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2014 COTTON VARIETY TESTING AND ON-FARM RESULTS

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General Information

The official cotton variety testing program (OVT) evaluates the performance of commercial and experimental cotton varieties. Varieties were tested at three non-irrigated locations during 2014. All locations were planted using a two row Seed Research Equipment Solutions Classic Aire planter. All locations were harvested using a 2-row John Deere 9930 cotton picker modified with a system to collect cotton in mesh bags for weighing. The 2014 OVT received 51 entries from five seed companies. Each company was charged an entry fee for each hybrid per location entered. Five extra varieties were entered in the Suffolk trial #1 location as part of a regional variety testing program protocol.

Statistical Analyses

To determine yield differences among varieties at each location the authors have incorporated some basic statistics in the tables. The primary tool for determining the differences among varieties is the LSD (least significant difference) (0.1) value listed at the bottom of the column in the tables. When the difference between varieties is larger than the LSD value, then the varieties can be considered different; however when the difference between varieties is less than the LSD value these varieties cannot be considered different.

Relative Yield

When varieties are grown at multiple locations, each having differing yield potentials, a comparison of absolute yield (lint yields) could bias variety comparisons to favor one variety over another. The purpose of the cotton OVT program is to evaluate varieties on genetic yield potential and fiber quality traits and not on differences in environmental conditions where they were tested.

To standardize absolute yields so comparisons can be made across locations, relative yields were calculated. Relative yields were calculated by taking individual plot yields and dividing by the highest average yield for a variety within each location:

$$\boldsymbol{Relative\ Yield} = \frac{\boldsymbol{Plot\ Yield}}{\boldsymbol{Highest\ Avg.Yield}}$$

Relative yields for each plot were then averaged to calculate the average relative yield for a variety at a given location. The highest relative yield possible at each location is 1.00.

Variety Selection

Selecting the appropriate variety for your given environment is the most important decision a cotton producer will face during the growing season. Producers should take notice that variety performance depends heavily on environmental conditions at the site where the variety is grown. For this reason, decisions should not be made using a variety's performance at a single location in a given year. Averages across locations should be evaluated carefully and relative yields give insights to where the variety ranks compared to the top yielding variety in that given environment. Varieties which consistently rank near the top in relative yield across years and locations have a higher yield stability. More stable varieties minimize yield fluctuations due to environmental conditions, but do not guarantee the maximum achievable yield level under every environmental condition.

Fiber Quality

The following tables also provide fiber quality characteristics on the tested varieties. Fiber quality is important to downstream consumers in the global cotton market and should be incorporated in variety decisions.

The following tables provide an excellent summary of the yield potential and fiber characteristics of cotton varieties in Virginia.

2014 Agronomic Inputs for Locations

(Rates on a per acre basis)

Suffolk, VA Trial #1

Planted: May 8, 2014

Harvested: Oct. 27, 2014

Population: 43,560 plants/acre

Fertilizer: 330 lbs. 6-16-39 Preplant Broadcast on Apr. 22, 2014
40 units 24-0-0-3 and 1 qt. Boron dribbled between rows on Jun. 20, 2014
40 units 24-0-0-3 and 1 qt. Boron dribbled between rows on Jun. 28, 2014

Cover Crop: Small grain

PGR: 6 oz. Pentia® on Jun. 26, 2014
8 oz. Pentia® on Jul. 14, 2014
10 oz. Pentia® on Jul. 30, 2014

Herbicide: 1 qt. Touchdown® on Apr. 21, 2014
1 qt. Roundup WeatherMax® on May 6, 2014
1.5 pt. Acumen® and 1 qt. Cotoran® on May 9, 2014
1 pt. Select Max® on Jul. 1, 2014

Insecticide: 6 oz. Orthene® on May 28, 2014
8 oz. Orthene® on Jun. 4, 2014
6 oz. Brigade® on Jul. 30, 2014
2 oz. Baythroid® and 2 oz. Belt® on Aug. 14, 2014
2 oz. Baythroid® and 2 oz. Belt® on Aug. 18, 2014

Harvest Aid: 1 qt. Finish 6 Pro®, 1 pt. SuperBoll®, 10 oz. Folex®, 3 oz. Dropp® on Oct. 1, 2014

Plot Size: 2 rows 40’ x 36” 4 replications

Soil Type Dragston and Eunola

Cooperator: Robert Ashburn, Karl Jones

Suffolk, VA Trial #2

Planted: May 5, 2014

Harvested: Oct. 24, 2014

Population: 43,560 plants/acre

Fertilizer: 330 lbs. 6-16-39 Preplant Broadcast on Apr. 22, 2014
40 units 24-0-0-3 and 1 qt. Boron dribbled between rows on Jun. 20, 2014
40 units 24-0-0-3 and 1 qt. Boron dribbled between rows on Jun. 28, 2014

Cover Crop Small grain

PGR: 6 oz. Pentia® on Jun. 26, 2014
10 oz. Pentia® on Jul. 30, 2014

Herbicide: 1 qt. Touchdown® on Apr. 21, 2014
1.5 pts. Acumen® and 1 qt. Cotoran® on May 5, 2014
1 pt. Select Max® on Jul. 1, 2014

Insecticide: 6 oz. Orthene 97® on May 22, 2014
8 oz. Orthene 97® on Jun. 4, 2014
6 oz. Brigade® on Jul. 30, 2014
2 oz. Belt® and 2 oz. Baythroid® on Aug. 14, 2014
2 oz. Belt® and 2 oz. Baythroid® on Aug. 18, 2014

Harvest Aid: 1 qt. Finish 6 Pro®, 1 pt. SuperBoll®, 10 oz. Folex®, 3 oz. Dropp® on Oct. 1, 2014

