor Rating (0-9 L-H)
DG3535B3XF	3.5	6.0
DG3644B3XF	2.9	6.0
DP1646B2XF	3.5	5.5
DP1948B3XF	2.9	5.0
NG4936B3XF	3.4	5.5
NG5150B3XF	3.0	5.0
PHY350W3FE	3.3	7.5
PHY400W3FE	3.3	6.5
ST4993B3XF	3.8	7.5
ST5091B2XF	3.9	8.0
Mean	3.3	6.3

Yield and fiber quality results from the University of Arizona Upland Cotton Variety Testing (UCVT) program, Eloy, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)	Percent Lint	Color Grade	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Leaf Grade	Uniformity Index (%)	Premium (cents/lb)	Value** (\$/acre)	
DynaGro	DG3535B3XF	1622.3	a*	37.6	31	37	4.8	30.3	1.16	2	80.5	3.3	\$897.17
Deltapine	DP1948B3XF	1515.1	ab	36.7	31	39	4.7	30.7	1.20	1	81.0	5.3	\$867.49
Deltapine	DP1646B2XF	1436.3	bc	35.9	31	39	4.5	29.2	1.21	3	80.6	5.1	\$819.84
NexGen	NG5150B3XF	1413.2	bc	35.8	31	37	5.0	28.7	1.13	2	79.3	2.8	\$775.75
Stoneville	ST5091B2XF	1411.4	bc	34.3	31	37	4.8	30.6	1.16	3	81.8	4.7	\$800.19
Phytogen	PHY400W3FE	1393.6	bc	36.3	31	37	5.0	31.1	1.14	2	80.1	3.4	\$770.36
NexGen	NG4936B3XF	1343.0	bc	32.7	31	38	4.9	28.9	1.17	1	81.1	4.9	\$764.14
Stoneville	ST4993B3XF	1322.6	c	33.7	31	37	5.1	32.7	1.15	2	82.8	2.5	\$721.20
Phytogen	PHY350W3FE	1311.5	c	34.8	31	36	5.0	29.3	1.12	2	80.1	3.4	\$725.64
DynaGro	DG3644B3XF	1267.6	c	34.8	31	38	5.1	33.1	1.17	1	80.4	2.9	\$695.95
Mean		1403.7		35.3	---	37	4.9	30.4	1.16	2	80.7	3.8	\$783.77
LSD[§]		178.1		2.2	---	NS	NS	2.2	NS	1.5	NS	NS	\$102.19
OSL[†]		0.0356		0.0202	---	0.1666	0.1881	0.0157	0.1963	0.1221	0.0608	0.6327	0.0234
CV[‡]		5.6		2.8	---	2.4	4.2	3.1	2.5	37.9	1.0	43.7	5.8

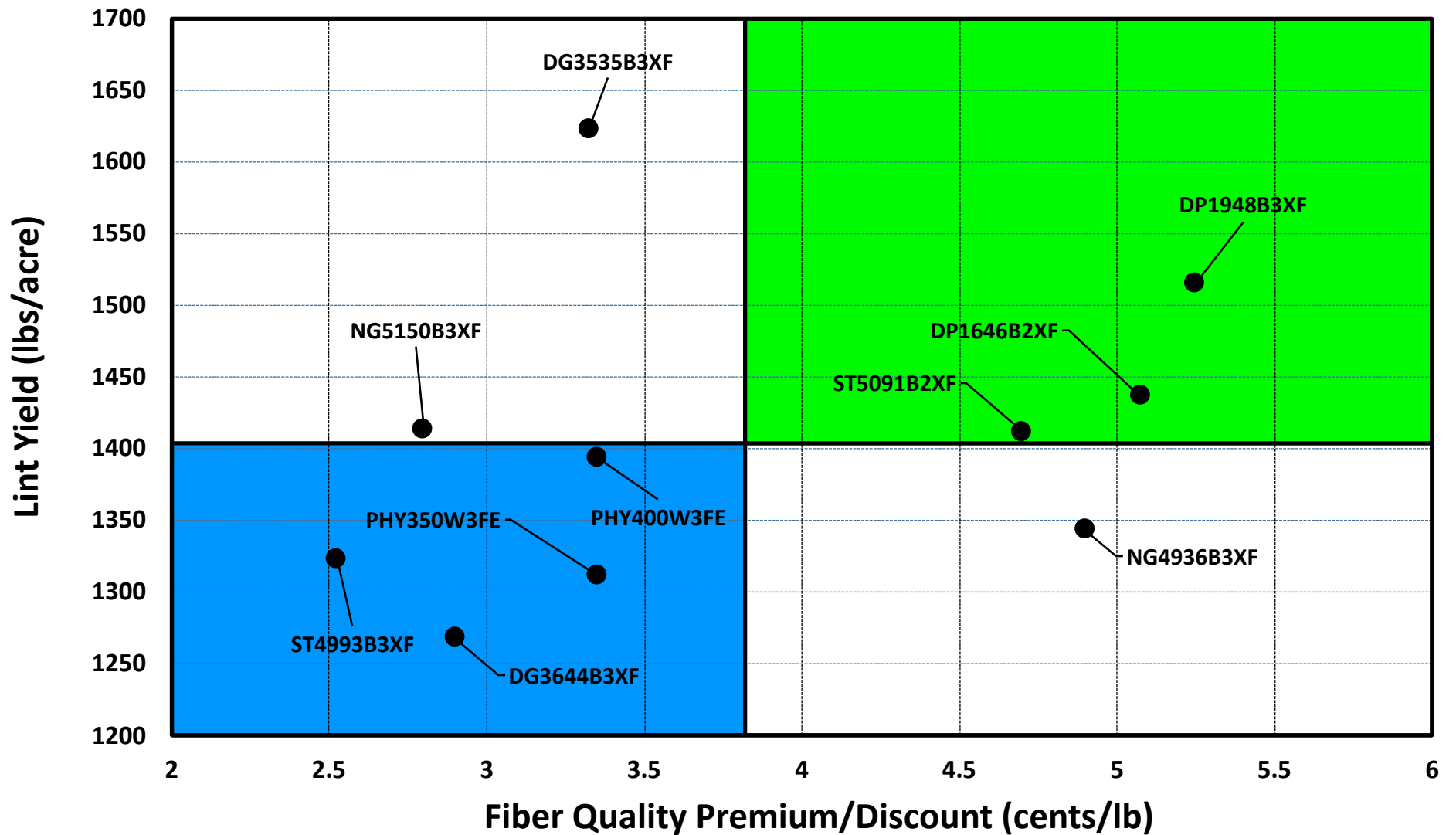
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†Observed Significance Level

‡Coefficient of Variation



Yield and fiber quality graph for the University of Arizona Upland Cotton Variety Testing (UCVT) program, Eloy, AZ, 2021.

Thatcher, AZ	
Soil Type	Clay loam
Irrigation	Sub-surface drip
Tillage	Minimum
Planting Rate	68,000
Planting Date	5/12/21
Defoliation Date	10/15/21
Harvest Date	11/10/21

Variety	Plant Population (plants/foot)	Plant Vigor Rating (0-9 L-H)
DG3535B3XF	3.7	5.0
DG3644B3XF	4.0	4.0
DP2012B3XF	4.3	6.0
DP2038B3XF	3.6	4.5
FM1730GLTP	3.4	5.0
NG3195B3XF	2.7	4.5
NG4190B3XF	1.6	3.5
PHY332W3FE	3.9	6.5
PHY480W3FE	4.5	5.0
ST4993B3XF	2.7	4.5
Mean	3.4	4.9

Yield and fiber quality results from the University of Arizona Upland Cotton Variety Testing (UCVT) program, Thatcher, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)	Percent Lint	Color Grade	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Leaf Grade	Uniformity Index (%)	Premium (cents/lb)	Value** (\$/acre)	
FiberMax	FM1830GLT	2379.4	a*	39.5	21	35	5.2	27.7	1.07	1	80.6	0.1	\$1,239.73
DynaGro	DG3535B3XF	2348.8	a	40.5	21	36	4.6	29.3	1.12	1	79.9	4.5	\$1,326.65
NexGen	NG3195B3XF	2318.8	a	41.6	21	36	5.0	29.8	1.11	2	81.3	3.0	\$1,278.29
Stoneville	ST4993B3XF	2270.2	ab	41.2	21	37	5.0	31.1	1.13	2	81.3	4.3	\$1,276.14
Deltapine	DP2038B3XF	2218.2	ab	42.7	21	35	4.9	28.7	1.08	2	79.1	0.8	\$1,170.98
Deltapine	DP2012B3XF	2165.7	ab	39.4	21	36	4.9	29.2	1.12	2	80.4	4.8	\$1,229.59
Phytogen	PHY332W3FE	2127.3	abc	37.5	21	36	5.0	29.9	1.12	2	79.7	2.7	\$1,160.89
Phytogen	PHY480W3FE	2029.3	bc	37.6	21	36	4.3	30.1	1.13	1	80.5	4.7	\$1,149.59
NexGen	NG4190B3XF	1996.0	bc	39.2	21	37	4.7	29.1	1.14	2	80.7	3.9	\$1,113.16
FiberMax	FM1730GLTP	1880.7	cd	35.9	31	39	4.5	32.5	1.20	2	83.0	5.6	\$1,082.58
DynaGro	DG3644B3XF	1641.1	d	34.6	21	38	4.9	32.0	1.17	1	79.2	5.5	\$943.06
	Mean	2125.0		39.1	---	36	4.8	29.9	1.12	2	80.5	3.6	\$1,179.15
	LSD[§]	275.8		3.3	---	1.6	NS	1.5	0.04	NS	2.0	NS	\$170.33
	OSL[†]	0.0032		0.0061	---	0.0092	0.4183	0.0010	0.0026	0.4106	0.0457	0.1683	0.0190
	CV[‡]	5.8		3.8	---	2.0	7.2	2.3	1.8	39.2	1.1	51.9	6.5

