DELTAPINE® CLASS OF '21 COTTON VARIETIES

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Abstract

DP 2115 B3XF, DP 2127 B3XF, DP 2123 B3XF, DP 2141NR B3XF, and DP 2143NR B3XF are Bollgard® 3 XtendFlex® cotton varieties that have been released as the Deltapine® Class of '21. These cotton varieties are described for plant characteristics, disease tolerance, fiber quality, yield potential, management recommendations, and regional fit.

Introduction

For the 2021 growing season, five new Deltapine® cotton varieties are being introduced ranging from early maturing cotton varieties that fit short-season markets (Northern High Plains, Upper Midsouth and Upper Southeast regions) ti mid-full maturing cotton varieties that fit regions further south. Two of these new varieties, DP 2141NRB3XF and DP 2143NR B3XF, offer resistance to reniform and root knot nematodes.

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Materials and Methods

The data describing Deltapine cotton varieties (along with internal and competitive check varieties) was obtained from the following sources: Bayer breeder trials, Bayer on-farm trials, and university trials. Plant growth, fruiting, and maturity comparisons were made by plant mapping a subset of the Bayer on-farm trials when approximately 50% of the bolls were open. All available yield, fiber quality, and plant mapping data were queried in December 2018 to develop each data table for these analyses. The rating for plant mapping data (vigor score, fall out, and string out rating): 1 = Excellent; 9 = Poor.

Results and Discussion

DP 2115 B3XF

DP 2115 B3XF is an early maturing cotton variety with a shorter/compact plant stature and high yield potential. This variety is best adapted to Midsouth and Southeast regions. DP 2115 B3XF and has semi-smooth leaf pubescence. DP 2115 B3XF may be best fit on irrigated or productive dryland acres.

DP 2115 B3XF vs. DP 2012 B3XF Plant Mapping Comparisons

The growth and fruiting characteristics of DP 2115 B3XF, as measured by end-of-season plant mapping, are summarized in Table 1. The growth and fruiting variables of DP 2115 B3XF are similar to DP 2012 B3XF in Bayer trials. DP 2115 B3XF matures (opens bolls) in a similar pattern when compared to DP 2012 B3XF using % Boll open and Heat Units to 100% Open. DP 2115 B3XF has increased total nodes, number of fruiting nodes, plant height, and a similar string out rating than compared to DP 2012 B3XF. The vigor rating of DP 2115 B3XF is slightly higher numerically when compared to DP 2012 B3XF, indicating slightly less vigorous emergence.

Table 1. Plant mapping comparison of DP 2115 B3XF vs. DP 2012 B3XF in Bayer Trials (2019-2020).

	Deviation	DP 2115 B3XF	DP 2012 B3XF
Vigor Score (rating 1 to 9)	0.82	2.8	2.0
Plant Height (inches)	0.22	32.5	32.3
Total Nodes	0.64	18.6	18.0
Fruiting Nodes	0.56	9.54	8.98
% Boll Open	-6.38	70	76
Node of First Fruiting Branch	-0.11	6.3	6.4
DD60 to 100% open	-8.50	136.5	145.0
Fall Out Rating	-0.18	1.6	1.8
String Out Rating	0.06	2.7	2.6
Rating 1=Excellent 9=Poor			

DP 2115 B3XF Yield and Fiber Quality

DP 2115 B3XF was compared to DP 1646 B2XF in testing conducted in the Midsouth region. DP 2115 B3XF showed improvements over DP 1646 B2XF in yield (increase of 132 lbs/acre), lint % (increase of 0.8%), and fiber strength (increase of 0.8 g/tex). DP 2115 B3XF had higher micronaire and shorter fiber length when compared to DP 1646 B2XF (Table 2).

Table 2. Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2115 B3XF and DP 1646 B2XF in the Midsouth region, 2018-2020.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2115 B3XF	1,782	44.1	1.19	4.67	30.9	83.9
DP 1646 B2XF	1,649	43.3	1.26	4.41	30.0	83.8
Significance	**	**	**	**	**	
Observations	52	61	44	44	46	46
Years	3	3	3	3	3	3
% Wins	69	85	2	14	74	57
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: Midsouth regions 2018-2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2115 B3XF was compared to DP 2012 B3XF in testing conducted in the Midsouth region. DP 2115 B3XF showed improvements over DP 2012 B3XF in lint yield (increase of 126 lbs/acre), lint % (increase of 2.6%). DP 2115 B3XF showed higher fiber micronaire (increase of 0.33), reduced fiber length and similar fiber strength when compared to DP 2012 B3XF (Table 3).