Plot Size: 2 rows 40’ x 36” 4 replications

Soil Type Emporia and Nansemond

Cooperator: Robert Ashburn, Karl Jones

Southampton Co., VA

Planted: May 13, 2014

Harvested: Oct. 28, 2014

Population: 43,560 plants/acre

Fertilizer: 200 lb. 7-18-36 Preplant
25 gal. 24-0-03S Sidedress
32 oz. N-Boron on Jun. 27, 2014
6 oz. Ful-Bor® on Jul. 16, 2014
16 oz. 10% Boron on Aug. 8, 2014

PGR: 12 oz. Pix® on Jul. 16, 2014
12 oz. Pix® on Aug. 8, 2014

Herbicide: 32 oz. Roundup PowerMax®, 1.5 oz. Valor®, 32 oz. 2-4D Amine® at Preplant
32 oz. Roundup PowerMax® on May 26, 2014
32 oz. Roundup PowerMax® on Jun. 27, 2014

Insecticide: 6 oz. Acephate® on May 26, 2014
5 oz. Bifenthrin®, 4 oz. Bidrin® on Aug. 8, 2014

Harvest Aids: 48 oz. Ethephon®, 3 oz. Thidazuron®, 12 oz. Folex® on Oct. 3, 2014

Plot Size: 2 rows 40’ x 36” 4 replications

Cooperator: Lewis and M.L. Everett

On-Farm Variety Trials

Table 1: Planting and Harvest Date for County On-Farm Trials

County	Planting Date	Harvest Date
Greensville	May 13, 2014	Nov. 19, 2014
Isle of Wight	May 3, 2014	Oct. 20, 2014
Southampton #1	May 8, 2014	Oct. 29, 2014
Southampton #2	May 23, 2014	Dec. 4, 2014
Suffolk	May 6, 2014	Nov. 4, 2014
Surry	May 13, 2014	Oct. 21, 2014

Table 2: Relative yields for all varieties at all locations entered in the 2014 Official Variety Testing (OVT) Program

Seed Company	Variety	Maturity	Relative Yield			Avg. Relative Yield
			Suffolk #1	Suffolk #2	Southampton	
Dow AgroSciences	PHY 444 WRF	early	0.95	0.94	0.99	**0.96**
Dow AgroSciences	PHY 333 WRF	early	1.00	0.93	0.93	**0.95**
Bayer CropScience	ST 4946 GLB2	early-mid	0.93	1.00	0.88	**0.94**
Dow Agrosciences	PX 554010 WRF¶	mid	0.93	0.94	0.93	**0.93**
Dow Agrosciences	PX 49907 W3RF¶	mid	0.90	0.94	0.94	**0.93**
Dow Agrosciences	PX 554057 WRF¶	mid	0.87	0.92	0.98	**0.93**
Dow Agrosciences	PHY 495 W3RF	mid	0.93	0.90	0.95	**0.93**
Monsanto	DP 0912 B2RF	early	0.98	0.91	0.88	**0.92**
Monsanto	DP 1137 B2RF	mid	0.82	0.94	1.00	**0.92**
Dow Agrosciences	PHY 499 WRF	mid	0.99	0.93	0.84	**0.92**
Dow Agrosciences	PX 49936 W3RF¶	mid	0.93	0.91	0.87	**0.90**
Seed Source Genetics	SSG HQ 210 CT	early-mid	0.92	0.89	-	**0.90**
Dow Agrosciences	PHY 312 WRF	early	0.92	0.99	0.77	**0.90**
Dow Agrosciences	PX 300314 WRF¶	early	0.93	0.99	0.77	**0.89**
Dow Agrosciences	PHY 575 WRF	mid-full	0.89	0.82	0.93	**0.88**
Dow Agrosciences	PHY 552 WRF	mid	0.86	0.88	0.88	**0.87**
Bayer CropScience	ST 4747 GLB2	early	0.83	0.87	0.90	**0.87**
Bayer CropScience	ST 6448 GLB2	full	0.78	0.87	0.94	**0.86**
Monsanto	DP 1028 B2RF	mid	0.90	0.89	0.80	**0.86**
Seed Source Genetics	SSG UA 222	early-mid	0.86	0.86	-	**0.86**
Dow Agrosciences	PX 37520 W3RF¶	early	0.84	0.88	0.85	**0.86**
Dow Agrosciences	PHY 375 WRF	early	0.84	0.93	0.79	**0.85**
Monsanto	DP 1034 B2RF	mid	0.83	0.89	0.81	**0.85**
Bayer CropScience	ST 5115GLT	early	0.83	0.87	0.84	**0.84**
Monsanto	DP 1133 B2RF	mid	0.88	0.88	0.77	**0.84**
Bayer CropScience	BX 1532 GLT¶	early	0.86	0.88	0.77	**0.84**
Dow Agrosciences	PHY 427 WRF	early	0.81	0.83	0.86	**0.84**
CPS Dyna-Gro	DG CT14515¶	medium	0.94	0.84	0.73	**0.84**
Bayer CropScience	ST 6182GLT	mid-full	0.84	0.83	0.81	**0.83**
Dow Agrosciences	PX 37508 W3RF¶	early	0.79	0.88	0.81	**0.83**
Bayer CropScience	ST 5032 GLB2	early-mid	0.82	0.90	0.72	**0.81**
Dow Agrosciences	PHY 339 WRF	early	0.85	0.83	0.75	**0.81**
Bayer CropScience	FM 1944 GLB2	early-mid	0.87	0.88	0.69	**0.81**
Americot/NexGen	NG 1511 B2RF	medium	0.79	0.89	0.76	**0.81**
CPS Dyna-Gro	DG 2285 B2RF	early	0.79	0.87	0.77	**0.81**
Monsanto	DP 1321 B2RF	early	0.77	0.82	0.83	**0.80**
Dow Agrosciences	PHY 417 WRF	early	0.81	0.77	0.81	**0.79**
Bayer CropScience	BX 1531 GLT¶	early	0.83	0.82	0.72	**0.79**
Monsanto	DP 1311 B2RF	early	0.75	0.80	0.81	**0.79**
Dow Agrosciences	PHY 487 WRF	early	0.87	0.77	0.72	**0.79**
Bayer CropScience	ST 5289 GLB2	mid-full	0.76	0.80	0.79	**0.78**
Bayer CropScience	BX 1536 GLT¶	mid-full	0.83	0.83	0.67	**0.78**
Bayer CropScience	BX 1535 GLT¶	mid-full	0.80	0.83	0.69	**0.78**

