



# Virginia Cooperative Extension

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## 2013 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 locations during 2013, two non-irrigated locations and one irrigated location. All locations were planted using a two row Seed Research Equipment Solutions Classic Aire planter. The Suffolk locations were harvested using a 2-row John Deere 9930 cotton picker while the Painter location was harvested using a Case International 982 series II cotton picker. Both cotton pickers were modified with a system to collect cotton in mesh bags for weighing. The 2013 OVT received 33 entries from six seed companies. Each company was charged an entry fee for each hybrid per location entered. Seven extra varieties were entered in the Suffolk non-irrigated 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:

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

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.

# 2013 Agronomic Inputs for Locations

(Rates on a per acre basis)

## Suffolk, VA (non-irrigated)

<b>Planted:</b>	May 14, 2013
<b>Harvested:</b>	Nov. 5, 2013
<b>Population:</b>	43,560 plants/acre
<b>Fertilizer:</b>	20-53-129 Preplant Broadcast on April 3, 2013 40-0-0-5S-0.5B Dribbled between rows on June 26, 2013 40-0-0-5S-0.5B Dribbled between rows on July 10, 2013
<b>Cover Crop:</b>	Small grain
<b>PGR:</b>	8 oz. Pentia <sup>®</sup> on July 5, 2013 12 oz. Pentia <sup>®</sup> on July 17, 2013 10 oz. Pentia <sup>®</sup> on July 30, 2013
<b>Herbicide:</b>	1.5 pts. 2,4-D Amine on March 30, 2013 22 oz. Roundup WeatherMax <sup>®</sup> on April 4, 2013 1 qt. Roundup WeatherMax <sup>®</sup> on April 19, 2013 1 pt. Acumen <sup>®</sup> and 1 qt. Cotoran <sup>®</sup> on May 16, 2013 12 oz. Volunteer <sup>®</sup> on June 5, 2013 12 oz. Select Max <sup>®</sup> on June 24, 2013
<b>Insecticide:</b>	8 oz. Orthene <sup>®</sup> on June 5, 2013 10 oz. Hero <sup>®</sup> on July 30, 2013 3 oz. Baythroid <sup>®</sup> on August 8, 2013 6 oz. Brigade <sup>®</sup> and 2 oz. Belt <sup>®</sup> on August 15, 2013
<b>Harvest Aid:</b>	1 qt. Finish 6 Pro <sup>®</sup> , 1 pt. SuperBoll <sup>®</sup> , 10 oz. Folex <sup>®</sup> , and 3 oz. FreeFall <sup>®</sup> on Oct. 18, 2013
<b>Plot Size:</b>	2 rows 40' x 36" 4 replications
<b>Soil Type</b>	Dragston and Eunola
<b>Cooperator:</b>	Robert Ashburn

## Suffolk, VA (irrigated)

<b>Planted:</b>	May 15, 2013
<b>Harvested:</b>	Nov. 6, 2013
<b>Population:</b>	43,560 plants/acre
<b>Fertilizer:</b>	20-53-129 Preplant Broadcast on April 3, 2013 40-0-0-5S-0.5B Dribbled between rows on June 26, 2013 40-0-0-5S-0.5B Dribbled between rows on July 10, 2013
<b>Cover Crop</b>	Small grain
<b>Irrigation:</b>	1.75" applied with travelling gun on July 26, 2013 1.50" applied with travelling gun on August 7, 2013 1.25" applied with travelling gun on August 22, 2013
<b>PGR:</b>	4 oz. Pentia <sup>®</sup> on July 5, 2013 12 oz. Pentia <sup>®</sup> on July 17, 2013 10 oz. Pentia <sup>®</sup> on July 31, 2013
<b>Herbicide:</b>	1.5 pts. 2,4-D Amine on March 30, 2013 1 qt. Roundup WeatherMax <sup>®</sup> on April 13, 2013 1 pt. Acumen <sup>®</sup> and 1 qt. Cotoran <sup>®</sup> on May 16, 2013 12 oz. Volunteer <sup>®</sup> on June 5, 2013 12 oz. Select Max <sup>®</sup> on June 24, 2013
<b>Insecticide:</b>	8 oz. Orthene <sup>®</sup> on June 5, 2013 10 oz. Hero <sup>®</sup> on July 30, 2013 3 oz. Baythroid <sup>®</sup> on August 8, 2013 6 oz. Brigade <sup>®</sup> and 2 oz. Belt <sup>®</sup> on August 15, 2013
<b>Harvest Aid:</b>	1 qt. Finish 6 Pro <sup>®</sup> , 1 pt. SuperBoll <sup>®</sup> , 10 oz. Folex <sup>®</sup> , and 3 oz. FreeFall <sup>®</sup> on Oct. 18, 2013
<b>Plot Size:</b>	2 rows 40' x 36" 4 replications
<b>Soil Type</b>	Emporia and Eunola
<b>Cooperator:</b>	Robert Ashburn