Table 3. Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2115 B3XF and DP 2012 B3XF in Midsouth region, 2018-2020.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2115 B3XF	1,670	44.1	1.19	4.62	31.0	83.8
DP 2012 B3XF	1,544	41.5	1.22	4.29	31.1	84.1
Significance	**	**	**	**		
Observations	31	35	30	30	30	30
Years	2	2	2	2	2	2
% Wins	74	97	13	7	40	43
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: Midsouth region 2018-2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2115 B3XF was compared to DP 1646 B2XF in testing conducted in the Upper Southeast region. DP 2115 B3XF showed improvements over DP 1646 B2XF in lint % (increase of 0.7%), and uniformity index (increase of 0.6). While DP 2115 B3XF had similar lint yield and fiber strength compared to DP 1646 B2XF; and reduced fiber length when compared to DP 1646 B2XF (Table 4).

Table. 4 Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2115 B3XF and DP1646 B2XF in Upper Southeast region, 2018-2020.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2115 B3XF	1,485	45.1	1.14	4.58	30.6	83.3
DP 1646 B2XF	1,413	44.4	1.21	4.36	30.0	82.8
Significance		*	**	**		*
Observations	21	26	15	17	17	17
Years	3	3	2	2	2	2
% Wins	57	73	0	18	76	82
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: Upper Southeast region 2018-2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2127 B3XF

DP 2127 B3XF is an early-mid maturing cotton variety with a tall plant stature and solid performance across the Beltwide region. This variety is best adapted to Midsouth, Southeast, and Texas regions. DP 2127 B3XF has an open canopy which could be beneficial in wet conditions to reduce boll rot incidence. Due to the product's aggressive growth, timely harvest aid applications are needed to help manage micronaire in full-season markets. DP 2127 B3XF provides moderate tolerance to verticillium wilt.

DP 2127 B3XF vs. DP 1646 B2XF Plant Mapping Comparisons

The growth and fruiting characteristics of DP 2127 B3XF, as measured by end-of-season plant mapping, are summarized in Table 5. The growth and fruiting variables of DP 2127 B3XF are similar to DP 1646 B2XF from in season data trials. DP 2127 B3XF matures slightly earlier when compared to DP 1646 B2XF. DP 2127 B3XF has increased boll open percent, lower string out rating, and lower fall out rating (looser boll type) compared to DP 1646 B2XF and the same node of first fruiting branch and plant height.

Table 5. Plant mapping comparison of DP 2127 B3XF vs. DP 1646 B2XF in Bayer Trials (2018-2020) in season data.

	Deviation	DP 2127 B3XF	DP 1646 B2XF
Vigor Score (rating 1 to 9)	-0.23	2.3	2.5
Plant Height (inches)	0.03	35.5	35.5
Total Nodes	-0.72	17.9	18.6
Fruiting Nodes	-1.06	10.00	11.06
% Boll Open	6.67	70	64
Node of First Fruiting Branch	0.00	6.6	6.6
DD60 to 100% open	-55.83	146.17	202.00
Fall Out Rating	0.68	3.8	3.1
String Out Rating	0.74	2.8	2.0
Rating 1=Excellent 9=Poor			

DP 2127 B3XF Yield and Fiber Quality

DP 2127 B3XF was compared to DP 1646 B2XF in testing conducted in the Lower Midsouth and Lower Southeast regions. DP 2127 B3XF showed improvements over DP 1646 B2XF in yield (increase of 115 lbs/acre), fiber strength (increase of 0.6 g/tex), and uniformity index (increase of 0.9). DP 2127 B3XF had reduced fiber length and higher micronaire (increase of 0.39), when compared to DP 1646 B2XF (Table 6).

Table 6. Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2127 B3XF and DP 1646 B2XF in the Lower Midsouth and Lower Southeast regions, 2018-2020.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2127 B3XF	1,632	42.3	1.16	4.78	30.5	84.6
DP 1646 B2XF	1,517	42.1	1.25	4.39	29.9	83.7
Significance	**		**	**	**	**
Observations	62	70	51	57	57	57
Years	3	3	3	3	3	3
% Wins	74	54	0	7	67	86
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: Lower Midsouth and Lower Southeast regions 2018-2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2127 B3XF was compared to DP 2038 B3XF in testing conducted in the Lower Midsouth and Lower Southeast regions. DP 2127 B3XF showed improvements over DP 2038 B3XF in yield (increase of 83 lbs/acre), fiber length (increase of 0.02 inches), micronaire (increase of 0.28), and uniformity index (increase of 1.6). DP 2127 B3XF had reduced lint % when compared to DP 2038 B3XF and higher micronaire (0.28 mic units) (Table 7).