CPS Dyna-Gro	DG 2355 B2RF	early-mid	0.72	0.80	0.76	**0.76**
Monsanto	MON 12R224B2R2[¶]	early	0.82	0.78	0.67	**0.76**
Bayer CropScience	BX 1533 GLT[¶]	early-mid	0.76	0.82	0.65	**0.74**
		Mean	**0.86**	**0.87**	**0.82**	
[¶] *Experimental lines not released*		**LSD (0.1)**	**0.090**	**0.091**	**0.141**	

Table 3: Two year (2013-2014) relative yield averages for varieties tested each year

Seed Company	Variety	Avg. Relative Yield
Dow AgroSciences	PHY 333 WRF	1.00
Monsanto	DP 0912 B2RF	0.95
Bayer CropScience	ST 4946 GLB2	0.95
Dow AgroSciences	PHY 499 WRF	0.94
Monsanto	DP 1137 B2RF	0.92
Bayer CropScience	ST 4747 GLB2	0.92
Monsanto	DP 1028 B2RF	0.91
Dow AgroSciences	PHY 339 WRF	0.91
Dow AgroSciences	PHY 375 WRF	0.91
Monsanto	DP 1133 B2RF	0.90
Monsanto	DP 1321 B2RF	0.90
Americot/NexGen	NG 1511 B2RF	0.90
Dow AgroSciences	PHY 427 WRF	0.89
Monsanto	DP 1034 B2RF	0.88
Bayer CropScience	ST 6448 GLB2	0.88
CPS Dyna-Gro	DG 2285 B2RF	0.87
Bayer CropScience	FM 1944 GLB2	0.87
Monsanto	MON 12R224B2R2	0.87
Monsanto	DP 1311 B2RF	0.86
Dow AgroSciences	PHY 417 WRF	0.86
	Mean	**0.89**

Table 4: Three year (2012-2014) relative yield averages for varieties tested each year

Seed Company	Variety	Avg. Relative Yield
Dow AgroSciences	PHY 333 WRF	1.00
Bayer CropScience	ST 4946 GLB2	0.97
Dow AgroSciences	PHY 499 WRF	0.96
Monsanto	DP 0912 B2RF	0.95
Monsanto	DP 1137 B2RF	0.95
Monsanto	DP 1028 B2RF	0.94
Monsanto	DP 1321 B2RF	0.93
Americot/NexGen	NG 1511 B2RF	0.93
Dow AgroSciences	PHY 339 WRF	0.93
Dow AgroSciences	PHY 375 WRF	0.93
CPS Dyna-Gro	DG 2285 B2RF	0.90
Monsanto	DP 1034 B2RF	0.89
Monsanto	DP 1311 B2RF	0.88
Bayer CropScience	FM 1944 GLB2	0.88
	Mean	**0.93**

Table 5: Lint yield and fiber quality of varieties tested during 2014 at the Suffolk, VA #1 location