## Painter, VA (non-irrigated)

<b>Planted:</b>	May 21, 2013
<b>Harvested:</b>	Dec. 3, 2013
<b>Population:</b>	43,560 plants/acre
<b>Fertilizer:</b>	12-0-40 Preplant Broadcast 40-0-0 Dribbled between rows on July 10, 2013
<b>Cover Crop:</b>	Mixed vegetation with legumes
<b>PGR:</b>	14oz. Pentia <sup>®</sup> on July 23, 2013 8 oz. Pentia <sup>®</sup> on August 12, 2013
<b>Herbicide:</b>	1 pt. Acumen <sup>®</sup> and 1 qt. Cotoran <sup>®</sup> on May 22, 2013 1 qt. Roundup WeatherMax <sup>®</sup> on June 6, 2013 1 qt. Roundup PowerMax <sup>®</sup> on June 21, 2013
<b>Insecticide:</b>	6.0 oz. Orthene <sup>®</sup> 97 on June, 21, 2013 6.4 oz. Brigade <sup>®</sup> on August 12, 2013 6.4 oz. Brigade <sup>®</sup> on August 27, 2013
<b>Harvest Aids:</b>	37 oz. Finish 6 Pro <sup>®</sup> and 12 oz. Folex <sup>®</sup> on Oct. 26, 2013
<b>Plot Size:</b>	2 rows 40' x 36" 4 replications
<b>Soil Type</b>	Bojac
<b>Cooperator:</b>	Tommy Custis

## On-Farm Variety Trials

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

<b>County</b>	<b>Planting Date</b>	<b>Harvest Date</b>
<b>Dinwiddie</b>	5/13/2013	12/6/2013
<b>Greensville</b>	5/9/2013	10/18/2013
<b>Isle of Wight</b>	5/16/2013	11/15/2013
<b>Southampton</b>	5/8/2013	10/28/2013
<b>Suffolk</b>	5/8/2013	11/24/2013

**Table 2: Relative yields for all varieties at all locations entered in the 2013 Official Variety Testing (OVT) Program**

Seed Company	Variety	Maturity	Relative Yield			Avg. Relative Yield
			Suffolk (NI)	Suffolk (I)	Painter	
Dow Agrosciences	PHY 333 WRF	early	0.98	0.98	0.90	<b>0.95</b>
Dow Agrosciences	PX4444-14WRF <sup>¶</sup>		1.00	0.95	0.90	<b>0.95</b>
Dow Agrosciences	PHY 339 WRF	early	0.91	0.92	1.00	<b>0.94</b>
CPS Dyna-gro	DG 2530 B2RF	medium	0.89	1.00	0.91	<b>0.93</b>
Monsanto	DP 1321 B2RF	early-mid	0.92	0.96	0.91	<b>0.93</b>
Monsanto	MON 12R242B2R2 <sup>¶</sup>		0.91	0.97	0.89	<b>0.92</b>
Monsanto	MON 12R224B2R2 <sup>¶</sup>		0.93	0.99	0.83	<b>0.92</b>
Americot/NexGen	NG 1511 B2RF	medium	0.92	0.89	0.92	<b>0.91</b>
Croplan Genetics	CG 3787 B2RF	mid	0.86	0.91	0.94	<b>0.90</b>
Bayer CropScience	ST 4747 GLB2	early	0.89	0.91	0.90	<b>0.90</b>
Dow Agrosciences	PX3003-10WRF <sup>¶</sup>		0.94	0.93	0.83	<b>0.90</b>
Dow Agrosciences	PHY 375 WRF	early	0.86	0.96	0.88	<b>0.90</b>
Monsanto	DP 1133 B2RF	medium	0.81	0.91	0.96	<b>0.89</b>
Monsanto	DP 0912 B2RF	early	0.89	0.92	0.83	<b>0.88</b>
Bayer CropScience	ST 4946 GLB2	early-mid	0.91	0.93	0.79	<b>0.88</b>
Monsanto	DP 1028 B2RF	early-mid	0.84	0.89	0.90	<b>0.87</b>
Dow Agrosciences	PHY 499 WRF	mid	0.86	0.97	0.79	<b>0.87</b>
Dow Agrosciences	PHY 427 WRF	early-mid	0.86	0.89	0.84	<b>0.86</b>
CPS Dyna-gro	DG 2285 B2RF	early	0.83	0.88	0.88	<b>0.86</b>
Seed Source Genetics	SSG HQ 210 CT	early-mid	0.84	0.88	-	<b>0.86</b>
Seed Source Genetics	UA 222	early-mid	0.84	0.88	-	<b>0.86</b>
Monsanto	DP 1311 B2RF	early	0.87	0.85	0.86	<b>0.86</b>
Dow Agrosciences	PX5538-40WRF <sup>¶</sup>		0.92	0.89	0.77	<b>0.86</b>
CPS Dyna-gro	CPS 12R241 <sup>¶</sup>		0.79	0.93	0.85	<b>0.86</b>
Bayer CropScience	FM 1944 GLB2	early-mid	0.86	0.80	0.88	<b>0.85</b>
Dow Agrosciences	PHY 417 WRF	early-mid	0.86	0.84	0.84	<b>0.85</b>
Monsanto	DP 1137 B2RF	medium	0.77	0.94	0.83	<b>0.85</b>
Monsanto	DP 1034 B2RF	mid	0.84	0.88	0.79	<b>0.84</b>
Croplan Genetics	CG 3428 B2RF	early-mid	0.75	0.90	0.86	<b>0.84</b>
Monsanto	DP 1044 B2RF	mid-full	0.81	0.83	0.82	<b>0.82</b>
Americot/NexGen	AM 1550 B2RF	early-mid	0.82	0.82	0.81	<b>0.82</b>
Bayer CropScience	ST 6448 GLB2	full	0.88	0.88	0.67	<b>0.81</b>
CPS Dyna-gro	DG 2570 B2RF	early-mid	0.74	0.87	0.78	<b>0.80</b>