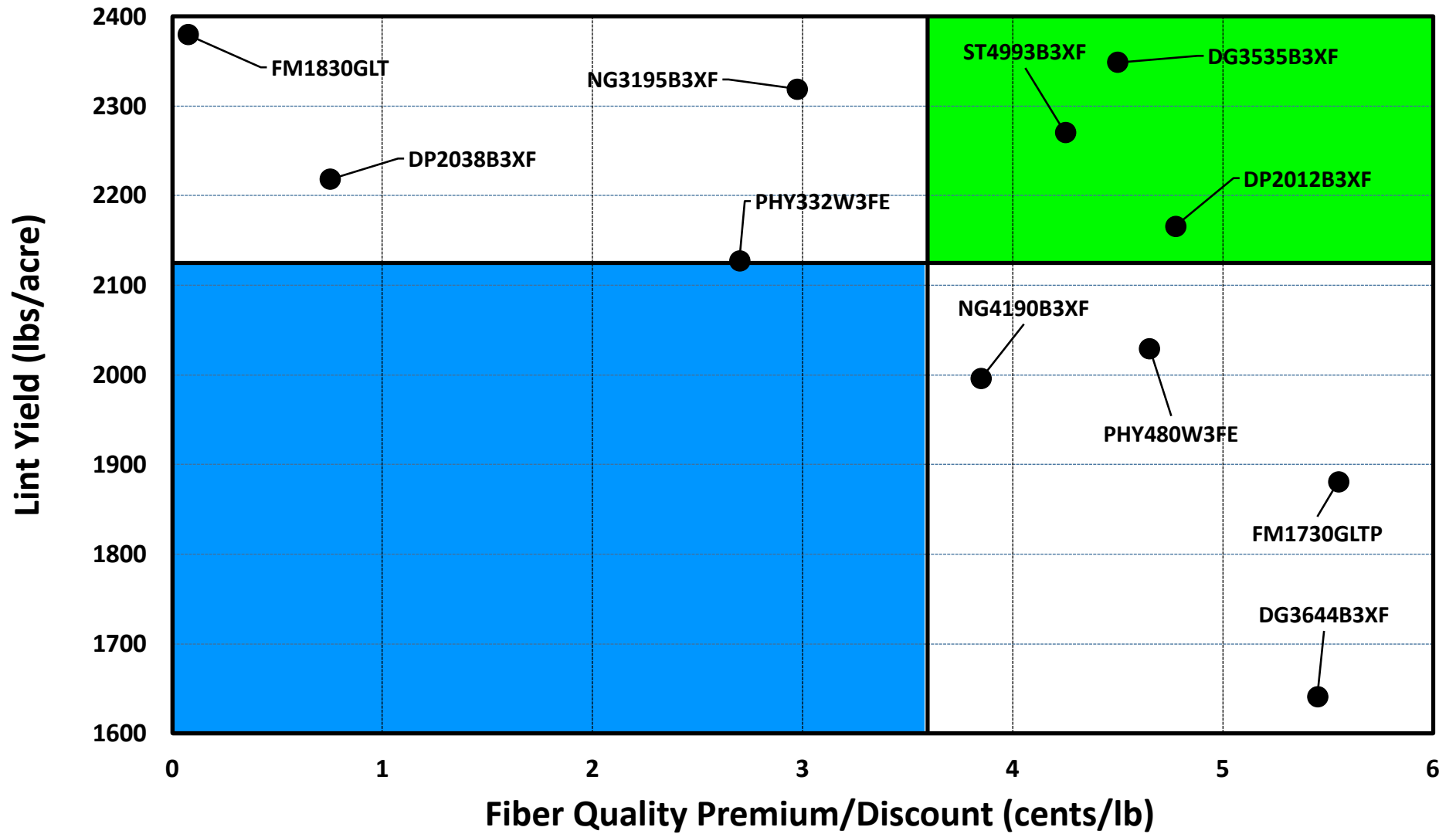
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Yield and fiber quality graph for the University of Arizona Upland Cotton Variety Testing (UCVT) program, Thatcher, AZ, 2021.

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Prepared by:
Dr. Randy Norton

Significant crop management dates and soil classification for each Upland Advanced Strain evaluation location conducted during the 2021 production season.

	Yuma, AZ	Maricopa, AZ	Safford, AZ
County:	Yuma	Pinal	Graham
City:	Yuma	Maricopa	Safford
GPS Coordinates:	32.7093, -114.7093	33.0618, -111.9739	32.8131, -109.6786
Planting Date:	3/22/21	4/28/21	5/3/21
Seeding Rate:	4 seed/foot	4 seed/foot	4 seed/foot
Defoliation Date:	9/10/21	10/5/21	9/25/21
Harvest Date:	10/21/21	12/2/21	11/18/21
Tillage:	Conventional	Conventional	Conventional
Soil Class:	Holtville clay	Casa Grande sandy loam	Grabe clay loam
Irrigation System:	Furrow/Flood	Furrow/flood	Furrow/flood
Harvester Type:	Plot harvester	Plot harvester	Plot harvester
Gin Type:	Table-top gin	Table-top gin	Table-top gin

Early season emergence (plants/foot), vigor evaluations (1-9, L-H), and mid-season plant height and nodes above white flower (NAWF) for each entry in the Upland Advanced Strain evaluation, Yuma, AZ, 2021.

Seed Company	Variety	Plant Population (plants/foot)	Plant Vigor Rating (1-9 L-H)	Plant Height (inches)	Nodes Above White Flower (NAWF)
Gowan	1432	2.1	7.0	50.7	5.2
Deltapine	20R727B3XF	3.4	5.3	39.4	4.4
Deltapine	20R732B3XF	3.5	5.5	40.7	3.8
Deltapine	20R734B3XF	3.1	4.0	37.1	3.7
Deltapine	20R739B3XF	2.0	3.7	32.3	4.1
Deltapine	20R744B3XF	2.2	4.0	42.4	4.4
Deltapine	20R745NRB3XF	2.5	5.7	41.6	4.9
Deltapine	20R926XF	2.2	4.7	39.6	4.0
Brownfield	6X	2.1	5.7	34.9	4.0
Brownfield	9X	2.8	5.0	38.7	4.1
Deltapine	DP1549B2XF	2.6	6.3	46.2	5.8
Deltapine	DP2012B3XF	3.7	4.5	38.0	3.9
Deltapine	DP2115B3XF	3.2	5.7	40.2	4.4
Deltapine	DP2239B3XF	2.8	6.3	34.8	3.7
FiberMax	FM1621GL	2.5	5.0	34.8	4.7
FiberMax	FM1730GLTP	2.2	5.0	36.1	4.4
FiberMax	FM2202GL	2.9	5.0	43.1	4.3
FiberMax	FM2398GLTP	2.9	4.0	42.3	4.6
NexGen	NG3195B3XF	2.2	4.7	41.9	4.3
NexGen	NG3299B3XF	2.1	3.3	74.6	4.2
NexGen	NG4098B3XF	1.8	5.0	37.1	4.9
NexGen	NG4190B3XF	2.8	4.3	42.9	5.2
NexGen	NG4936B3XF	1.9	3.0	37.0	4.9
NexGen	NG5150B3XF	2.2	5.3	42.3	4.7
Phytogen	PHY350W3FE	2.6	6.0	39.2	4.3
Phytogen	PHY400W3FE	2.9	6.7	38.2	3.8
Phytogen	PXL213W3FE	2.8	7.3	38.4	3.6
Phytogen	PXL222W3FE	3.0	6.0	37.6	4.3
Phytogen	PXLU329W3FE	3.4	6.0	39.8	5.1
Phytogen	PXU383W3FE	3.1	6.0	40.3	4.0
Phytogen	PXU385W3FE	3.2	7.3	43.4	4.7
Phytogen	PXU450W3FE	3.4	5.7	39.4	4.4
Phytogen	PXU452W3FE	2.9	7.0	45.5	4.6
Phytogen	PXU453W3FE	3.0	3.3	37.8	4.2
Stoneville	ST4550GLTP	2.7	4.3	40.2	3.7
Stoneville	ST4990B3XF	3.1	6.3	43.5	4.4
Stoneville	ST4993B3XF	2.4	3.7	34.4	4.5
Stoneville	ST5091B3XF	2.9	5.3	43.5	3.8
Stoneville	ST5707B2XF	2.5	4.0	37.2	3.8
Brownfield	TBE	0.9	2.7	40.3	4.5
MEAN		2.7	5.2	40.7	4.4