Table 7. Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2127 B3XF and DP 2038 B3XF in the Lower Midsouth and Lower Southeast region, 2018-2020.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2127 B3XF	1,593	42.3	1.16	4.78	30.4	84.7
DP 2038 B3XF	1,510	44.9	1.14	4.50	30.2	83.0
Significance	*	**	*	**		**
Observations	44	46	38	38	38	38
Years	2	2	2	2	2	2
% Wins	70	0	76	21	55	95
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: Lower Midsouth and Lower Southeast regions 2018-2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2127 B3XF was compared to DP 1646 B2XF in testing conducted in Southern and East Texas regions. DP 2127 B3XF showed improvements over DP 1646 B2XF in yield (increase of 71 lbs/acre), lint % (increase 1%), and uniformity index (increase of 0.4). DP 2127 B3XF had reduced fiber length and fiber strength and higher micronaire (increase of 0.22) when compared to DP 1646 B2XF (Table 8).

Table 8. Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2127 B3XF and DP 1646 B2XF in Southern and East Texas regions, 2019-2020.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2127 B3XF	1,493	42.8	1.11	4.66	29.1	83.3
DP 1646 B2XF	1,422	41.8	1.20	4.44	30.0	82.9
Significance	*	**	**	**	**	**
Observations	40	40	35	35	35	35
Years	2	2	2	2	2	2
% Wins	72	79	0	23	21	62
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: Southern and East Texas regions 2019-2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2123 B3XF

DP 2123 B3XF is an early-mid maturing cotton variety that demonstrates the ability to perform under dryland conditions of West Texas. This variety has strong emergence potential, short plant height that is easy to manage, and best adapted to the Northern High Plains and Panhandle Texas regions. DP 2123 B3XF is a DryTough™ variety offered for dryland acres. DP 2123 B3XF has semi-smooth leaf pubescence and is moderately tolerant to verticillium wilt.

DP 2123 B3XF vs. DP 1820 B3XF Plant Mapping Comparisons

The growth and fruiting characteristics of DP 2123 B3XF, as measured by end-of-season plant mapping, are summarized in Table 9. The growth and fruiting variables of DP 2123 B3XF are similar to DP 1820 B3XF in in-season data trials. DP 2123 B3XF matures similar to slightly later when compared to DP 1820 B3XF. DP 2123 B3XF had similar total nodes, node of first fruiting branch, and fall out rating when compared to DP 1820 B3XF.

Table 9. Plant mapping comparison of DP 2123 B3XF vs. DP 1820 B3XF in Bayer Trials (2018-2020) in-season data only PCM4 sites.

	Deviation	DP 2123 B3XF	DP 1820 B3XF
Vigor Score (rating 1 to 9)	-0.48	1.7	2.2
Plant Height (inches)	-0.40	33.8	34.2
Total Nodes	-0.26	19.1	19.3
Fruiting Nodes	-0.70	10.54	11.24
% Boll Open	-1.55	63	65
Node of First Fruiting Branch	0.00	7.7	7.7
DD60 to 100% open	10.00	190	180
Fall Out Rating	0.02	1.5	1.5
String Out Rating	0.46	2.6	2.1
Rating 1=Excellent 9=Poor			

DP 2123 B3XF Yield and Fiber Quality

DP 2123 B3XF was compared to DP 2044 B3XF in testing conducted in the West Texas region. DP 2123 B3XF showed improvements over DP 2044 B3XF in uniformity (increase of 1.0) and a higher micronaire level, which is important for northern High Plains markets where DP 2123 B3XF shows the best fit. DP 2123 B2XF had shorter fiber length and lower fiber strength when compared to DP 2044 B3XF (Table 10).

Table 10. Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2123 B3XF and DP 2044 B3XF in the West Texas region, 2019-2020.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2123 B3XF	1,114	36.6	1.13	4.47	30.9	81.8
DP 2044 B3XF	1,127	37.7	1.17	3.98	32.3	80.8
Significance		**	**	**	**	**
Observations	27	30	29	29	29	29
Years	2	2	2	2	2	2
% Wins	56	21	17	11	24	86
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: West Texas trials 2019-2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2123 B3XF was compared to DP 1522 B2XF in testing conducted in the West Texas region. DP 2123 B3XF showed improvements over DP 1522 B2XF in lint yield (increase of 143 lb/acre) and fiber strength (increase of 1.5 g/tex). DP 2123 B2XF had lower lint percent, slightly shorter fiber length, similar micronaire, and similar uniformity index when compared to DP 1522 B2XF (Table 11).