<sup>¶</sup> experimental lines not released

**Table 3: Two year (2012-2013) relative yield averages for varieties tested each year**

<b>Seed Company</b>	<b>Variety</b>	<b>Relative Yield</b>
Monsanto	DP 1321 B2RF	0.94
CPS Dyna-gro	DG 2530 B2RF	0.94
Americot/NexGen	NG 1511 B2RF	0.93
Dow Agrosciences	PHY 339 WRF	0.93
Dow Agrosciences	PHY 333 WRF	0.93
Croplan Genetics	CG 3787 B2RF	0.92
Dow Agrosciences	PHY 375 WRF	0.90
Monsanto	DP 1028 B2RF	0.89
Bayer CropScience	ST 4946 GLB2	0.89
Dow Agrosciences	PHY 499 WRF	0.89
Monsanto	DP 1137 B2RF	0.88
CPS Dyna-gro	DG 2285 B2RF	0.87
Monsanto	DP 0912 B2RF	0.87
Monsanto	DP 1311 B2RF	0.85
Bayer CropScience	FM 1944 GLB2	0.84
Croplan Genetics	CG 3428 B2RF	0.84
Monsanto	DP 1034 B2RF	0.83
CPS Dyna-gro	DG 2570 B2RF	0.83
Americot/NexGen	AM 1550 B2RF	0.83
<b>Mean</b>		<b>0.88</b>
<b>LSD (0.1)</b>		<b>0.048</b>

**Table 4: Three year (2011-2013) relative yield averages for varieties tested each year**

<b>Seed Company</b>	<b>Variety</b>	<b>Relative Yield</b>
Dow Agrosciences	PHY 499 WRF	0.94
Monsanto	DP 1028 B2RF	0.89
Monsanto	DP 1137 B2RF	0.89
Dow Agrosciences	PHY 375 WRF	0.88
CPS Dyna-gro	DG 2570 B2RF	0.87
Monsanto	DP 0912 B2RF	0.86
Monsanto	DP 1034 B2RF	0.83
Americot/NexGen	AM 1550 B2RF	0.83
<b>Mean</b>		<b>0.87</b>
<b>LSD (0.1)</b>		<b>0.054</b>

**Table 5: Lint yield and fiber quality of varieties tested during 2013 at the non-irrigated (NI) location in Suffolk, VA**