Yield and fiber quality data along with statistical analysis for each entry in the Upland Advanced Strain evaluation, Yuma, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)	Lint (%)	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Uniform (%)	Premium (cents/lb)	Value** (\$/acre)	
Stoneville	ST5091B3XF	2357.0	a*	44.0	36	4.6	30.3	1.13	81.4	1.2	\$1,255.35
Stoneville	ST4990B3XF	2096.0	b	41.2	38	4.4	30.7	1.19	82.1	2.1	\$1,134.43
NexGen	NG5150B3XF	2042.1	b	43.0	37	4.7	31.6	1.16	81.1	2.2	\$1,105.84
Deltapine	DP2012B3XF	2026.5	bc	40.7	37	4.3	30.9	1.17	81.5	2.1	\$1,095.74
NexGen	NG3195B3XF	2002.1	bcd	42.6	37	4.5	32.7	1.16	82.7	2.2	\$1,085.52
Phytogen	PXU383W3FE	2000.5	bcd	43.7	39	4.3	35.3	1.20	83.7	2.5	\$1,089.28
Phytogen	PHY400W3FE	1970.1	bcde	43.1	37	4.3	32.9	1.16	81.6	2.2	\$1,067.79
Deltapine	20R926XF	1937.7	bcde	45.0	37	5.0	31.7	1.16	81.9	0.6	\$1,021.70
Deltapine	DP2115B3XF	1892.5	bcdef	45.1	37	4.9	31.8	1.14	82.8	0.9	\$999.96
Phytogen	PHY350W3FE	1809.8	cdefg	41.1	37	4.0	32.8	1.15	81.5	2.1	\$979.56
NexGen	NG4936B3XF	1804.6	defg	40.0	38	4.6	30.4	1.18	82.8	2.0	\$974.87
NexGen	NG3299B3XF	1750.1	efgh	42.7	37	5.1	34.7	1.15	83.0	0.6	\$922.65
Stoneville	ST4550GLTP	1706.4	fghi	45.3	37	4.9	34.2	1.14	83.2	1.0	\$904.66
Deltapine	DP2239B3XF	1703.5	fghi	45.1	38	4.8	31.1	1.19	82.2	1.6	\$912.64
Deltapine	20R734B3XF	1681.9	fghij	44.6	36	4.9	28.9	1.12	80.7	-0.7	\$865.10
NexGen	NG4190B3XF	1647.4	ghij	43.5	38	4.4	30.4	1.17	82.4	2.1	\$891.40
Phytogen	PXLU329W3FE	1608.2	ghijk	44.1	38	4.4	34.7	1.20	82.0	2.4	\$874.26
Deltapine	DP1549B2XF	1591.5	ghijk	41.1	37	4.4	33.3	1.15	81.5	2.1	\$861.38
NexGen	NG4098B3XF	1571.1	hijk	39.5	38	4.5	35.9	1.20	81.8	2.4	\$853.87
Phytogen	PXU385W3FE	1568.5	hijk	45.4	37	4.4	33.8	1.14	83.6	2.3	\$851.54
Phytogen	PXL213W3FE	1564.1	hijkl	41.7	37	4.2	34.7	1.17	83.9	2.4	\$851.40
Brownfield	6X	1528.1	ijkl	39.0	36	5.0	29.6	1.11	82.1	-0.3	\$789.58
Stoneville	ST4993B3XF	1488.3	ijkl	43.6	37	5.2	33.8	1.14	82.7	-0.4	\$770.47
FiberMax	FM1730GLTP	1481.8	jkl	43.9	37	3.9	33.3	1.14	81.8	0.5	\$778.90
Phytogen	PXL222W3FE	1422.9	klm	42.8	35	4.5	30.5	1.09	81.9	1.1	\$755.35
FiberMax	FM2398GLTP	1347.2	lmn	41.3	37	5.0	31.4	1.15	82.1	0.3	\$703.84
Phytogen	PXU450W3FE	1347.1	lmn	42.1	37	4.4	34.4	1.16	83.4	2.3	\$731.47
Deltapine	20R732B3XF	1346.7	lmn	39.0	38	4.4	32.7	1.17	81.0	2.2	\$729.29
Deltapine	20R727B3XF	1233.2	mno	41.8	37	4.4	33.6	1.16	81.4	2.1	\$667.39
Stoneville	ST5707B2XF	1202.4	mnop	40.0	38	5.2	34.0	1.17	82.6	0.3	\$629.44
FiberMax	FM1621GL	1138.3	nop	46.1	37	5.1	30.8	1.13	81.9	0.1	\$593.73
Phytogen	PXU453W3FE	1131.7	nop	44.1	37	4.3	36.7	1.13	82.7	1.6	\$607.80
Deltapine	20R744B3XF	1094.9	opq	44.8	37	4.7	29.3	1.17	81.7	1.8	\$589.45
Phytogen	PXU452W3FE	1084.9	opq	42.9	36	3.9	33.5	1.11	82.4	1.9	\$584.56
Deltapine	20R745NRB3XF	1083.2	opq	43.5	37	4.8	32.0	1.16	81.6	1.2	\$576.37
FiberMax	FM2202GL	1061.4	opq	42.3	35	4.0	33.3	1.09	81.5	1.0	\$562.66
Brownfield	9X	1060.2	opq	36.4	37	5.0	31.8	1.14	83.3	0.5	\$556.26
Gowan	1432	1032.6	opq	35.4	41	4.3	36.7	1.28	83.5	2.5	\$562.38
Deltapine	20R739B3XF	989.7	pq	40.0	38	4.5	33.0	1.17	82.1	1.7	\$531.54
Brownfield	TBE	874.4	q	35.5	37	4.6	31.4	1.14	82.0	1.8	\$469.86
Mean		1532.0		42.3	37	4.6	32.6	1.15	82.2	1.5	\$819.73
LSD[§]		220.7		2.4	1.1	0.4	2.3	0.03	1.2	1.6	\$127.39
OSL[†]		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001
CV[‡]		10.3		4.1	2.0	6.9	5.1	2.1	1.1	80.7	11.1

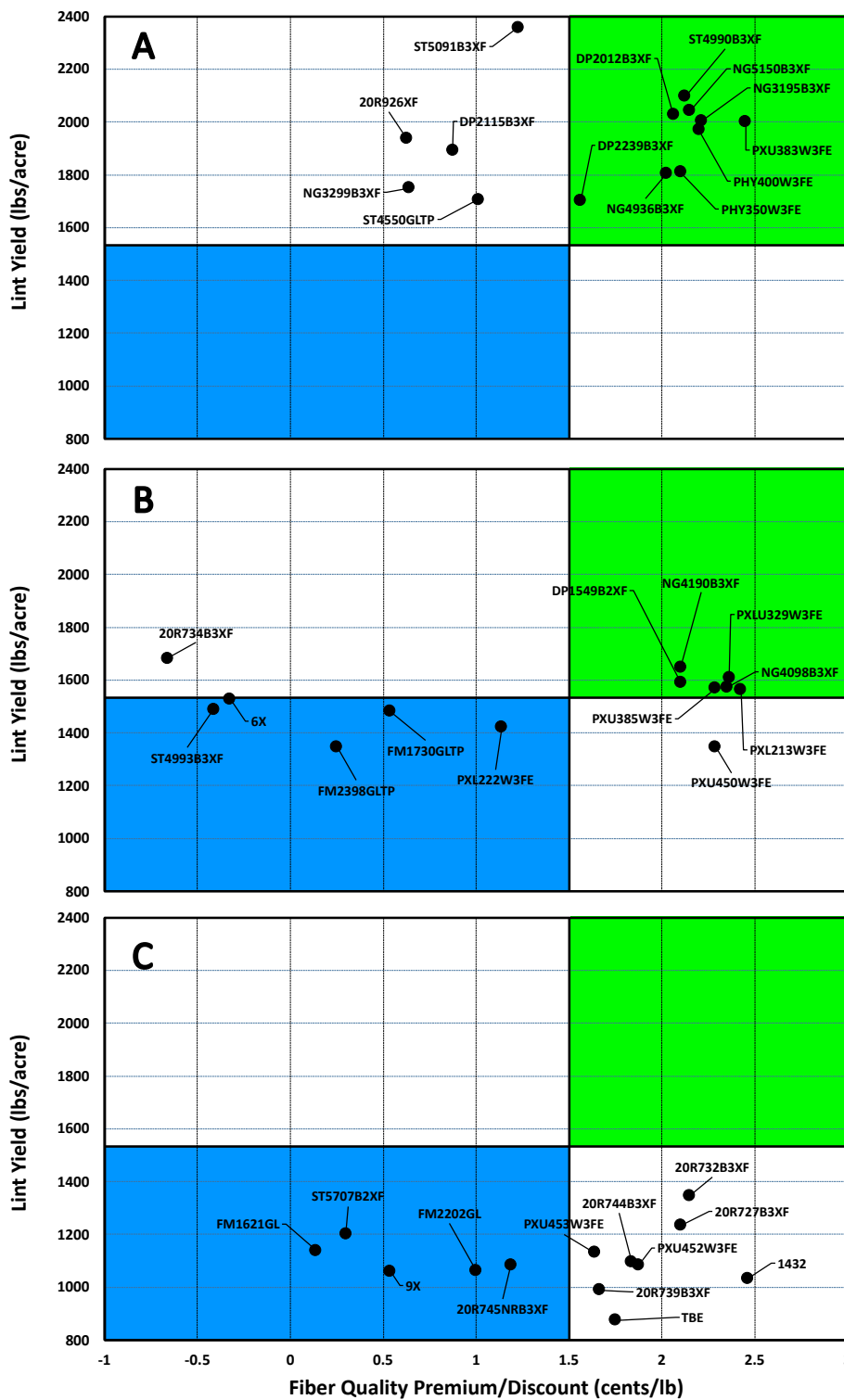
*Lint yield means followed by the same letter are not statistically different according to Fisher's LSD (Least Significance Difference) means separation ($\alpha = 0.05$)