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb./A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Dow AgroSciences	PHY 333 WRF	2250.7	44.0	4.1	1.18	29.1	84.2
Dow AgroSciences	PHY 499 WRF	2233.4	45.4	4.5	1.16	30.9	84.7
Monsanto	DP 0912 B2RF	2195.9	43.2	4.6	1.13	29.2	83.7
Dow AgroSciences	PHY 444 WRF	2145.6	44.6	3.5	1.24	29.4	85.4
Monsanto	DP 1252 B2RF	2121.3	45.4	4.6	1.16	25.7	84.2
CPS Dyna-Gro	DG CT14515¶	2112.2	44.2	3.9	1.16	31.2	83.5
Dow AgroSciences	PX 554010 WRF¶	2098.8	44.9	3.8	1.17	29.8	84.6
Bayer CropScience	ST 4946 GLB2	2096.0	42.1	4.4	1.16	30.2	83.7
Dow AgroSciences	PHY 495 W3RF	2093.6	44.4	4.3	1.15	29.3	84.2
Dow AgroSciences	PX 49936 W3RF¶	2085.3	44.5	4.4	1.16	29.9	83.6
Dow AgroSciences	PX 300314 WRF¶	2085.0	42.3	3.8	1.13	30.7	82.3
Dow AgroSciences	PHY 312 WRF	2080.2	43.8	4.2	1.19	29.8	83.5
Seed Source Genetics	SSG HQ 210 CT	2063.7	42.1	4.3	1.16	30.4	83.3
Dow AgroSciences	PX 49907 W3RF¶	2036.3	44.4	4.2	1.15	29.5	83.3
Monsanto	DP 1028 B2RF	2025.1	43.7	4.4	1.16	27.3	84.8
Bayer CropScience	FM 2484 B2F	2020.8	43.9	3.9	1.21	28.8	83.9
Dow AgroSciences	PHY 575 WRF	1993.0	41.7	3.8	1.26	28.3	84.0
Monsanto	DP 1050 B2RF	1986.5	44.4	4.3	1.18	26.5	84.0
Monsanto	DP 1133 B2RF	1971.8	43.2	4.3	1.19	29.5	84.8
Dow AgroSciences	PX 554057 WRF¶	1965.7	42.8	3.8	1.22	30.7	84.8
Bayer CropScience	FM 1944 GLB2	1959.7	39.4	4.0	1.21	33.2	83.4
Dow AgroSciences	PHY 487 WRF	1952.6	43.1	4.1	1.10	27.7	82.4
Seed Source Genetics	UA 222	1945.4	42.1	4.1	1.23	29.9	83.6
Bayer CropScience	BX 1532 GLT¶	1933.8	45.8	4.1	1.17	28.4	83.9
Dow AgroSciences	PHY 552 WRF	1933.8	43.4	3.8	1.20	31.5	84.6
Dow AgroSciences	PHY 339 WRF	1914.1	42.6	4.0	1.21	28.8	83.8
Bayer CropScience	ST 6182GLT	1895.9	45.8	4.1	1.15	28.1	84.2
Dow AgroSciences	PHY 375 WRF	1891.2	42.6	3.8	1.13	28.4	83.3
Dow AgroSciences	PX 37508 W3RF¶	1889.4	41.0	3.7	1.15	29.0	83.3
Bayer CropScience	BX 1531 GLT¶	1878.5	44.2	4.2	1.16	28.6	82.6
Monsanto	DP 1034 B2RF	1875.9	42.7	4.3	1.18	28.1	83.5
Bayer CropScience	ST 4747 GLB2	1874.3	42.6	4.1	1.21	30.5	83.4
Bayer CropScience	BX 1536 GLT¶	1873.1	43.8	3.8	1.17	31.0	83.8
Bayer CropScience	ST 5115GLT	1860.9	41.2	3.9	1.16	30.5	82.8
Monsanto	MON 12R224B2R2¶	1851.0	41.0	3.9	1.18	29.5	83.5
Monsanto	DP 1137 B2RF	1844.4	43.4	4.3	1.16	30.2	84.2
Bayer CropScience	ST 5032 GLB2	1839.8	40.8	3.7	1.22	30.9	83.7
Dow AgroSciences	PHY 427 WRF	1830.6	40.6	3.6	1.15	30.0	83.0
Dow AgroSciences	PHY 417 WRF	1814.0	42.6	3.5	1.15	30.3	82.8
Bayer CropScience	BX 1535 GLT¶	1809.9	42.2	3.7	1.20	33.4	83.0
Dow AgroSciences	PX 37520 W3RF¶	1786.6	41.5	3.8	1.15	27.2	82.5
CPS Dyna-Gro	DG 2285 B2RF	1776.3	43.7	4.1	1.18	28.7	83.6
Americot/NexGen	NG 1511 B2RF	1768.6	44.7	4.7	1.17	29.4	84.1

Bayer CropScience	ST 6448 GLB2	1764.6	41.5	4.0	1.21	30.9	82.5
Dow AgroSciences	PHY 725 RF	1740.8	41.6	4.1	1.20	29.3	83.7
Monsanto	DP 1321 B2RF	1725.8	41.8	4.4	1.17	30.5	84.3
Bayer CropScience	BX 1533 GLT[¶]	1712.3	41.2	3.9	1.22	33.0	83.1
Americot/NexGen	NG 5315 B2RF	1710.4	43.8	4.4	1.18	25.4	84.2
Bayer CropScience	ST 5289 GLB2	1706.6	41.0	3.9	1.15	29.2	82.3
Monsanto	DP 1311 B2RF	1689.0	43.4	4.1	1.17	28.7	83.2
CPS Dyna-Gro	DG 2355 B2RF	1626.8	39.8	3.9	1.17	29.8	84.3
	Mean	1928.2	43.0	4.05	1.17	29.52	83.66
	LSD (0.1)	202.66	0.92	0.22	0.026	1.54	0.90

[¶] *experimental lines not released*

Table 6: Lint yield and fiber quality of varieties tested during 2014 at the Suffolk, VA #2 location