Seed Company	Variety	Lint Yield	Lint		Fiber Properties		
		lb./A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Dow Agro Sciences	PX4444-14WRF <sup>¶</sup>	2085	41.2	4.1	1.18	30.4	84.6
Dow Agro Sciences	PHY 333 WRF	2051	41.1	4.4	1.20	29.8	84.6
Dow Agro Sciences	PX3003-10WRF <sup>¶</sup>	1971	39.9	4.4	1.15	30.2	83.9
Monsanto	MON 12R224B2R2 <sup>¶</sup>	1947	39.8	4.2	1.20	29.6	85.1
Monsanto	DP 1321 B2RF	1916	40.3	4.9	1.16	30.4	84.2
Dow Agro Sciences	PX5538-40WRF <sup>¶</sup>	1916	39.6	4.2	1.18	31.9	84.4
Americot/NexGen	NG 1511 B2RF	1910	41.1	4.9	1.15	29.5	83.8
Monsanto	MON 12R242B2R2 <sup>¶</sup>	1895	40.5	4.7	1.17	27.9	84.1
Dow Agro Sciences	PHY 339 WRF	1889	38.5	4.2	1.22	29.8	84.5
Bayer CropScience	ST 4946 GLB2	1888	39.1	4.8	1.16	30.4	84.5
Bayer CropScience	ST 4747 GLB2	1862	40.3	4.5	1.21	29.7	84.3
Monsanto	DP 0912 B2RF	1857	37.8	4.9	1.13	29.2	84.4
CPS Dyna-Gro	DG 2530 B2RF	1855	40.0	4.8	1.17	30.2	84.0
Bayer CropScience	ST 6448 GLB2	1833	38.3	4.3	1.22	30.8	83.9
Bayer CropScience	FM 9058 F	1829	39.7	4.3	1.23	31.2	84.3
Monsanto	DP 1311 B2RF	1813	41.4	4.2	1.18	28.7	83.9
Bayer CropScience	FM 1944 GLB2	1804	37.4	4.6	1.23	32.2	85.3
Dow Agro Sciences	PHY 575 WRF	1804	38.1	4.1	1.26	28.6	85.5
Dow Agro Sciences	PHY 417 WRF	1802	39.4	3.9	1.16	29.6	84.2
Dow Agro Sciences	PHY 427 WRF	1800	38.2	4.1	1.17	30.8	84.5
Dow Agro Sciences	PHY 375 WRF	1797	38.8	4.3	1.17	29.3	83.9
Dow Agro Sciences	PHY 499 WRF	1794	40.0	4.7	1.16	31.7	84.4
Croplan Genetics	CG 3787 B2RF	1788	39.4	4.6	1.19	29.5	84.5
Seed Source Genetics	SSG HQ 210 CT	1762	38.1	4.7	1.16	31.3	84.2
Americot/NexGen	UA 222	1758	39.0	4.6	1.23	30.3	85.1
Monsanto	DP 1034 B2RF	1754	39.4	4.5	1.19	29.2	84.6
Monsanto	DP 1028 B2RF	1746	41.7	4.8	1.15	29.1	84.2
CPS Dyna-Gro	DG 2285 B2RF	1734	38.3	4.6	1.32	29.0	84.0
Americot/NexGen	AM 1550 B2RF	1705	38.9	4.6	1.15	28.8	83.6
Monsanto	DP 1044 B2RF	1687	38.5	4.6	1.13	29.0	83.8
Monsanto	DP 1133 B2RF	1686	40.5	4.6	1.18	30.9	84.7
CPS Dyna-Gro	CPS 12R241 <sup>¶</sup>	1656	39.8	4.6	1.17	28.3	84.2
Monsanto	DP 1050 B2RF	1626	39.4	4.5	1.19	28.5	84.3
Monsanto	DP 1137 B2RF	1601	39.1	4.6	1.16	28.2	85.0
Monsanto	DP 1252 B2RF	1590	40.5	4.7	1.19	32.7	84.3
CPS Dyna-Gro	DG 2610 B2RF	1577	40.4	4.5	1.18	28.0	84.5
Croplan Genetics	CG 3428 B2RF	1554	40.0	4.6	1.23	29.3	84.6
CPS Dyna-Gro	DG 2570 B2RF	1551	40.1	4.6	1.21	31.4	84.5
Dow Agro Sciences	PHY 725 RF	1547	36.4	4.1	1.24	33.1	84.9
Americot/NexGen	NG 5315 B2RF	1307	39.6	4.6	1.18	28.5	84.6
	<b>Mean</b>	<b>1774</b>	<b>39.0</b>	<b>4.5</b>	<b>1.19</b>	<b>29.9</b>	<b>84.4</b>
	<b>LSD (0.1)</b>	<b>279</b>	<b>1.73</b>	<b>0.42</b>	<b>0.118</b>	<b>3.61</b>	<b>2.04</b>

<sup>¶</sup> experimental lines not released

**Table 6: Lint yield and fiber quality of varieties tested during 2013 at the irrigated (I) location in Suffolk, VA**

Seed Company	Variety	Lint Yield lb./A	Lint			Fiber Properties		
			%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)	
CPS Dyna-Gro	DG 2530 B2RF	1787	38.4	4.6	1.17	29.3	83.7	
Monsanto	MON 12R224B2R2 <sup>†</sup>	1762	39.6	4.0	1.22	28.4	84.2	
Dow Agro Sciences	PHY 333 WRF	1751	40.7	4.2	1.18	29.1	83.3	
Dow Agro Sciences	PHY 499 WRF	1735	42.6	4.6	1.18	30.5	84.2	
Monsanto	MON 12R242B2R2 <sup>†</sup>	1727	41.3	4.6	1.16	27.5	84.0	
Monsanto	DP 1321 B2RF	1721	40.9	4.7	1.17	29.6	83.9	
Dow Agro Sciences	PHY 375 WRF	1711	39.8	4.2	1.16	28.9	83.5	
Dow Agro Sciences	PX4444-14WRF <sup>†</sup>	1693	41.6	4.0	1.17	29.2	83.3	
Monsanto	DP 1137 B2RF	1675	41.8	4.4	1.16	28.3	83.2	
Bayer CropScience	ST 4946 GLB2	1667	40.4	4.4	1.17	30.5	83.6	
Dow Agro Sciences	PX3003-10WRF <sup>†</sup>	1662	40.7	4.2	1.13	29.4	83.3	
CPS Dyna-Gro	CPS 12R241 <sup>†</sup>	1657	42.1	4.7	1.14	25.6	83.6	
Dow Agro Sciences	PHY 339 WRF	1650	39.1	4.2	1.21	28.5	83.5	
Monsanto	DP 0912 B2RF	1647	40.0	4.7	1.13	29.0	83.1	
Monsanto	DP 1133 B2RF	1635	40.9	4.4	1.16	29.2	83.7	
Croplan Genetics	CG 3787 B2RF	1634	42.0	4.5	1.17	27.8	83.3	
Bayer CropScience	ST 4747 GLB2	1627	41.8	4.2	1.19	30.3	82.7	
Croplan Genetics	CG 3428 B2RF	1617	40.7	4.3	1.22	28.3	83.1	
Americot/NexGen	NG 1511 B2RF	1599	42.2	4.7	1.15	28.9	83.4	
Dow Agro Sciences	PHY 427 WRF	1590	38.6	4.0	1.17	29.9	83.4	
Dow Agro Sciences	PX5538-40WRF <sup>†</sup>	1589	40.1	3.8	1.20	30.2	84.1	
Monsanto	DP 1028 B2RF	1584	40.6	4.5	1.16	27.3	83.2	
Seed Source Genetics	SSG HQ 210 CT	1579	39.8	4.5	1.15	30.8	82.8	
CPS Dyna-Gro	DG 2285 B2RF	1570	40.6	4.4	1.15	28.9	82.3	
Americot/NexGen	UA 222	1568	39.5	4.2	1.19	30.0	83.9	
Monsanto	DP 1034 B2RF	1568	40.5	4.4	1.18	28.3	83.3	
Bayer CropScience	ST 6448 GLB2	1567	39.1	4.0	1.22	29.7	83.0	
CPS Dyna-Gro	DG 2570 B2RF	1557	40.1	4.4	1.21	29.6	84.0	
Monsanto	DP 1311 B2RF	1513	41.2	4.2	1.16	26.9	82.8	
Dow Agro Sciences	PHY 417 WRF	1500	40.5	3.6	1.15	28.9	82.7	
Monsanto	DP 1044 B2RF	1491	39.1	4.5	1.15	28.8	83.7	
Americot/NexGen	AM 1550 B2RF	1468	39.2	4.3	1.15	27.7	83.7	
Bayer CropScience	FM 1944 GLB2	1432	37.4	4.5	1.22	31.9	83.8	
<b>Mean</b>		<b>1622</b>	<b>40.0</b>	<b>4.3</b>	<b>1.17</b>	<b>29.0</b>	<b>83.4</b>	
<b>LSD (0.1)</b>		<b>342</b>	<b>2.57</b>	<b>0.48</b>	<b>0.053</b>	<b>2.20</b>	<b>1.68</b>	