**Value calculated from CCC loan schedule base price of \$0.52/lb + premium/discount

§Least Significant Difference

†Observed Significance Level

‡Coefficient of Variation



Lint yield (lbs./acre) plotted as a function of fiber quality premium/discount (cents/lb) for the top third (A), middle third (B), and bottom third (C). Vertical and horizontal lines represent the mean value for the two parameters. Varieties that fall in the upper right quadrant formed by the mean lines produced higher than average lint yield and fiber quality. Each entry for the Upland Advanced Strain evaluation is plotted for the Yuma, AZ location in 2021.

Early season emergence (plants/foot), vigor evaluations (1-9, L-H) for each entry in the Upland Advanced Strain evaluation, Maricopa, AZ, 2021.

Seed Company	Variety	Plant Population (plants/foot)	Plant Vigor Rating (1-9 L-H)
Deltapine	20R727B3XF	4.6	5.5
Deltapine	20R732B3XF	5.2	7.7
Deltapine	20R734B3XF	4.3	5.0
Deltapine	20R739B3XF	3.1	4.5
Deltapine	20R744B3XF	3.2	4.7
Deltapine	20R745NRB3XF	3.0	5.0
Deltapine	20R926XF	2.4	4.3
Brownfield	4X	3.0	5.8
Brownfield	6X	3.6	6.5
Brownfield	9X	2.9	5.0
Brownfield	BSD224	3.4	6.3
BASF	BX2296B3XF	3.3	5.3
BASF	BX2297B3XF	3.5	5.0
BASF	BX2298B3XF	6.0	4.8
Deltapine	DP1044B2RF	1.9	4.0
Deltapine	DP1549B2XF	4.2	5.5
Deltapine	DP1948B3XF	3.6	5.3
Deltapine	DP2115B3XF	3.3	3.7
Deltapine	DP2239B3XF	4.0	6.0
FiberMax	FM1730GLTP	3.4	4.0
NexGen	NG3195B3XF	3.6	4.8
NexGen	NG3299B3XF	3.7	5.0
NexGen	NG4098B3XF	3.8	6.0
NexGen	NG4190B3XF	3.4	5.3
NexGen	NG4936B3XF	3.1	4.3
NexGen	NG5150B3XF	3.1	5.7
Phytogen	PHY350W3FE	4.0	6.3
Phytogen	PHY400W3FE	4.6	7.3
Phytogen	PXL213W3FE	3.9	5.3
Phytogen	PXL222W3FE	3.8	6.0
Phytogen	PXLU329W3FE	4.0	5.0
Phytogen	PXU383W3FE	4.5	5.0
Phytogen	PXU385W3FE	3.9	5.7
Phytogen	PXU450W3FE	4.1	5.8
Phytogen	PXU452W3FE	3.3	4.7
Phytogen	PXU453W3FE	3.3	5.3
Stoneville	ST4550GLTP	4.3	6.8
Stoneville	ST4595B3XF	3.6	4.3
Stoneville	ST4990B3XF	3.8	5.7
Stoneville	ST4993B3XF	3.1	5.0
Stoneville	ST5091B3XF	4.0	4.3
Stoneville	ST5707B2XF	4.3	6.0
Brownfield	TBE	1.2	3.5
MEAN		3.6	5.3

Yield and fiber quality data along with statistical analysis for each entry in the Upland Advanced Strain evaluation, Maricopa, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)		Lint (%)	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Uniform (%)	Premium (cents/lb)	Value** (\$/acre)
Stoneville	ST4595B3XF	2213.8	a*	43.8	39	4.6	32.6	1.23	83.0	3.2	\$1,220.38
Deltapine	DP2115B3XF	2186.1	ab	43.4	38	4.8	32.3	1.18	83.0	2.4	\$1,188.72
Stoneville	ST5091B3XF	2098.3	abc	40.6	38	4.5	31.7	1.17	81.9	2.2	\$1,137.66
NexGen	NG3195B3XF	2076.9	abcd	41.8	37	4.8	32.5	1.16	83.2	2.4	\$1,129.09
Deltapine	20R926XF	2057.9	abcde	44.0	38	4.9	31.9	1.19	82.7	2.2	\$1,114.83
NexGen	NG4190B3XF	2047.8	abcdef	42.1	38	4.6	32.8	1.19	83.3	2.4	\$1,112.91
NexGen	NG4936B3XF	1992.8	abcdefg	38.9	39	4.5	32.3	1.21	83.5	3.1	\$1,098.69
NexGen	NG4098B3XF	1970.9	abcdefgh	42.7	38	4.6	35.0	1.20	83.4	3.3	\$1,086.49
Deltapine	DP1549B2XF	1944.9	bcdefghi	42.6	38	4.4	33.9	1.18	83.0	3.2	\$1,074.98
Phytogen	PXU385W3FE	1900.2	cdefghij	44.8	37	4.8	34.9	1.17	83.1	2.3	\$1,030.85
Phytogen	PHY350W3FE	1876.4	cdefghijk	42.9	39	4.3	33.1	1.23	83.2	3.2	\$1,035.25
Stoneville	ST5707B2XF	1876.0	cdefghijk	39.8	39	4.9	34.8	1.21	83.7	0.6	\$987.84
Deltapine	20R732B3XF	1839.0	defghijk	41.6	38	4.3	35.3	1.20	83.3	2.4	\$1,000.68
Deltapine	DP2239B3XF	1827.5	efghijk	43.3	40	4.4	32.7	1.25	83.0	2.4	\$993.58
BASF	BX2296B3XF	1824.2	efghijk	43.5	38	4.8	32.4	1.18	82.4	2.6	\$995.45
Phytogen	PXU450W3FE	1823.8	efghijk	43.0	37	4.5	35.7	1.17	83.4	2.3	\$990.99
BASF	BX2297B3XF	1810.6	fghijkl	42.4	38	4.7	32.1	1.18	82.4	2.5	\$986.52
Deltapine	20R734B3XF	1794.9	ghijklm	43.1	38	5.0	32.7	1.20	83.1	1.4	\$959.60
Deltapine	DP1948B3XF	1791.6	ghijklm	42.8	40	4.5	35.0	1.23	83.2	2.7	\$982.80
NexGen	NG3299B3XF	1779.6	ghijklm	42.8	37	5.0	36.7	1.17	83.7	2.0	\$961.81
BASF	BX2298B3XF	1768.2	ghijklmn	43.8	35	5.0	31.2	1.10	82.2	-0.2	\$915.13
Deltapine	DP1044B2RF	1751.0	ghijklmn	40.9	38	4.8	33.4	1.18	83.3	1.9	\$944.40
Phytogen	PXLU329W3FE	1745.4	hijklmn	44.3	38	4.7	37.3	1.19	83.2	2.7	\$956.44
NexGen	NG5150B3XF	1724.7	ijklmno	40.9	38	4.7	31.8	1.19	82.2	2.5	\$939.48
Phytogen	PXU383W3FE	1694.3	jklmnop	43.8	40	4.5	36.8	1.24	83.5	3.3	\$938.65
Stoneville	ST4550GLTP	1678.4	jklmnopq	43.3	38	4.8	33.5	1.18	83.8	2.5	\$915.07
Deltapine	20R727B3XF	1671.2	jklmnopq	42.8	37	4.4	35.1	1.18	82.3	3.3	\$926.01
Phytogen	PHY400W3FE	1661.7	jklmnopqr	41.3	38	4.6	35.8	1.19	83.3	2.7	\$907.45
Stoneville	ST4990B3XF	1654.2	klmnopqr	37.6	38	4.3	32.9	1.19	84.1	2.4	\$899.99
Deltapine	20R739B3XF	1652.7	klmnopqr	42.8	38	4.5	35.5	1.18	83.0	2.3	\$895.82
Stoneville	ST4993B3XF	1643.2	lmnopqrs	43.1	38	4.9	34.3	1.17	83.0	1.9	\$883.55
Phytogen	PXU453W3FE	1640.3	lmnopqrs	43.6	37	4.8	37.5	1.15	83.4	2.5	\$892.52
Brownfield	4X	1577.0	lmnopqrst	39.8	37	4.4	32.2	1.16	81.7	3.0	\$863.55
Phytogen	PXL213W3FE	1561.9	mnpqrst	40.5	39	4.4	34.6	1.21	84.1	3.3	\$863.44
Phytogen	PXU452W3FE	1526.0	nopqrst	42.7	37	4.4	35.8	1.17	83.1	3.2	\$842.26
Brownfield	BSD224	1491.3	opqrst	39.8	38	4.7	35.5	1.19	83.3	3.3	\$827.63
Deltapine	20R745NRB3XF	1476.9	pqrst	42.6	39	4.6	36.3	1.21	82.8	3.3	\$815.75
Phytogen	PXL222W3FE	1437.3	qrst	42.5	36	4.6	32.1	1.13	82.8	2.5	\$783.18
FiberMax	FM1730GLTP	1419.2	rst	40.3	38	4.5	34.7	1.17	83.2	3.2	\$782.78
Deltapine	20R744B3XF	1408.0	st	44.0	38	4.2	31.5	1.19	82.2	3.5	\$781.98
Brownfield	TBE	1373.7	t	37.0	37	4.8	35.8	1.18	83.5	1.6	\$734.44
Brownfield	9X	1349.4	t	39.5	39	4.6	36.2	1.21	83.1	3.3	\$744.87
Brownfield	6X	1336.5	t	38.0	37	4.7	31.7	1.16	83.1	2.3	\$725.51
Mean		1743.6		42.0	38	4.6	34.0	1.18	83.0	2.5	\$950.44
LSD[§]		244.5		2.8	1.1	0.4	2.4	0.03	NS	1.7	\$139.40
OSL[†]		<0.0001		<0.0001	<0.0001	0.0004	<0.0001	<0.0001	0.0536	0.0253	<0.0001
CV[‡]		10.0		4.8	2.1	6.2	5.1	2.1	1.1	47.4	10.5