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb./A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Bayer CropScience	ST 4946 GLB2	1876.4	41.2	4.4	1.15	31.0	83.7
Dow AgroSciences	PHY 312 WRF	1863.5	42.9	4.2	1.19	30.5	83.6
Dow AgroSciences	PX 300314 WRF¶	1852.9	43.2	3.7	1.12	31.8	82.4
Dow AgroSciences	PX 49907 W3RF¶	1768.7	44.7	4.2	1.16	30.5	83.4
Monsanto	DP 1137 B2RF	1768.3	46.2	4.4	1.14	28.9	84.4
Dow AgroSciences	PHY 444 WRF	1763.6	43.1	3.5	1.26	31.1	84.6
Dow AgroSciences	PX 554010 WRF¶	1756.8	45.0	3.8	1.17	30.7	84.8
Dow AgroSciences	PHY 375 WRF	1750.3	42.8	3.9	1.13	29.6	83.6
Dow AgroSciences	PHY 499 WRF	1743.0	45.6	4.5	1.17	31.8	85.2
Dow AgroSciences	PHY 333 WRF	1737.8	43.2	4.1	1.18	29.8	84.3
Dow AgroSciences	PX 554057 WRF¶	1734.1	43.4	3.9	1.23	31.5	84.9
Dow AgroSciences	PX 49936 W3RF¶	1710.3	43.9	4.3	1.15	31.2	83.8
Monsanto	DP 0912 B2RF	1703.9	44.1	4.6	1.13	30.0	83.7
Bayer CropScience	ST 5032 GLB2	1685.5	41.1	3.6	1.21	31.8	84.0
Dow AgroSciences	PHY 495 W3RF	1682.1	44.7	4.4	1.15	29.5	84.2
Monsanto	DP 1034 B2RF	1670.8	41.8	4.4	1.17	28.7	83.6
Americot/NexGen	NG 1511 B2RF	1670.2	43.0	4.7	1.17	29.9	84.2
Seed Source Genetics	SSG HQ 210 CT	1665.1	42.2	4.4	1.13	30.9	83.6
Monsanto	DP 1028 B2RF	1661.4	43.0	4.3	1.17	28.1	84.2
Dow AgroSciences	PX 37508 W3RF¶	1658.6	41.4	3.7	1.15	29.6	83.3
Monsanto	DP 1133 B2RF	1657.6	43.3	4.3	1.19	30.2	85.4
Bayer CropScience	BX 1532 GLT¶	1655.2	44.8	4.1	1.18	29.5	83.3
Dow AgroSciences	PHY 552 WRF	1646.9	43.0	3.7	1.21	32.2	84.7
Dow AgroSciences	PX 37520 W3RF¶	1645.9	41.7	3.7	1.14	28.5	82.4
Bayer CropScience	FM 1944 GLB2	1643.4	40.3	4.0	1.20	33.5	83.4
Bayer CropScience	ST 5115GLT	1631.4	41.9	3.9	1.16	30.9	82.7
CPS Dyna-Gro	DG 2285 B2RF	1629.8	43.4	4.0	1.19	29.7	83.7
Bayer CropScience	ST 6448 GLB2	1629.5	41.6	4.0	1.21	31.6	82.3
Bayer CropScience	ST 4747 GLB2	1624.4	42.7	4.1	1.22	31.4	83.6
Seed Source Genetics	UA 222	1605.5	41.6	4.1	1.22	30.5	83.5
CPS Dyna-Gro	DG CT14515¶	1573.3	44.2	4.0	1.16	32.2	83.9
Dow AgroSciences	PHY 427 WRF	1566.4	40.7	3.5	1.15	30.7	83.1
Bayer CropScience	ST 6182GLT	1564.7	44.5	4.1	1.16	29.2	84.4
Dow AgroSciences	PHY 339 WRF	1562.2	42.6	4.0	1.21	29.5	83.8
Bayer CropScience	BX 1536 GLT¶	1560.4	44.6	3.8	1.17	32.2	83.8
Bayer CropScience	BX 1535 GLT¶	1560.2	43.4	3.7	1.20	34.3	82.9
Bayer CropScience	BX 1531 GLT¶	1547.0	43.8	4.2	1.16	29.5	83.1
Monsanto	DP 1321 B2RF	1538.6	42.1	4.4	1.17	30.4	84.4
Bayer CropScience	BX 1533 GLT¶	1532.5	41.7	4.0	1.21	32.9	83.1
Dow AgroSciences	PHY 575 WRF	1531.1	41.6	3.8	1.26	29.5	84.4
Bayer CropScience	ST 5289 GLB2	1508.5	41.1	4.1	1.14	31.1	82.4
CPS Dyna-Gro	DG 2355 B2RF	1495.0	40.1	3.9	1.17	30.5	84.6
Monsanto	DP 1311 B2RF	1494.2	43.3	4.1	1.17	28.7	83.8

Monsanto	MON 12R224B2R2[¶]	1472.8	41.4	3.9	1.17	30.0	83.4
Dow AgroSciences	PHY 487 WRF	1452.7	43.2	4.1	1.09	28.3	82.6
Dow AgroSciences	PHY 417 WRF	1444.8	42.8	3.6	1.15	30.8	83.0
	Mean	1641.2	43.0	4.04	1.17	30.5	83.74
	LSD (0.1)	170.79	1.99	0.16	0.020	0.85	0.72

[¶] *experimental lines not released*

Table 7: Lint yield and fiber quality of varieties tested during 2014 at the Southampton Co., VA location