<sup>†</sup> experimental lines not released

**Table 7: Lint yield and fiber quality of varieties tested during 2013 at the location in Painter, VA**

Seed Company	Variety	Lint Yield	Lint			Fiber Properties		
		lb./A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)	
Dow Agro Sciences	PHY 339 WRF	1673	38.6	3.5	1.18	30.0	84.0	
Monsanto	DP 1133 B2RF	1601	39.4	3.8	1.17	30.9	84.9	
Croplan Genetics	CG 3787 B2RF	1575	40.2	3.8	1.17	30.1	84.8	
Americot/NexGen	NG 1511 B2RF	1539	40.9	4.1	1.15	30.7	84.3	
CPS Dyna-Gro	DG 2530 B2RF	1515	38.1	3.5	1.17	30.8	84.1	
Monsanto	DP 1321 B2RF	1515	40.1	4.0	1.16	30.9	84.3	
Bayer CropScience	ST 4747 GLB2	1513	39.1	3.6	1.18	30.0	83.0	
Dow Agro Sciences	PX4444-14WRF <sup>†</sup>	1510	40.0	3.4	1.15	30.2	83.7	
Dow Agro Sciences	PHY 333 WRF	1509	39.3	3.5	1.16	30.0	84.1	
Monsanto	DP 1028 B2RF	1507	40.3	3.8	1.15	29.5	84.1	
Monsanto	MON 12R242B2R2 <sup>†</sup>	1496	38.6	4.0	1.13	28.4	83.5	
Bayer CropScience	FM 1944 GLB2	1478	36.4	3.8	1.18	31.7	83.4	
CPS Dyna-Gro	DG 2285 B2RF	1478	38.4	3.5	1.16	29.1	83.9	
Dow Agro Sciences	PHY 375 WRF	1474	39.2	3.5	1.13	28.5	83.3	
Monsanto	DP 1311 B2RF	1445	39.0	3.3	1.15	29.8	83.5	
Croplan Genetics	CG 3428 B2RF	1433	38.2	3.7	1.20	29.6	84.2	
CPS Dyna-Gro	CPS 12R241 <sup>†</sup>	1421	39.3	3.8	1.15	27.9	84.5	
Dow Agro Sciences	PHY 427 WRF	1407	37.9	3.4	1.14	31.1	83.8	
Dow Agro Sciences	PHY 417 WRF	1405	38.6	3.6	1.14	28.8	84.0	
Monsanto	DP 1137 B2RF	1391	38.6	4.1	1.13	28.5	83.1	
Monsanto	DP 0912 B2RF	1391	37.0	4.1	1.12	29.0	84.1	
Dow Agro Sciences	PX3003-10WRF <sup>†</sup>	1390	39.2	3.5	1.12	29.8	83.2	
Monsanto	MON 12R224B2R2 <sup>†</sup>	1390	37.9	3.1	1.19	30.2	84.4	
Monsanto	DP 1044 B2RF	1375	37.1	3.7	1.12	29.7	83.3	
Americot/NexGen	AM 1550 B2RF	1359	36.0	3.3	1.15	28.8	83.7	
Bayer CropScience	ST 4946 GLB2	1329	36.3	3.4	1.15	31.9	83.5	
Dow Agro Sciences	PHY 499 WRF	1326	40.1	3.9	1.15	32.1	84.6	
Monsanto	DP 1034 B2RF	1324	39.6	3.8	1.15	28.8	83.7	
CPS Dyna-Gro	DG 2570 B2RF	1311	36.5	3.7	1.18	31.4	84.6	
Dow Agro Sciences	PX5538-40WRF <sup>†</sup>	1290	36.2	3.1	1.19	32.0	84.7	
Bayer CropScience	ST 6448 GLB2	1123	33.7	3.4	1.20	29.8	82.1	
	<b>Mean</b>	<b>1435</b>	<b>38.0</b>	<b>3.6</b>	<b>1.16</b>	<b>30.0</b>	<b>83.9</b>	
	<b>LSD (0.1)</b>	<b>367</b>	<b>2.61</b>	<b>0.75</b>	<b>0.049</b>	<b>2.75</b>	<b>2.13</b>	