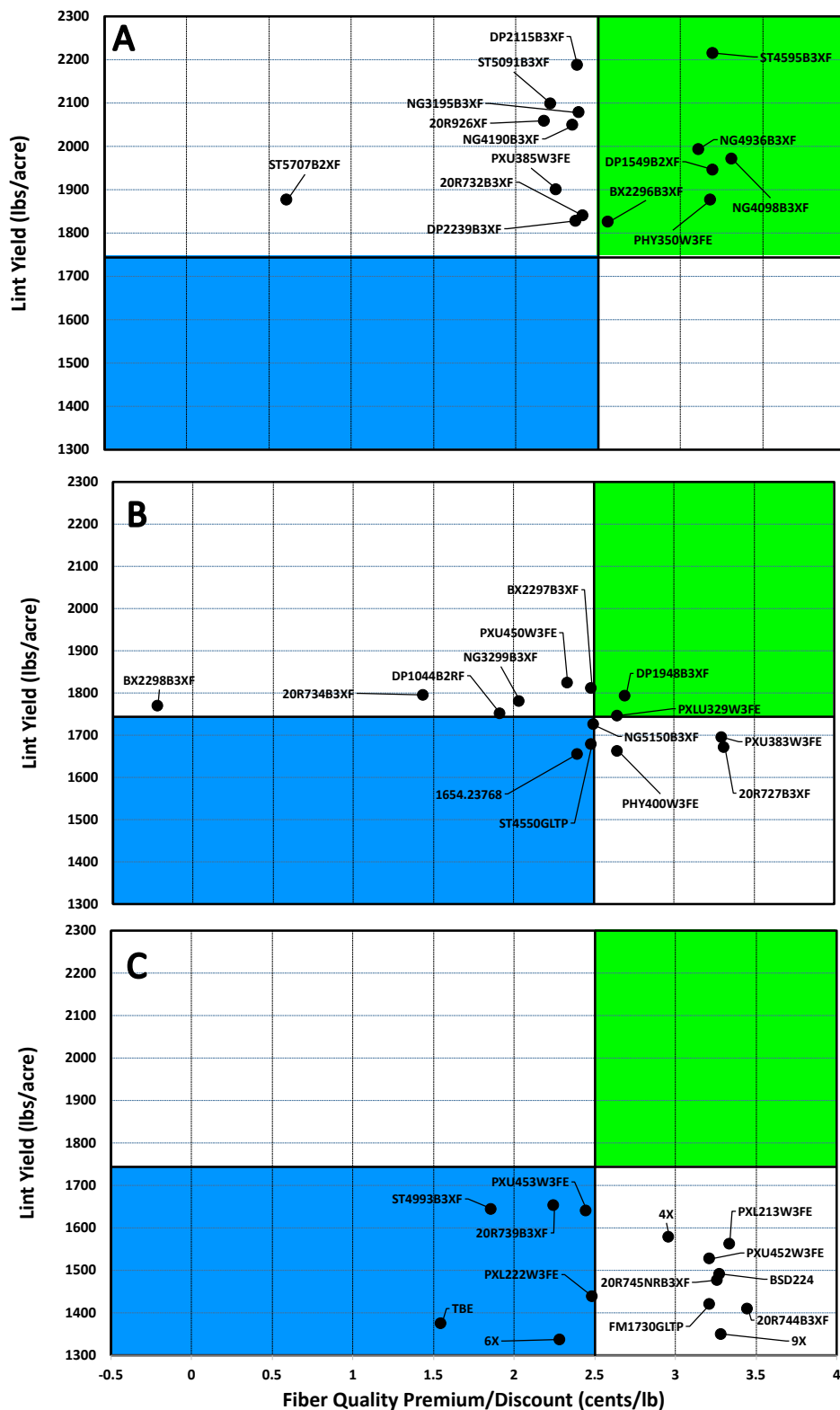
*Lint yield means followed by the same letter are not statistically different according to Fisher's LSD (Least Significance Difference) means separation ($\alpha = 0.05$)

**Value calculated from CCC loan schedule base price of \$0.52/lb + premium/discount

§Least Significant Difference

†Observed Significance Level

‡Coefficient of Variation



Lint yield (lbs./acre) plotted as a function of fiber quality premium/discount (cents/lb) for the top third (A), middle third (B), and bottom third (C). Vertical and horizontal lines represent the mean value for the two parameters. Varieties that fall in the upper right quadrant formed by the mean lines produced higher than average lint yield and fiber quality. Each entry for the Upland Advanced Strain evaluation is plotted for the Maricopa, AZ location in 2021.

Early season emergence (plants/foot), vigor evaluations (1-9, L-H), and mid-season plant height and nodes above white flower (NAWF) for each entry in the Upland Advanced Strain evaluation, Safford, AZ, 2021.