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb/A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Monsanto	DP 1137 B2RF	2017.4	45.8	4.7	1.11	28.3	82.3
Dow AgroSciences	PHY 444 WRF	1998.2	45.6	3.7	1.23	32.0	83.6
Dow AgroSciences	PX 554057 WRF¶	1985.4	44.2	3.9	1.16	31.8	83.8
Dow AgroSciences	PHY 495 W3RF	1923.8	44.0	4.6	1.12	31.8	83.9
Dow AgroSciences	PX 49907 W3RF¶	1894.2	44.7	4.4	1.12	30.2	82.6
Bayer CropScience	ST 6448 GLB2	1892.9	44.4	4.4	1.20	30.4	82.3
Dow AgroSciences	PHY 575 WRF	1883.5	43.7	3.9	1.21	30.3	83.9
Dow AgroSciences	PX 554010 WRF¶	1877.3	46.1	3.8	1.10	28.8	83.0
Dow AgroSciences	PHY 333 WRF	1868.3	45.0	4.3	1.16	30.7	83.5
Bayer CropScience	ST 4747 GLB2	1823.4	42.9	4.1	1.16	31.1	81.8
Monsanto	DP 0912 B2RF	1779.5	43.2	5.0	1.10	29.4	82.9
Bayer CropScience	ST 4946 GLB2	1777.2	44.5	3.9	1.15	30.3	83.3
Dow AgroSciences	PHY 552 WRF	1766.9	44.6	4.0	1.14	31.2	82.7
Dow AgroSciences	PX 49936 W3RF¶	1759.3	44.4	4.5	1.11	31.4	83.1
Dow AgroSciences	PHY 427 WRF	1738.1	41.8	4.0	1.14	30.8	82.7
Dow AgroSciences	PX 37508 W3RF¶	1717.7	43.5	4.0	1.12	30.9	81.8
Dow AgroSciences	PHY 499 WRF	1693.1	45.1	4.7	1.12	32.2	84.0
Bayer CropScience	ST 5115GLT	1684.9	43.6	3.9	1.12	29.4	82.3
Monsanto	DP 1321 B2RF	1668.4	44.5	4.6	1.14	29.2	83.3
Monsanto	DP 1034 B2RF	1643.9	45.6	4.3	1.16	29.6	83.6
Dow AgroSciences	PX 37520 W3RF¶	1635.7	43.1	4.1	1.09	27.8	80.6
Monsanto	DP 1311 B2RF	1635.7	46.1	4.4	1.14	28.5	82.1
Dow AgroSciences	PHY 417 WRF	1630.5	45.6	3.6	1.13	30.5	82.2
Bayer CropScience	ST 6182GLT	1628.2	46.3	4.4	1.11	27.2	82.7
Monsanto	DP 1028 B2RF	1622.5	42.2	4.5	1.14	29.6	82.9
Bayer CropScience	ST 5289 GLB2	1596.3	44.7	4.2	1.13	30.9	82.0
Dow AgroSciences	PHY 375 WRF	1588.0	45.0	4.2	1.10	28.9	82.0
CPS Dyna-Gro	DG 2285 B2RF	1557.3	41.9	4.4	1.14	30.4	82.7
Bayer CropScience	BX 1532 GLT¶	1556.5	45.9	4.0	1.15	30.1	83.2
Dow AgroSciences	PHY 312 WRF	1555.6	43.5	4.3	1.14	30.4	83.6
Dow AgroSciences	PX 300314 WRF¶	1549.6	43.6	4.2	1.11	30.4	82.4
Monsanto	DP 1133 B2RF	1547.5	44.5	4.8	1.14	29.9	83.5
CPS Dyna-Gro	DG 2355 B2RF	1541.4	42.0	4.2	1.12	30.7	82.4
Americot/NexGen	NG 1511 B2RF	1532.6	43.5	4.9	1.09	29.7	82.6
Dow AgroSciences	PHY 339 WRF	1519.7	41.8	4.2	1.15	30.2	83.8
CPS Dyna-Gro	DG CT14515¶	1476.7	44.3	4.3	1.09	30.4	80.9
Bayer CropScience	ST 5032 GLB2	1462.3	42.5	3.9	1.20	31.2	82.5
Bayer CropScience	BX 1531 GLT¶	1461.6	45.3	4.5	1.10	28.9	81.6
Dow AgroSciences	PHY 487 WRF	1443.4	44.0	4.0	1.12	30.5	82.7
Bayer CropScience	BX 1535 GLT¶	1401.4	42.5	3.7	1.17	33.9	82.1
Bayer CropScience	FM 1944 GLB2	1390.7	41.4	4.0	1.17	31.8	82.6
Bayer CropScience	BX 1536 GLT¶	1359.4	41.9	3.9	1.13	32.2	82.5
Monsanto	MON 12R224B2R2¶	1344.6	42.4	4.0	1.16	29.8	83.8

Bayer CropScience	BX 1533 GLT[¶]	1308.9	41.7	4.3	1.19	32.6	83.1
	Mean	1653.2	44.0	4.22	1.14	30.37	82.75
	LSD (0.1)	287.06	1.93	0.21	0.023	1.00	0.87

[¶] *experimental lines not released*

Table 8: Yield, fiber quality, & performance of varieties in the Isle of Wight Co. 2014 On-farm trial

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb/A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Monsanto	DP 1028 B2RF	1522.9	45.9	4.5	1.13	28.1	84.2
Monsanto	DP 1133 B2RF	1495.2	44.4	4.6	1.11	28.6	83.0
Dow AgroSciences	PHY 499 WRF	1443.9	46.4	4.6	1.11	29.6	83.0
Bayer CropScience	ST 4747 GLB2	1442.3	44.6	3.9	1.15	29.0	81.7
Americot/NexGen	NG 1511 B2RF	1424.3	47.8	4.5	1.11	28.2	83.1
Dow AgroSciences	PHY 333 WRF	1412.1	44.8	4.1	1.15	28.1	83.3
Dow AgroSciences	PHY 375 WRF	1406.8	44.4	3.9	1.12	27.3	83.3
Monsanto	DP 1321 B2RF	1403.5	43.5	4.5	1.14	29.9	82.5
Bayer CropScience	FM 1944 GLB2	1391.7	42.0	4.3	1.17	30.0	83.0
Bayer CropScience	ST 4946 GLB2	1339.8	43.0	4.2	1.12	29.4	82.8
Dow AgroSciences	PHY 339 WRF	1317.3	43.9	3.8	1.16	29.0	83.3
Monsanto	DP 12R224 B2R2	1300.7	42.3	3.9	1.17	28.3	82.4
	Mean	1408.4	44.4	4.2	1.14	28.8	83.0

Table 9: Yield, fiber quality, & performance of varieties in the City of Suffolk 2014 On-farm trial