Table 11. Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2123 B3XF and DP 1522 B2XF in the West Texas region 2019.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2123 B3XF	1,791	41.7	1.15	4.10	31.4	82.0
DP 1522 B2XF	1,648	43.0	1.17	3.96	29.9	82.6
Significance	+	**	+		**	
Observations	14	14	5	9	10	10
Years	1	1	1	1	1	1
% Wins	79	7	20	44	90	30
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: West Texas region 2019 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2141NR B3XF

P 2141NR B3XF is a mid-full maturing cotton variety with excellent fiber strength and best fit in the Eastern and Midsouth regions with the potential for broad adaptation Beltwide. DP 2141NR B3XF offers resistance to both reniform and root-knot nematode species making it valuable in regions with high nematode pressure. DP 2141NR B3XF has semi-smooth leaf pubescence and has a bushy plant phenotype with moderate tolerance to verticillium wilt.

DP 2141NR B3XF vs. DP 1646 B2XF Plant Mapping Comparisons

The growth and fruiting characteristics of DP 2141NR B3XF, as measured by end-of-season plant mapping, are summarized in Table 18. The growth and fruiting variables of DP 2141NR B3XF are similar to DP 1646 B2XF in in-season data trials. DP 2141NR B3XF has a taller plant height when compared to DP 1646 B2XF. DP 2141NR B3XF has similar total nodes, node above cracked boll, fall out, and string out ratings when compared to DP 1646 B2XF (Table 12).

Table 12. Plant mapping comparison of DP 2141NR B3XF vs. DP 1646 B2XF in Bayer Trials (2018-2020) in-season data only PCM4 sites.

	Deviation	DP 2141NR B3XF	DP 1646 B2XF
Vigor Score (rating 1 to 9)	-0.50	2.0	2.5
Plant Height (inches)	1.45	27.5	26.0
Total Nodes	-0.19	16.5	16.7
NHR (inches/node)	0.11	1.67	1.56
% Boll Open	-2.23	73	75
Node Above Cracked Boll	-0.10	4.0	4.1
Fall Out Rating	0.03	1.6	1.5
String Out Rating	0.11	2.6	2.5
Rating 1=Excellent 9=Poor			

DP 2141NR B3XF Yield and Fiber Quality

DP 2141NR B3XF was compared to DP 1646 B2XF in testing. DP 2141NR B3XF showed improvements over DP 1646 B2XF fiber strength (increase of 2.7 g/tex), and the similar uniformity index. DP 2141NR B2XF had similar lint yield and shorter fiber length when compared to DP 1646 B2XF; while the higher micronaire (increase of 0.35) will likely require growers to make timely harvest aid applications (Table 13).

Table 13. Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2141NR B3XF and DP 1646 B2XF testing, 2018-2020.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2141NR B3XF	1,636	42.3	1.19	4.70	32.7	83.1
DP 1646 B2XF	1,649	43.3	1.23	4.35	30.0	83.1
Significance		**	**	**	**	
Observations	39	50	30	33	36	36
Years	3	3	3	3	3	3
% Wins	36	29	0	9	100	53
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: In-season trials 2018-2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2141NR B3XF has a tendency for the terminal to split early in the season. Data was collected on DP 2141NR B3XF with and without terminal split (compared to DP 1646 B2XF). Results for the trial showed approximately 12.5% of the DP 2141NR B3XF plants exhibited split terminals which resulted in variation of cotton quality ratings (Table 14).

Table 14. Total node, NFFB, NUCB, Plot Height, NUHB, NACB, and # Fruiting nodes in comparisons of DP 1646 B2XF and DP 2141NR B3XF both normal and with split terminals in testing conducted in County, Georgia, 2020.

Variety	Total node	NFFB	NUCB	Plot Ht	NUHB	NACB	# Fruiting nodes
DP 1646 B2XF	25.2	7.2	15.2	55.8	21.8	6.6	15.6
DP 2141NR B3XF – Normal	26.0	7.4	14.4	47.8	22.2	7.7	15.8
DP 2141NR B3XF - Split	22.4	7.2	11.2	45.2	17.6	6.4	11.4 (x2)
% Split Terminals							
DP 1646 B2XF	3.30%				2/80 plants		
DP 2141NR B3XF	12.50%				10/80 plants		
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: County, GA 2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.							