Seed Company	Variety	Plant Population (plants/foot)	Plant Vigor Rating (1-9 L-H)	Plant Height (inches)	Nodes Above White Flower (NAWF)
Deltapine	20R727B3XF	4.1	6.0	37.0	5.0
Deltapine	20R732B3XF	4.3	7.3	34.5	3.0
Deltapine	20R734B3XF	4.1	5.5	34.6	3.8
Deltapine	20R739B3XF	3.9	5.3	35.0	3.4
Deltapine	20R744B3XF	4.3	5.5	35.5	2.8
Deltapine	20R745NRB3XF	2.9	5.0	38.4	3.6
Deltapine	20R926XF	2.3	5.8	39.8	5.4
Brownfield	4X	3.4	6.3	31.0	3.2
Brownfield	6X	3.7	6.0	35.0	2.8
Brownfield	9X	4.2	6.0	39.0	4.4
Brownfield	BSD224	3.7	7.5	41.6	3.4
BASF	BX2296B3XF	4.1	5.3	37.6	3.6
BASF	BX2297B3XF	3.6	5.8	34.0	4.0
BASF	BX2298B3XF	3.0	4.8	34.0	4.2
Deltapine	DP1044B2RF	3.0	5.8	36.0	4.8
Deltapine	DP1549B2XF	4.0	6.3	34.9	3.8
Deltapine	DP1948B3XF	3.6	6.3	34.4	4.4
Deltapine	DP2038B3XF	2.6	5.0	36.9	3.8
Deltapine	DP2115B3XF	3.7	5.5	37.4	4.0
Deltapine	DP2239B3XF	4.2	6.3	35.3	3.6
FiberMax	FM1621GL	3.5	5.8	28.4	4.2
FiberMax	FM1730GLTP	3.6	6.3	35.6	4.8
FiberMax	FM2202GL	3.3	5.3	39.8	4.6
FiberMax	FM2398GLTP	3.2	5.3	30.1	3.0
NexGen	NG3195B3XF	3.4	6.8	35.6	3.8
NexGen	NG3299B3XF	3.4	5.3	36.9	3.4
NexGen	NG4098B3XF	3.8	5.5	32.2	3.4
NexGen	NG4190B3XF	3.4	6.3	39.0	3.2
NexGen	NG4936B3XF	2.6	4.8	37.0	3.6
NexGen	NG5150B3XF	3.8	6.3	39.0	4.6
Phytogen	PHY350W3FE	4.6	5.8	28.4	3.4
Phytogen	PHY400W3FE	4.7	5.8	31.4	3.8
Phytogen	PXL213W3FE	4.2	6.0	27.5	1.6
Phytogen	PXL222W3FE	3.6	4.8	28.9	3.4
Phytogen	PXLU329W3FE	3.9	5.5	38.3	4.2
Phytogen	PXU383W3FE	4.4	7.3	38.4	4.4
Phytogen	PXU385W3FE	3.5	6.5	36.6	5.2
Phytogen	PXU450W3FE	4.3	6.5	35.2	4.4
Phytogen	PXU452W3FE	3.5	5.0	36.1	3.4
Phytogen	PXU453W3FE	3.6	6.5	40.2	3.2
Stoneville	ST4550GLTP	3.1	6.0	38.3	3.2
Stoneville	ST4595B3XF	3.9	5.3	32.6	3.4
Stoneville	ST4990B3XF	3.6	6.0	35.8	3.4
Stoneville	ST4993B3XF	3.6	5.0	32.5	3.6
Stoneville	ST5091B3XF	3.8	6.7	38.3	4.4
Stoneville	ST5707B2XF	3.8	6.8	33.5	3.6
Brownfield	TBE	1.7	3.8	34.3	3.2
MEAN		3.7	5.8	35.4	3.8

Yield and fiber quality data along with statistical analysis for each entry in the Upland Advanced Strain evaluation, Safford, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)		Lint (%)	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Uniform (%)	Premium (cents/lb)	Value** (\$/acre)
FiberMax	FM1621GL	2410.2	a*	47.7	38	4.6	34.3	1.18	83.7	5.7	\$1,389.28
Stoneville	ST4595B3XF	2338.9	ab	47.4	38	4.9	29.4	1.19	83.0	3.9	\$1,307.99
FiberMax	FM2202GL	2330.6	abc	47.0	37	4.7	34.5	1.14	83.4	5.3	\$1,334.86
Deltapine	20R727B3XF	2310.8	abcd	46.0	37	4.2	32.3	1.16	81.0	5.7	\$1,332.16
Deltapine	DP2239B3XF	2291.6	abcde	48.0	38	4.8	29.7	1.19	82.6	4.3	\$1,291.54
NexGen	NG4098B3XF	2248.3	abcdef	44.3	39	4.5	34.8	1.21	81.8	5.3	\$1,287.39
Deltapine	20R739B3XF	2235.0	abcdefg	43.6	37	4.5	32.0	1.16	82.4	5.8	\$1,291.59
Deltapine	DP1646B2XF	2229.3	abcdefg	45.9	40	4.3	29.7	1.23	83.0	4.9	\$1,270.73
Deltapine	DP1948B3XF	2195.8	bcdefg	45.8	39	4.4	31.6	1.22	83.2	5.7	\$1,268.17
BASF	BX2297B3XF	2185.4	bcdefgi	48.0	37	5.0	28.0	1.14	81.6	3.1	\$1,201.35
Deltapine	20R734B3XF	2178.7	bcdefghij	47.6	36	5.0	29.0	1.13	81.9	3.4	\$1,206.20
NexGen	NG5150B3XF	2133.6	cdefghijk	45.6	38	4.8	30.2	1.17	81.7	4.5	\$1,205.49
BASF	BX2296B3XF	2125.9	defghijkl	47.9	37	5.0	29.1	1.15	82.9	3.9	\$1,186.64
Deltapine	20R744B3XF	2114.5	defghijkl	48.9	37	4.5	28.3	1.17	81.4	4.9	\$1,203.74
Brownfield	9X	2096.7	efghijklm	41.8	37	4.7	31.1	1.15	82.3	5.3	\$1,200.22
Phytogen	PHY400W3FE	2087.6	efghijklmn	45.3	37	4.1	32.1	1.15	81.7	5.5	\$1,200.27
NexGen	NG4190B3XF	2082.0	fghijklmno	47.0	38	4.6	30.1	1.18	83.2	5.1	\$1,189.15
FiberMax	FM1730GLTP	2049.9	fghijklmnop	45.1	39	4.5	33.6	1.21	83.7	5.7	\$1,183.56
Deltapine	DP1549B2XF	2039.5	ghijklmnop	45.6	36	4.4	30.5	1.13	81.5	4.5	\$1,150.79
Brownfield	BSD224	2034.6	ghijklmnopq	41.6	37	4.6	32.5	1.15	83.0	5.3	\$1,166.19
Deltapine	20R732B3XF	2034.5	ghijklmnopq	43.4	38	4.5	31.2	1.17	81.3	5.5	\$1,169.31
Phytogen	PXU383W3FE	1991.7	hijklmnopqr	44.6	38	4.6	32.7	1.18	82.0	4.8	\$1,133.44
FiberMax	FM2398GLTP	1989.4	ijklmnopqr	46.5	37	5.2	30.8	1.15	82.9	2.7	\$1,087.24
Deltapine	DP1044B2RF	1981.7	jklmnopqr	42.8	36	4.7	29.7	1.12	82.4	5.0	\$1,128.81
Deltapine	20R926XF	1980.3	jklmnopqr	48.6	37	4.8	29.8	1.16	82.4	5.5	\$1,139.26
Phytogen	PXU450W3FE	1979.4	jklmnopqr	46.2	37	5.0	31.1	1.15	82.8	2.7	\$1,084.78
NexGen	NG3195B3XF	1973.1	klmnopqr	46.6	36	4.8	29.0	1.13	82.5	3.5	\$1,093.80
NexGen	NG3299B3XF	1947.6	klmnopqr	47.1	37	5.1	33.2	1.14	83.0	2.8	\$1,069.51
Stoneville	ST5091B3XF	1933.5	lmnopqrs	48.4	37	4.5	29.2	1.15	81.3	4.1	\$1,087.33
Phytogen	PXU385W3FE	1921.8	mnpqrst	47.3	37	4.6	32.4	1.14	82.9	4.2	\$1,079.85
Stoneville	ST4550GLTP	1908.7	mnpqrst	48.1	36	5.0	30.3	1.11	82.8	1.8	\$1,025.69
Phytogen	PXU452W3FE	1901.6	nopqrstu	46.3	36	4.5	33.5	1.12	82.3	5.0	\$1,083.02
Phytogen	PXL222W3FE	1884.8	opqrstu	45.6	35	5.1	30.6	1.10	83.0	0.4	\$990.38
BASF	BX2298B3XF	1878.7	opqrstu	46.6	35	5.1	28.8	1.09	82.2	0.4	\$984.53
Phytogen	PHY350W3FE	1876.3	pqrstuv	43.4	37	4.8	31.1	1.15	82.3	5.0	\$1,069.26
Deltapine	20R745NRB3XF	1830.9	qrstuvw	47.5	37	4.6	30.7	1.13	80.9	4.6	\$1,036.29
Phytogen	PXLU329W3FE	1822.5	rstuvwxy	46.3	37	4.9	32.7	1.16	82.0	3.5	\$1,013.51
Deltapine	DP2115B3XF	1811.7	rstuvwxy	48.0	37	4.9	30.6	1.14	82.5	4.4	\$1,022.15
Stoneville	ST5707B2XF	1805.9	rstuvwxy	41.2	38	4.9	32.5	1.17	83.3	5.1	\$1,030.12
Stoneville	ST4993B3XF	1793.7	rstuvwxy	45.9	37	5.1	32.9	1.15	83.9	3.3	\$991.20
Phytogen	PXU453W3FE	1725.3	stuvwxy	45.6	36	4.9	33.2	1.12	82.8	4.0	\$966.71
Phytogen	PXL213W3FE	1713.5	tuvwxy	43.9	38	4.3	33.2	1.20	83.2	6.0	\$993.73
Brownfield	4X	1693.5	vwxy	41.0	37	4.3	31.2	1.17	81.9	5.4	\$971.06
Deltapine	DP2038B3XF	1673.9	vwx	49.5	35	4.8	28.9	1.09	80.5	3.2	\$924.47
Brownfield	6X	1661.0	wx	41.0	37	4.6	29.3	1.14	82.2	4.9	\$944.80
Stoneville	ST4990B3XF	1647.4	wx	44.3	37	4.7	29.4	1.17	83.0	4.5	\$931.96
NexGen	NG4936B3XF	1618.9	x	45.2	37	4.7	29.1	1.15	82.9	4.0	\$905.70
Brownfield	TBE	1195.8	y	40.4	36	5.0	29.8	1.12	82.0	3.6	\$665.32
Mean		1977.0		45.6	37	4.7	31.0	1.16	82.4	4.3	\$1,114.39
LSD[§]		204.2		1.4	1.0	0.3	1.9	0.03	1.2	1.9	\$121.20
OSL[†]		<.0001		<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
CV[‡]		7.4		2.1	2.0	4.3	4.3	2.0	1.0	32.1	7.8