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb/A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Bayer CropScience	ST 4946 GLB2	2074.6	41.8	4.4	1.16	31.1	84.1
Monsanto	DP 1321 B2RF	2047.3	44.6	4.6	1.16	29.3	84.5
Americot/NexGen	NG 1511 B2RF	2020.2	46.1	4.7	1.13	29.5	83.3
Monsanto	DP 12R224 B2R2	1954.6	42.5	4.0	1.19	29.4	83.9
Dow AgroSciences	PHY 499 WRF	1925.6	43.9	4.7	1.15	29.9	83.9
Dow AgroSciences	PHY 375 WRF	1923.5	43.4	4.4	1.16	30.1	83.2
Bayer CropScience	FM 1944 GLB2	1881.1	39.9	4.2	1.18	31.6	83.4
Bayer CropScience	ST 4747 GLB2	1879.2	41.4	4.2	1.17	29.3	81.9
Dow AgroSciences	PHY 333 WRF	1807.0	40.1	4.1	1.16	29.2	82.4
Monsanto	DP 1133 B2RF	1775.9	43.0	4.6	1.15	29.6	84.0
Dow AgroSciences	PHY 339 WRF	1699.3	41.7	4.0	1.17	28.1	83.3
Monsanto	DP 1028 B2RF	1556.5	43.2	4.7	1.14	27.5	83.2
	Mean	1878.7	42.6	4.4	1.16	29.6	83.4

Table 10: Yield, fiber quality, & performance of varieties in the Southampton Co. #1 2014 On-farm trial

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb/A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Bayer CropScience	ST 4946 GLB2	2073.9	43.2	4.4	1.18	29.2	84.9
Bayer CropScience	ST 4747 GLB2	2060.8	45.0	4.1	1.20	29.8	83.9
Dow AgroSciences	PHY 499 WRF	2051.3	46.2	4.6	1.17	29.9	84.8
Dow AgroSciences	PHY 333 WRF	2047.0	45.5	4.2	1.18	29.2	84.8
Monsanto	DP 1133 B2RF	2033.7	46.4	4.6	1.17	29.0	84.7
Monsanto	DP 12R224 B2R2	2000.1	45.2	4.1	1.20	29.0	84.6
Dow AgroSciences	PHY 375 WRF	1981.7	44.1	4.2	1.12	28.3	83.7
Americot/NexGen	NG 1511 B2RF	1950.0	45.3	4.8	1.15	29.1	84.2
Bayer CropScience	FM 1955 GLB2	1941.6	41.9	4.0	1.20	31.2	83.9
Monsanto	DP 1028 B2RF	1919.7	45.5	4.6	1.15	28.1	84.3
Monsanto	DP 1321 B2RF	1915.5	45.5	4.7	1.14	28.4	84.5
Dow AgroSciences	PHY 339 WRF	1894.5	44.0	4.1	1.18	28.3	83.9
	Mean	1989.2	44.8	4.4	1.17	29.1	84.4

Table 11: Yield, fiber quality, & performance of varieties in the Southampton Co. #2 2014 On-farm trial

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb/A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Dow AgroSciences	PHY 333 WRF	1798.0	45.0	4.1	1.16	30.3	83.7
Bayer CropScience	ST 4946 GLB2	1722.0	43.2	4.4	1.17	31.8	84.5
Dow AgroSciences	PHY 499 WRF	1695.9	45.5	4.2	1.15	30.7	83.8
Bayer CropScience	ST 4747 GLB2	1654.3	44.3	4.0	1.17	30.8	83.4
Dow AgroSciences	PHY 339 WRF	1623.8	43.7	3.5	1.20	29.8	85.0
Americot/NexGen	NG 1511 B2RF	1622.4	45.4	4.3	1.14	29.4	84.1
Monsanto	DP 1133 B2RF	1535.3	44.7	4.2	1.15	29.8	85.0
Monsanto	DP 1321 B2RF	1494.9	44.6	4.0	1.16	30.8	84.7
Bayer CropScience	FM 1944 GLB2	1468.4	41.0	4.4	1.12	30.5	83.1
	Mean	1623.9	44.2	4.1	1.16	30.4	84.2

Table 12: Yield, fiber quality, & performance of varieties in the Surry Co. 2014 On-farm trial

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb/A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Monsanto	DP 1133 B2RF	1278.6	44.3	4.1	1.15	31.2	84.3
Monsanto	DP 1028 B2RF	1228.7	44.6	4.3	1.14	30.0	83.7
Bayer CropScience	FM 1944 GLB2	1211.0	42.5	3.6	1.19	33.6	83.4
Bayer CropScience	ST 4747 GLB2	1184.0	42.3	3.4	1.15	29.6	80.5
Americot/NexGen	NG 1511 B2RF	1180.8	42.7	3.9	1.14	31.1	83.7
Dow AgroSciences	PHY 499 WRF	1147.9	44.6	4.0	1.15	30.9	84.1
Monsanto	DP 1321 B2RF	1124.6	43.4	3.5	1.16	30.6	84.3
Bayer CropScience	ST 4946 GLB2	1100.5	43.0	3.8	1.14	31.9	83.1
Dow AgroSciences	PHY 339 WRF	1046.8	43.2	3.5	1.16	30.9	83.0
Dow AgroSciences	PHY 333 WRF	1044.6	43.2	3.7	1.16	31.9	83.4
Dow AgroSciences	PHY 375 WRF	1008.6	42.8	3.4	1.14	30.2	82.5
Monsanto	DP 12R224 B2R2	929.7	42.8	3.4	1.18	30.8	83.8
	Mean	1123.8	43.3	3.7	1.15	31.1	83.3

Table 13: Yield, fiber quality, & performance of varieties in the Greensville Co.* 2014 On-farm trial