<sup>†</sup> experimental lines not released

**Table 8: Yield, fiber quality, and performance of varieties in the Greenville\* County 2013 On-Farm trial**

Seed Company	Variety	Lint Yield		Fiber Properties			
		lb./A	Lint %	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Americot/NexGen	NG 1511 B2RF	1936	46.0	5.0	1.11	31.3	82.0
Dow Agro Science	PHY 499 WRF	1881	46.5	4.6	1.13	31.9	83.6
Dow Agro Science	PHY 375 WRF	1865	46.0	4.6	1.11	29.7	81.9
Croplan Genetics	CG 3787 B2RF	1796	46.5	4.8	1.16	31.3	83.2
Bayer CropSciences	FM 1944 GLB2	1736	43.5	4.9	1.18	33.8	83.1
CPS Dyna-Gro	DG 2570 B2RF	1726	45.5	4.6	1.13	32.1	83.0
Dow Agro Science	PHY 339 WRF	1620	44.0	4.3	1.19	32.2	83.1
Bayer CropSciences	ST 4946 GLB2	1586	46.5	4.9	1.14	33.1	82.6
Monsanto	DP 1321 B2RF	1388	43.0	5.3	1.12	30.7	83.4
Monsanto	DP 1028 B2RF	1170	46.5	4.9	1.12	29.2	83.8
<b>Mean</b>		<b>1670</b>	<b>45.4</b>	<b>4.8</b>	<b>1.14</b>	<b>31.5</b>	<b>83.0</b>

\*Varieties were replicated one time at this location.

**Table 9: Yield, fiber quality, and performance of varieties in the Isle of Wight\* County 2013 On-Farm trial**

Seed Company	Variety	Lint Yield		Fiber Properties			
		lb./A	Lint %	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Monsanto	DP 1028 B2RF	1484	45.2	4.6	1.12	26.7	84.1
Dow Agro Sciences	PHY 499 WRF	1470	45.2	4.7	1.13	28.9	85.2
Dow Agro Sciences	PHY 375 WRF	1422	43.0	4.4	1.17	26.8	84.5
Croplan Genetics	CG 3787 B2RF	1394	42.5	4.5	1.16	27.0	83.7
Bayer CropScience	ST 4946 GLB2	1372	41.9	4.8	1.17	30.2	84.8
Americot/NexGen	NG 1511 B2RF	1309	44.1	4.9	1.12	27.7	83.7
Bayer CropScience	FM 1347 GLB2	1299	41.9	4.3	1.17	29.4	82.7
Bayer CropScience	FM 1944 GLB2	1286	39.8	4.5	1.17	30.3	82.6
Dow Agro Sciences	PHY 339 WRF	1276	41.9	4.4	1.17	28.7	84.7
Monsanto	DP 1321 B2RF	1239	42.5	4.9	1.13	27.7	84.8
CPS Dyna-Gro	DG 2570 B2RF	1107	43.0	4.6	1.14	28.5	84.8
<b>Mean</b>		<b>1333</b>	<b>42.8</b>	<b>4.6</b>	<b>1.15</b>	<b>28.4</b>	<b>84.1</b>

\*Varieties were replicated one time at this location.

**Table 10: Yield, fiber quality, and performance of varieties in the City of Suffolk\* 2013 On-Farm trial**

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb./A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Dow Agro Science	PHY 375 WRF	1347	40.6	4.4	1.15	27.7	83.4
Bayer CropSciences	ST 4946 GLB2	1338	40.1	5.0	1.15	30.6	84.2
CPS Dyna-Gro	DG 2570 B2RF	1333	39.5	4.5	1.15	29.1	84.3
Americot/NexGen	NG 1511 B2RF	1321	42.2	4.7	1.12	29.2	84.1
Monsanto	DP 1321 B2RF	1268	41.7	4.6	1.17	29.4	85.2
Bayer CropSciences	FM 1944 GLB2	1246	37.9	4.6	1.19	29.5	83.5
Dow Agro Science	PHY 499 WRF	1238	42.0	4.7	1.17	30.0	85.5
Dow Agro Science	PHY 339 WRF	1191	39.5	4.4	1.17	28.0	84.1
Croplan Genetics	CG 3787 B2RF	1139	41.2	4.5	1.14	27.3	84.1
Monsanto	DP 1028 B2RF	1063	40.6	4.7	1.14	27.0	84.3
<b>Mean</b>		<b>1248</b>	<b>40.5</b>	<b>4.6</b>	<b>1.16</b>	<b>28.8</b>	<b>84.3</b>

\*Varieties were replicated two times at this location.