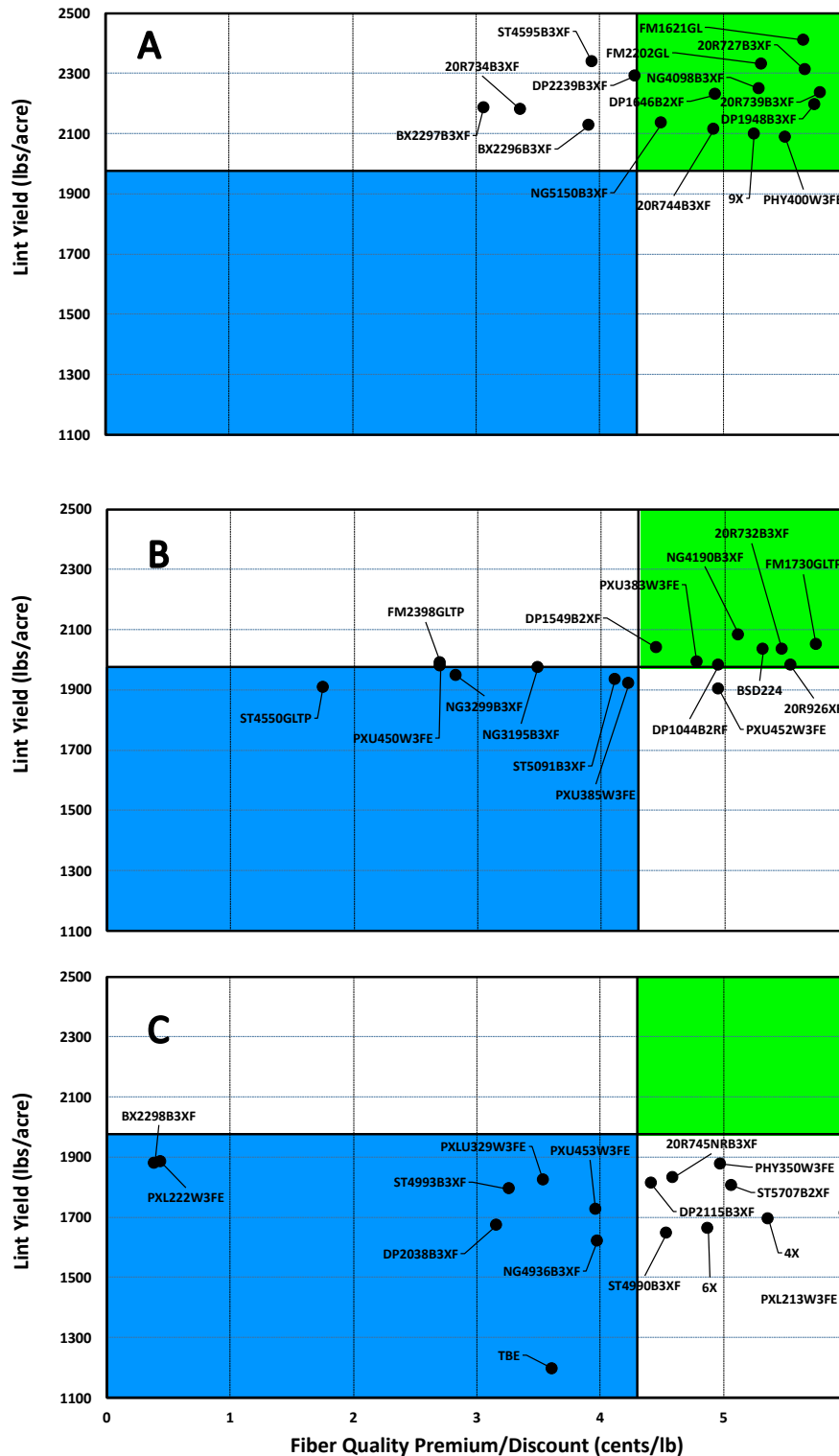
*Lint yield means followed by the same letter are not statistically different according to Fisher's LSD (Least Significance Difference) means separation ($\alpha = 0.05$)

**Value calculated from CCC loan schedule base price of \$0.52/lb + premium/discount

§Least Significant Difference

†Observed Significance Level

‡Coefficient of Variation



Lint yield (lbs./acre) plotted as a function of fiber quality premium/discount (cents/lb) for the top third (A), middle third (B), and bottom third (C). Vertical and horizontal lines represent the mean value for the two parameters. Varieties that fall in the upper right quadrant formed by the mean lines produced higher than average lint yield and fiber quality. Each entry for the Upland Advanced Strain evaluation is plotted for the Safford, AZ location in 2021.

2021 Pima Cotton Variety Testing Program

University of Arizona
Cooperative Extension
Experiment Station

Trial Results

Funded in part by Participating Seed Companies

Prepared by:
Dr. Randy Norton

Thatcher, AZ	
Soil Type	Sandy loam
Irrigation	Furrow/Flood
Tillage	Conventional
Planting Rate	72,000
Planting Date	4/20/21
Defoliation Date	9/25/21
Harvest Date	10/28/21

Variety	Plant Population (plants/foot)	Plant Vigor Rating (0-9 L-H)
20R022R2P	4.3	6.3
DP347RF	4.0	5.3
DP359RF	4.6	6.3
PHY807RF	4.6	6.3
PHY881RF	2.7	5.3
PX1180A101-02	4.6	5.7
Mean	4.1	5.9

Yield and fiber quality results from the University of Arizona Pima Cotton Variety Testing (PCVT) program, Thatcher, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)	Percent Lint	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Uniformity Index (%)	Base Price (cents/lb)	Value** (\$/acre)
Deltapine	DP347RF	1769.8 a*	42.1	48	5.3	41.8	1.39	87.2	\$0.954	\$1,688.37
Deltapine	DP359RF	1744.2 a	40.6	48	5.2	42.6	1.38	86.4	\$0.954	\$1,663.93
Phytogen	PHY807RF	1733.8 a	40.3	47	5.2	44.3	1.36	86.9	\$0.951	\$1,649.04
Phytogen	PX1180A101-02	1709.8 a	40.3	50	5.4	43.8	1.44	87.8	\$0.954	\$1,631.18
Deltapine	20R022R2P	1647.4 a	40.3	48	5.4	43.7	1.41	87.2	\$0.954	\$1,571.64
Phytogen	PHY881RF	1638.5 a	41.1	50	5.4	43.4	1.45	88.6	\$0.954	\$1,563.09
	Mean	1707.2	40.8	48	5.3	43.3	1.41	87.3	\$0.954	\$1,627.87
	LSD [§]	NS	NS	0.9	NS	NS	0.04	1.3	\$0.002	NS
	OSL [†]	0.2571	0.6001	<0.0001	0.4212	0.3095	0.0297	0.0370	0.0297	0.2766
	CV [‡]	4.3	3.5	1.0	3.6	3.0	1.7	0.8	0.1	4.4

*Lint yield means followed by the same letter are not statistically different according to Fisher's LSD (Least Significance Difference) means separation ($\alpha = 0.05$)

**Value calculated from CCC loan schedule base price of \$0.52/lb + premium/discount

§Least Significant Difference

†Observed Significance Level

‡Coefficient of Variation

Early season emergence (plants/foot), vigor evaluations (1-9, L-H), and mid-season plant height and nodes above white flower (NAWF) for each entry in the Pima Advanced Strain evaluation, Maricopa, AZ, 2021.