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb/A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Bayer CropScience	ST 4946 GLB2	2210.9	47.2	4.7	1.19	30.6	85.1
Bayer CropScience	ST 4747 GLB2	2128.3	47.6	4.4	1.22	31.0	84.8
Dow Agro Science	PHY 499 WRF	2028.8	49.5	4.5	1.18	30.4	86.0
Dow Agro Science	PHY 333 WRF	2009.0	48.2	4.3	1.19	28.7	86.0
Dow Agro Science	PHY 375 WRF	2005.4	48.0	4.2	1.13	27.0	84.1
Monsanto	DP 1133 B2RF	1969.7	47.7	4.3	1.18	31.5	84.2
Dow Agro Science	PHY 339 WRF	1874.8	47.0	4.4	1.22	27.6	84.6
Monsanto	DP 1028 B2RF	1837.9	48.2	4.5	1.15	26.5	85.1
Monsanto	DP 1321 B2RF	1751.0	48.3	4.3	1.15	29.3	85.7
Monsanto	DP 12R224 B2R2	1698.3	46.6	3.7	1.16	26.8	84.4
Americot/NexGen	NG 1511 B2RF	1681.9	49.8	4.6	1.13	30.9	84.9
Bayer CropScience	FM 1944 GLB2	1599.8	45.1	3.6	1.19	29.0	83.3
	Mean	1899.7	47.8	4.3	1.17	29.1	84.9

***Varieties were replicated one time at this location.**

Weather Charts

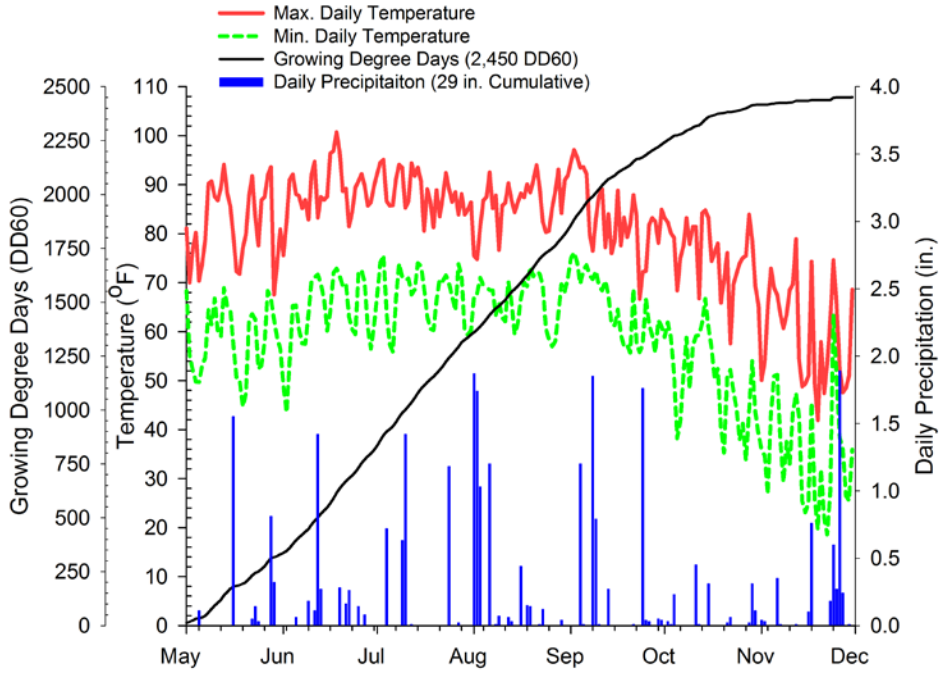

Fig. 1: Weather data for Suffolk, VA for 2014 growing season

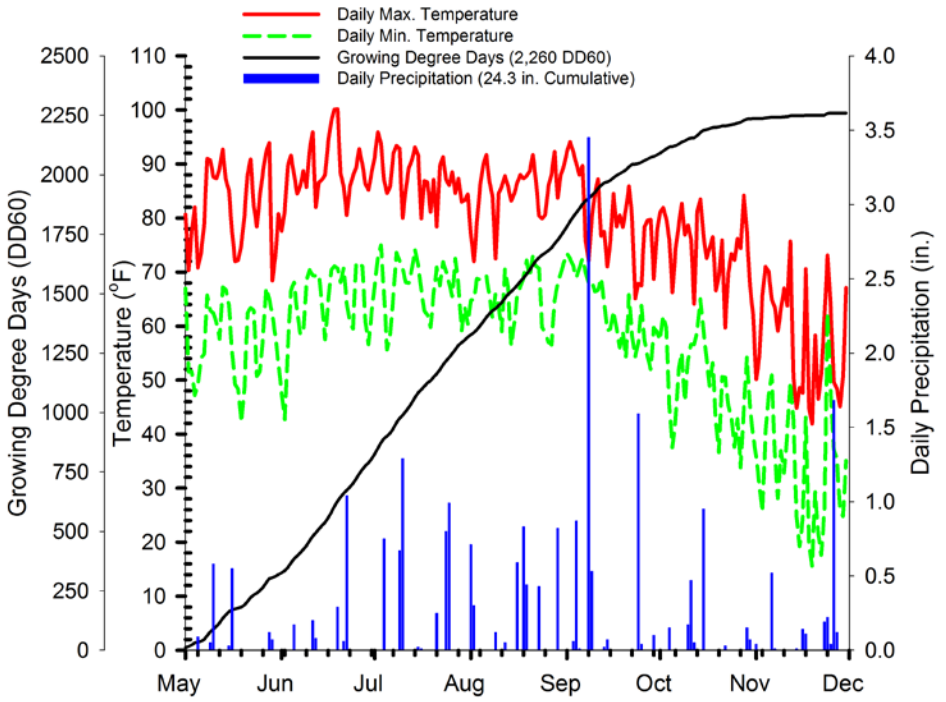

Fig. 2: Weather data for Southampton Co., VA for 2014 growing season