**Table 11: Yield, fiber quality, and performance of varieties in the Southampton\* County 2013 On-Farm trial**

Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb./A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Dow Agro Sciences	PHY 339 WRF	1170	41.2	4.3	1.19	29.5	84.3
Dow Agro Sciences	PHY 499 WRF	1162	43.2	4.5	1.15	34.2	84.9
Bayer CropSciences	ST 4946 GLB2	1136	40.6	4.5	1.18	31.6	84.4
CPS Dyna-Gro	DG 2570 B2RF	1111	41.4	4.5	1.14	29.5	83.5
Dow Agro Sciences	PHY 375 WRF	1092	41.4	4.2	1.17	32.7	83.0
Bayer CropSciences	FM 1944 GLB2	1083	39.4	4.5	1.21	32.3	83.6
Monsanto	DP 1321 B2RF	1080	42.1	4.8	1.16	30.6	83.7
Americot/NexGen	NG 1511 B2RF	1078	43.0	4.7	1.13	31.2	83.4
Monsanto	DP 1028 B2RF	1068	42.8	4.6	1.17	29.1	84.7
Croplan Genetics	CG 3787 B2RF	1018	42.6	4.4	1.17	30.1	83.7
<b>Mean</b>		<b>1100</b>	<b>41.8</b>	<b>4.5</b>	<b>1.17</b>	<b>31.1</b>	<b>83.9</b>

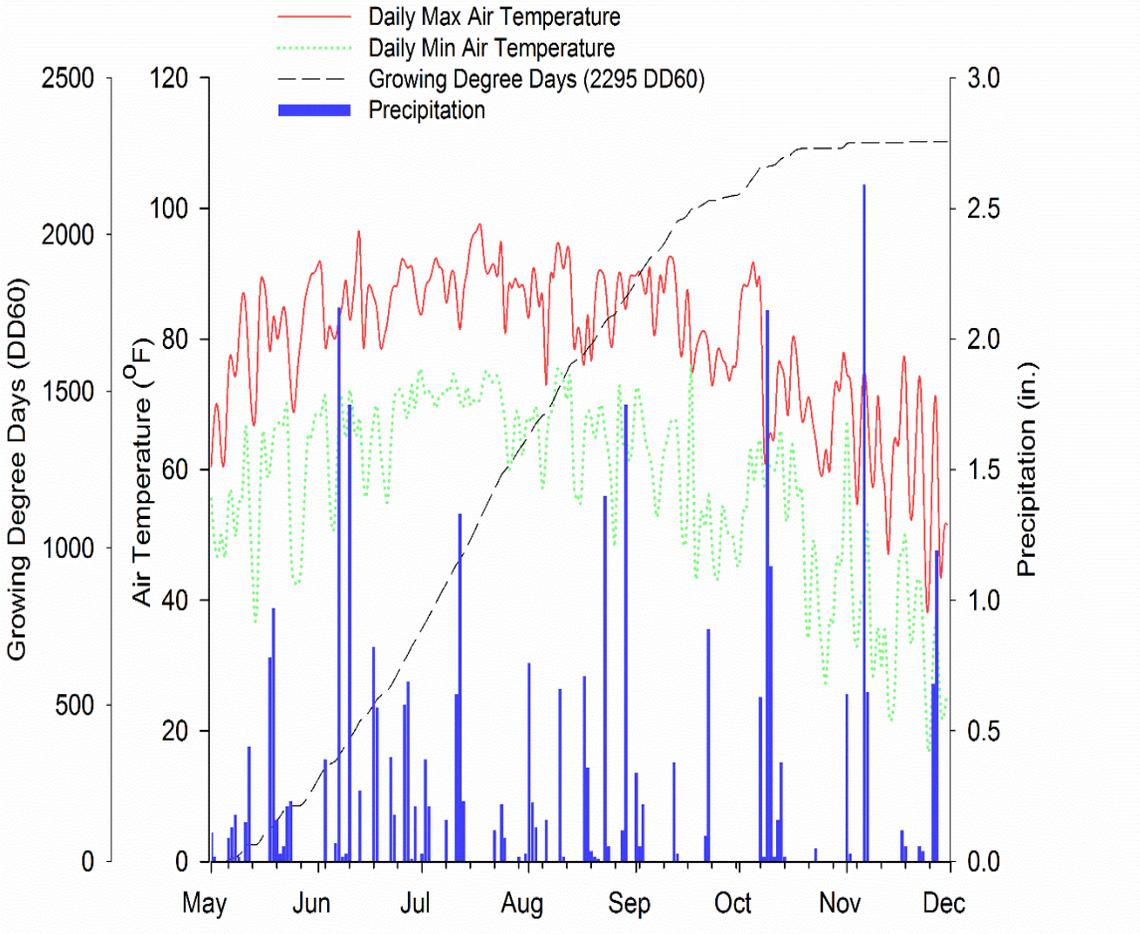
\*Varieties were replicated three times at this location.