Seed Company	Variety	Plant Population (plants/foot)	Plant Vigor Rating (1-9 L-H)
Gowan	1432	3.4	6.5
Brownfield	GL6	1.2	4.0
Deltapine	OA-21-1	3.6	6.5
Deltapine	OA-21-10	2.8	5.8
Deltapine	OA-21-2	3.1	5.8
Deltapine	OA-21-3	3.8	6.3
Deltapine	OA-21-4	3.6	7.0
Deltapine	OA-21-5	3.5	6.3
Deltapine	OA-21-6	3.4	6.3
Deltapine	OA-21-7	3.1	6.0
Deltapine	OA-21-8	3.3	6.5
Deltapine	OA-21-9	3.4	6.3
Phytogen	PHY807RF	4.0	7.3
Phytogen	PHY881RF	3.2	6.5
Phytogen	PX1180A101-02RF	3.9	6.0
Phytogen	PX1180A102-02RF	3.8	6.3
Phytogen	PX1180A103-02RF	3.7	6.0
MEAN		3.3	6.2

Yield and fiber quality data along with statistical analysis for each entry in the Pima Advanced Strain evaluation, Maricopa, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)	Lint (%)	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Uniform (%)	Base Price (cents/lb)	Value** (\$/acre)	
Deltapine	OA21_10	926.5	a*	40.2	47	5.3	42.5	1.36	86.3	94.38	\$873.96
Gowan	1432	869.9	ab	32.1	48	4.8	39.1	1.38	85.4	95.29	\$828.77
Deltapine	OA21_8	865.2	abc	39.0	47	5.0	44.0	1.37	86.7	95.33	\$824.85
Phytogen	1180A103-02RF	819.4	bcd	38.1	50	5.0	43.1	1.44	87.2	95.63	\$783.50
Phytogen	PHY881RF	816.0	bcd	38.3	49	5.3	41.8	1.42	86.8	95.40	\$778.43
Phytogen	1180A105-02RF	805.9	bcde	38.8	51	5.1	40.4	1.46	87.2	95.55	\$770.15
Deltapine	OA21_7	799.2	bcdef	40.2	46	5.0	42.1	1.35	86.1	95.10	\$760.09
Deltapine	OA21_5	770.5	cdef	38.7	47	4.7	41.5	1.34	85.9	94.45	\$727.45
Deltapine	OA21_4	769.6	cdef	36.2	47	5.3	43.0	1.37	86.8	95.18	\$732.55
Deltapine	OA21_9	766.2	def	37.9	48	5.6	41.1	1.37	86.7	95.36	\$730.66
Deltapine	OA21_2	755.3	def	36.4	48	5.0	43.7	1.38	86.9	95.25	\$719.57
Phytogen	PHY807RF	723.9	defg	38.1	47	4.8	43.3	1.36	86.4	95.33	\$690.13
Deltapine	OA21_3	721.9	defg	36.6	48	5.3	41.4	1.39	86.2	95.40	\$688.71
Deltapine	OA21_1	710.0	efg	37.8	48	5.2	41.8	1.38	86.6	95.40	\$677.31
Phytogen	1180A101-02RF	703.8	fg	38.7	49	5.0	39.2	1.41	85.6	95.51	\$672.24
Phytogen	1180A102-02RF	640.8	f	40.6	47	5.1	45.0	1.37	86.0	95.18	\$609.91
Deltapine	OA21_6	638.6	f	38.4	48	5.1	41.1	1.40	85.9	95.44	\$609.44
Brownfield	GL6	290.4	h	36.5	51	5.2	41.0	1.48	86.4	95.63	\$277.69
Mean		744.1		37.9	48	5.1	41.9	1.39	86.4	95.27	\$708.63
LSD[§]		97.8		1.5	1.8	0.3	3.0	0.04	NS	NS	\$93.82
OSL[†]		<0.0001		<0.0001	<0.0001	0.0010	0.0123	<0.0001	0.4332	0.3344	<0.0001
CV[‡]		9.3		2.8	2.6	4.8	5.0	2.3	1.2	0.7	9.3

*Lint yield means followed by the same letter are not statistically different according to Fisher's LSD (Least Significance Difference) means separation ($\alpha = 0.05$)

**Value calculated from CCC loan schedule base price of \$0.52/lb + premium/discount

§Least Significant Difference

†Observed Significance Level

‡Coefficient of Variation

Early season emergence (plants/foot), vigor evaluations (1-9, L-H), and mid-season plant height and nodes above white flower (NAWF) for each entry in the Pima Advanced Strain evaluation, Safford, AZ, 2021.

Seed Company	Variety	Plant Population (plants/foot)	Plant Vigor Rating (1-9 L-H)
Gowan	1432	3.7	6.5
Brownfield	GL6	2.5	4.5
Deltapine	OA-21-1	4.3	6.8
Deltapine	OA-21-10	4.1	6.5
Deltapine	OA-21-2	4.0	6.3
Deltapine	OA-21-3	4.4	6.5
Deltapine	OA-21-4	3.8	6.3
Deltapine	OA-21-5	3.9	5.8
Deltapine	OA-21-6	4.1	6.0
Deltapine	OA-21-7	3.9	6.8
Deltapine	OA-21-8	4.1	6.3
Deltapine	OA-21-9	3.7	5.5
Phytogen	PHY807RF	4.4	6.5
Phytogen	PHY881RF	3.4	6.3
Phytogen	PX1180A101-02RF	4.2	7.0
Phytogen	PX1180A102-02RF	4.1	6.5
Phytogen	PX1180A103-02RF	4.2	6.8
MEAN		3.9	6.3

Yield and fiber quality data along with statistical analysis for each entry in the Pima Advanced Strain evaluation, Safford, AZ, 2021.

Seed Company	Variety	Lint Yield (lbs/acre)	Lint (%)	Staple (32nds)	Micro.	Strength (g/tex)	Length (in)	Uniform (%)	Base Price (cents/lb)	Value** (\$/acre)	
Phytogen	PHY881RF	1598.6	a*	39.8	49	4.9	43.5	1.42	87.3	95.7	\$1,529.90
Deltapine	OA21_10	1563.2	ab	40.3	48	4.8	44.9	1.40	87.6	95.7	\$1,495.94
Gowan	1432	1555.5	ab	36.5	48	4.5	38.2	1.39	85.7	95.5	\$1,485.79
Phytogen	1180A101-02RF	1447.1	abc	39.8	49	4.9	45.2	1.42	86.6	95.6	\$1,382.65
Phytogen	1180A102-02RF	1435.4	abc	40.5	46	4.8	45.1	1.35	86.3	95.3	\$1,367.21
Phytogen	1180A105-02RF	1427.2	abc	40.6	49	4.9	42.5	1.41	87.0	94.7	\$1,354.43
Deltapine	OA21_7	1422.6	bc	40.8	48	5.0	46.7	1.39	87.4	95.5	\$1,358.69
Phytogen	PHY807RF	1381.2	cd	39.5	48	4.9	46.6	1.38	86.9	94.6	\$1,307.80
Deltapine	OA21_9	1374.8	cd	40.3	50	4.9	45.7	1.43	87.6	95.6	\$1,314.52
Deltapine	OA21_5	1358.7	cde	41.1	45	5.2	44.9	1.33	87.0	93.5	\$1,270.24
Deltapine	OA21_4	1324.1	cdef	39.1	48	4.9	45.4	1.38	87.3	94.6	\$1,253.58
Phytogen	OA21_8	1217.6	defg	41.6	48	5.0	44.0	1.40	87.3	94.6	\$1,153.62
Deltapine	OA21_3	1211.8	defg	38.5	46	5.1	44.4	1.33	86.7	94.5	\$1,145.02
Deltapine	OA21_6	1200.1	efg	39.6	49	4.9	43.8	1.42	87.8	95.6	\$1,147.72
Deltapine	OA21_1	1177.2	fgh	39.5	47	5.1	44.8	1.35	87.0	95.4	\$1,122.86
Deltapine	OA21_2	1166.1	fgh	38.5	47	4.6	46.3	1.37	87.4	95.5	\$1,113.47
Phytogen	1180A103-02RF	1132.6	gh	39.5	49	5.0	46.1	1.42	87.8	95.7	\$1,083.86
Brownfield	GL6	1008.5	h	39.6	52	5.2	45.8	1.51	87.8	95.6	\$963.46
Mean		1,333.5		39.7	48	4.9	44.6	1.39	87.1	95.20	\$1,269.49
LSD[§]		173.2		1.1	2.4	NS	2.7	0.06	1.1	NS	\$168.84
OSL[†]		<0.0001		<0.0001	0.0009	0.0906	<0.0001	<0.0001	0.0362	0.2981	<0.0001
CV[‡]		9.1		2.0	3.5	5.4	4.3	3.1	1.0	1.2	9.4

*Lint yield means followed by the same letter are not statistically different according to Fisher's LSD (Least Significance Difference) means separation ($\alpha = 0.05$)

**Value calculated from CCC loan schedule base price of \$0.52/lb + premium/discount

§Least Significant Difference

†Observed Significance Level

‡Coefficient of Variation