DP 2143NR B3XF

DP 2143NR B3XF is a mid to full maturing cotton variety with excellent fiber strength and best fit in the West Texas region. DP 2143NR B3XF is resistant to both reniform and root-knot nematode species, making it valuable in regions with high nematode pressure. DP 2143 B3XF has an upright and robust plant structure and moderate tolerance to verticillium wilt.

DP 2143NR B3XF vs. DP 1646 B2XF Plant Mapping Comparisons

The growth and fruiting characteristics of DP 2143NR B3XF, as measured by end-of-season plant mapping, are summarized in Table 21. The growth and fruiting variables of DP 2143N B3XF are similar to DP 1646 B2XF in in-season data trials. DP 2143NR B3XF has a taller plant height and increased HNR when compared to DP 1646 B2XF. DP 2143NR B3XF had similar total nodes, node above cracked boll, fall out and string out ratings when compared to DP 1646 B2XF (Table 15).

Table 15. Plant mapping comparison of DP 2143NR B3XF vs. DP 1646 B2XF in Bayer Trials (2018-2020) in-season data only PCM4 sites.

	Deviation	DP 2143NR B3XF	DP 1646 B2XF
Vigor Score (rating 1 to 9)	-0.50	2.2	2.7
Plant Height (inches)	0.08	24.4	24.4
Total Nodes	-0.46	16.0	16.4
HNR (inches/node)	0.04	1.53	1.49
% Boll Open	-3.64	66	70
Node Above Cracked Boll	-0.07	4	4.1
Fall Out Rating	0.08	1.6	1.5
String Out Rating	0.16	2.6	2.4
Rating 1=Excellent 9=Poor			

DP 2143NR B3XF Yield and Fiber Quality

DP 2143NR B3XF was compared to DP 1646 B2XF in Beltwide testing. DP 2143NR B3XF showed differences versus DP 1646 B2XF in micronaire (increase of 0.35) and fiber strength (increase of 2.7 g/tex). DP 2143NR B2XF had similar lint yield, lint %, uniformity index, and shorter fiber length when compared to DP 1646 B2XF (Table 16).

Table 16. Lint yield, lint %, fiber length, micronaire, fiber strength, and uniformity index comparisons of DP 2143NR B3XF and DP 1646 B2XF testing, 2018-2020.

Variety	Lint Yield (lb/acre)	Lint %	Fiber Length	Micronaire	Fiber Strength (g/tex)	Uniformity Index
DP 2143NR B3XF	1,565	42.5	1.19	4.73	32.8	83.2
DP 1646 B2XF	1,585	42.6	1.23	4.29	29.9	83.0
Significance			**	**	**	
Observations	42	56	36	39	42	42
Years	3	3	3	3	3	3
% Wins	43	36	14	8	100	62
Significance levels denoted by + = 0.1; * = 0.05; ** = 0.01 alpha error levels. Data Source: **West Texas trials** 2018-2020 – all data sources: TechDev and Breeding PCM4, NPE, and University.						

DP 2143NR B3XF Performance in High Reniform Environment

DP 2143NR B3XF was tested in 2020 near New Home, TX in a high Reniform nematode field under 4 different crop rotation treatment: 1) following Reniform susceptible cotton; 2) following Reniform resistant cotton; 3) following 1-year non-host; and 4) following 2-year non-host. Figure 1 illustrates the yield advantage of DP 2143NR B3XF over DP 1820 B3XF (susceptible check); which ranged from 323 lb lint / acre to 556 lb / lint per acre with an overall advantage of 438 lb. lint / acre. DP 2143NR B3XF will provide a new management tool for grower with moderate to high reniform fields in West Texas.