**Table 12: Yield, fiber quality, and performance of varieties in the Dinwiddie\* County 2013 On-Farm trial**

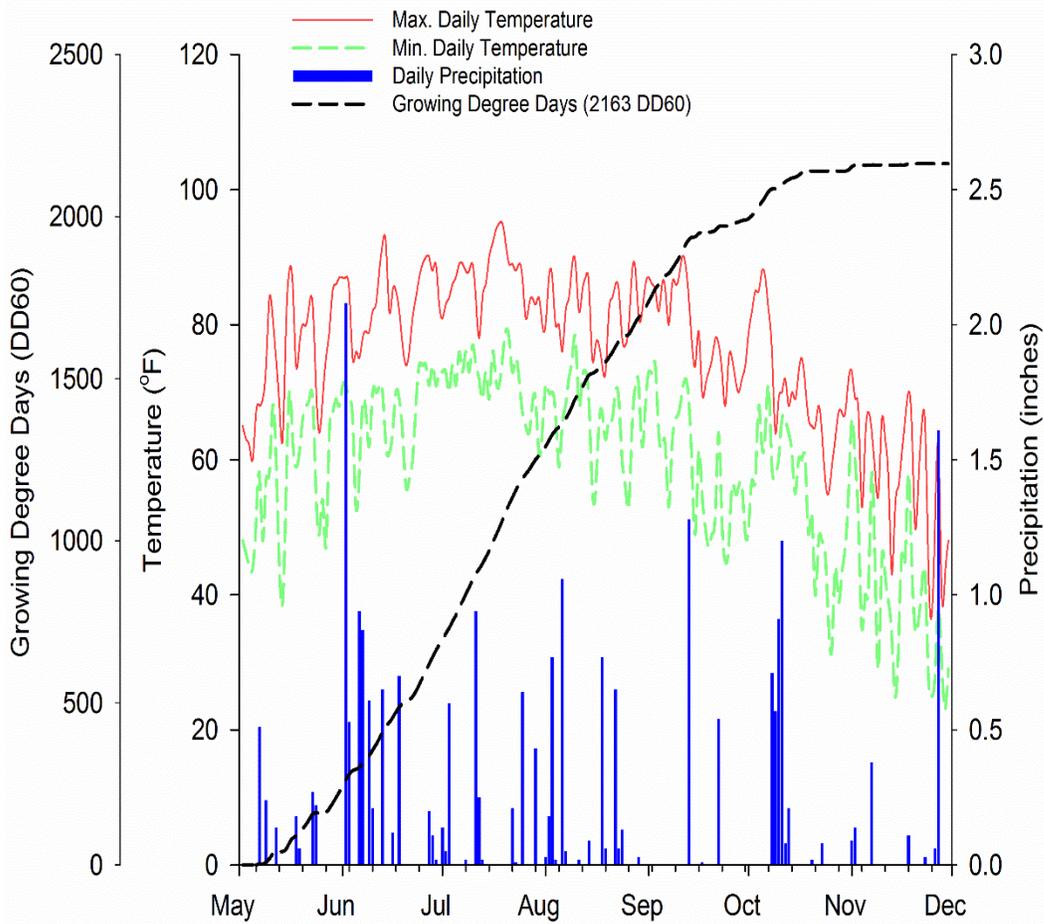
Seed Company	Variety	Lint Yield	Lint	Fiber Properties			
		lb./A	%	Mic.	Len. (in.)	Str. (g/tex)	Uni. (%)
Bayer CropScience	FM 1944 GLB2	1240	39.8	4.0	1.19	31.3	83.4
Dow Agro Sciences	PHY 375 WRF	1181	38.5	3.9	1.13	29.0	83.7
Monsanto	DP 1028 B2RF	1174	42.1	4.1	1.13	28.6	84.1
Bayer CropScience	ST 4946 GLB2	1108	37.8	4.3	1.16	30.4	84.0
Monsanto	DP 1321 B2RF	1056	38.5	4.3	1.15	29.0	84.2
Dow Agro Sciences	PHY 499 WRF	1048	41.6	4.3	1.13	31.5	84.1
Dow Agro Sciences	PHY 339 WRF	1045	36.9	4.0	1.18	30.1	83.7
CPS Dyna-Gro	DG 2570 B2RF	1040	40.7	4.4	1.12	29.4	83.7
Americot/NexGen	NG 1511 B2RF	979	42.1	4.3	1.11	30.4	83.2
Croplan Genetics	CG 3787 B2RF	876	39.7	4.1	1.15	28.5	83.6
<b>Mean</b>		<b>1075</b>	<b>39.8</b>	<b>4.2</b>	<b>1.15</b>	<b>29.8</b>	<b>83.8</b>

\*Varieties were replicated three times at this location.

# Weather Charts



**Fig. 1: Weather data for Suffolk, VA for 2013 growing season**



**Fig. 2: Weather data for Painter, VA for 2013 growing season**