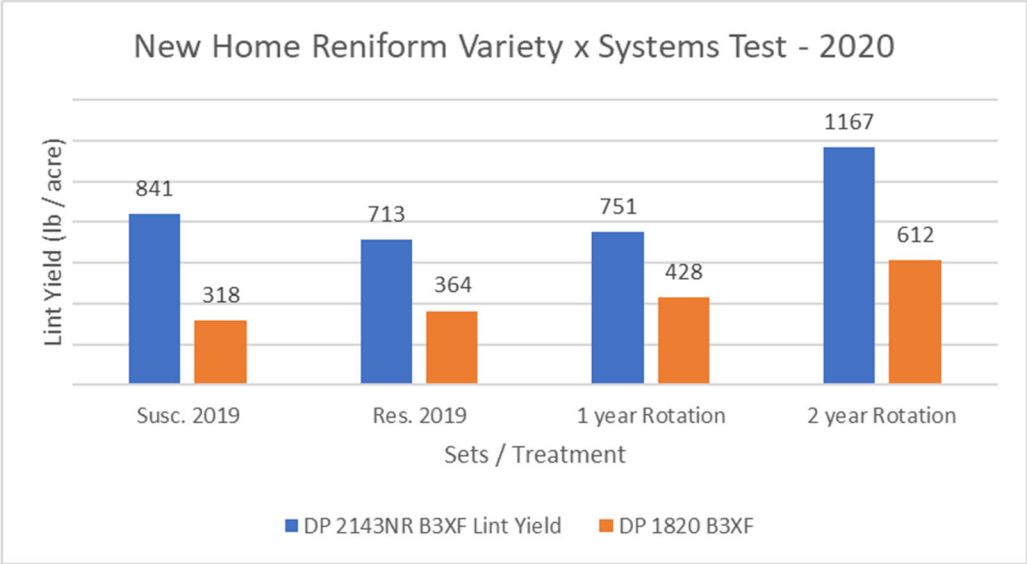

Figure 1. DP 2143NR B3XF vs. DP 1820 B3XF (susceptible check) with 4 rotations for high Reniform nematode, New Home, TX – 2020

Summary

DP 2115 B3XF is an early-maturing cotton variety with high yield potential. It has a shorter/compact plant stature that is best adapted to Midsouth and Southeast regions. It has excellent yield potential, lint %, fiber strength and uniformity index. This variety has semi-smooth leaf and shows its best fit on irrigated or productive dryland acres.

DP 2127 B3XF is an early to mid-maturing cotton variety with a tall plant stature and solid performance across the Beltwide region. This product is best adapted to the Midsouth, Southeast, and Texas regions. DP 2127 B3XF has an open canopy which could benefit production in wet conditions to reduce boll rot. This product provides moderate tolerance to verticillium wilt. Due to aggressive growth characteristic of DP 2127 B3XF timely plant growth regulator applications should be utilized; in addition, timely harvest aid applications may be needed to help manage micronaire in full-season markets.

DP 2123 B3XF is an early-mid maturing cotton variety that demonstrates the ability to perform under dryland West Texas environments. This variety has strong emergence potential, short plant height that is easy to manage, and best adapted to the Northern High Plains and Panhandle Texas regions. DP 2123 B3XF is a DryTough™ variety offered for dryland acres. This product has excellent fiber strength. DP 2123 B3XF has semi-smooth leaf pubescence and is moderately tolerant to verticillium wilt.

DP 2141NR B3XF is a mid to full maturing cotton variety with excellent fiber strength and best fit in for the Eastern and Midsouth regions. DP 2141NR B3XF has semi-smooth leaf pubescence and has a bushy plant phenotype with moderately tolerance to verticillium wilt. DP 2141NR B3XF offers resistance to both reniform and root-knot nematode species making it valuable in regions with high nematode populations.

DP 2143NR B3XF is also a mid to full maturing cotton variety with excellent fiber strength best fit in the West Texas region. DP 2143NR B3XF offers resistance to both reniform and root-knot nematode species, making it valuable in regions with high nematode pressure. DP 2143NR B3XF has an upright and robust plant structure and moderate tolerance to verticillium wilt.

DP 2115 B3XF, DP 2127 B3XF, DP 2123 B3XF, DP 2141NR B3XF, and DP 2143NR B3XF are Bollgard® 3 XtendFlex® cotton varieties that have been selected as the Deltapine® Class of ’21 and will be available to cotton growers for the 2021 season.

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ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. NOT ALL formulations of dicamba, glyphosate or glufosinate are approved for in-crop use with products with XtendFlex® Technology. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with Roundup Ready 2 Xtend® soybeans or products with XtendFlex® Technology.

***B.t.* products** may not yet be registered in all states. Check with your seed brand representative for the registration status in your state.

Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

Products with XtendFlex® Technology contains genes that confer tolerance to glyphosate, glufosinate and dicamba. Glyphosate will kill crops that are not tolerant to glyphosate. **Dicamba** will kill crops that are not tolerant to dicamba. **Glufosinate** will kill crops that are not tolerant to glufosinate. Contact your seed brand dealer or refer to the Bayer Technology Use Guide for recommended weed control programs.

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