

Arizona Upland Cotton Variety Testing Program, 2005

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Abstract

The upland cotton variety trial has been conducted in Arizona every year for the past 6 years to evaluate several varieties of upland cotton. Varieties planted at each location are planted side-by-side to evaluate performance and yield under the same growing conditions. Eleven locations were planted in Arizona in 2005. These locations include two locations in the Yuma Region (Yuma County), two locations in the Western Region (La Paz and Mohave Counties), four locations in the Central Region (Maricopa and Pinal Counties), one location in the Southern Region (Pima County), and two locations in the Eastern Region (Graham and Cochise Counties). Each site had between seven and eleven varieties evaluated for yield and quality of lint.

Introduction

Over the past few years, the Arizona Upland Cotton Variety Testing Program has become one of the most intensive cotton programs in Arizona. With eleven sites located throughout the southern half of Arizona the University of Arizona has been able to share with both the cotton producers and public the performance of several cotton varieties grown in Arizona. The data that is collected during the year is unbiased and shows the results from a “real world” approach to growing cotton rather than a controlled environment on a research farm.

The trials are grown on a large plot scale with the cooperator growing the crop under their normal regimens. With support from several seed companies and University Cooperative Extension Agents this program is designed to help growers produce a high yielding, good quality crop to maximize return and minimize loss.

Materials and Methods

Locations: Eleven locations for the 2005 variety trials were used. These locations included: the Western Region (Mohave Valley and Parker), the Yuma Region (Somerton and Wellton), the Central Region (Coolidge, Goodyear, Maricopa Agriculture Center, and Stanfield), the Southern Region (Marana Agriculture Center) and the Eastern Region (Kansas Settlement and Thatcher).

Varieties: Each location planted different varieties of cotton depending on the company’s recommendation and entry location for the variety. Varieties planted in the trials included: Bayer (FM 960 R, FM989 B2R, FM 958 LL, FM 981 LL, and FM 991 B2R), Delta and Pine (DP 455 BR, DP 449 BR, DP 445 BR, DP 444 BR, DP 434 BR, DP 432 R, DP 494 R, DP 488 BR, DP 655 BR, and DP 555 BR), Dow Agro Sciences (PHY 310 R, PHY 470 WR, and PHY 710 R) and Stoneville (ST 5242 BR, ST 5599 BR, ST 4575 BR). The Kansas Settlement location also included a numbered variety, 151799 WS, from New Mexico State University.

All trials except for the Marana Agriculture Center and the Maricopa Agriculture Center were conducted on a commercial grower’s farm. Cultural practices, including planting, irrigation, pest management, fertility practices, defoliation, and harvest, were set by the cooperator.

Each location was set up as a randomized complete block with 3-4 replications and a minimum of 4 rows wide and maximum of 12 rows wide (row spacing: 38-40 inches) and extended the full length of the field. Each plot had a minimum of 2 rows harvested with a machine picker and then weighted to calculate the seed cotton weight on a per acre bases. Sub-samples from each plot picked were collected and ginned at the University of Arizona Maricopa Agriculture Center in Maricopa, Arizona. Samples from the ginned cotton were then taken to the USDA Cotton Classing office in Phoenix, Arizona for HVI fiber quality analysis. The CCC loan schedule was then used to determine average premiums and discounts for the HVI data. The premium or discount was then calculated with the base price of 52.0 cents per pound to determine the value of lint on a per acre bases.

Results

For all locations please see data tables.

Western Region: Seven varieties were tested at the Parker, AZ location during the 2005 growing season. Significant differences were seen in all areas except for percent lint. Both of the Fiber Max varieties tested at this location were lower yielding with higher micronaire than the other varieties tested. This resulted in both varieties having a lower value than the highest yielding variety DP 449 BR.

In Mohave Valley, AZ seven varieties were evaluated in the state wide variety trial. Differences were seen in all areas except fiber length and staple length. DP 449 BR performed the best with ST 5242 BR not performing well. Although ST 5242 BR did have the highest uniformity index of 82.41.

Yuma Region: The variety trial in Somerton, AZ showed to have no significant difference between the 9 varieties tested. The only significant difference observed in this location was uniformity in DP 434 R and the only discount applied to the loan schedule was a -163 for ST 5599 BR. However, with the discount applied ST 5599 BR had a higher value than DP 434 R, DP 432 R, ST 5242 BR, and DP 444 BR.

The varieties tested at the Wellton, AZ location were significantly different in lint yield, percent lint, micronaire, staple length, fiber strength, and uniformity. All varieties showed to have premium points applied to the CCC loan schedule. ST 4575 BR showed to have the highest yielding lint weight with FM 989 B2R having the lowest yield. The uniformity index showed to have the same spread with ST 4575 BR being the most uniform and FM 989 B2R having the least uniform turn out.

Central Region: In Goodyear, AZ eight varieties were tested. Micronaire, fiber strength, and uniformity were the areas where a significant difference was seen in the data. DP 555 BR and ST 5599 BR had the highest level of micronaire with ST 5242 BR and PHY 470 WR having the lowest level of micronaire. Fiber strength had more variability with in the varieties, however the highest fiber strength, DP 449 BR, resulted in the highest value per acre and the variety with the lowest fiber strength resulted in one of the lowest values per acre.

Coolidge varieties, 7 varieties tested, tended to have less variance than the varieties tested at the Goodyear site. Significant differences were seen in lint yield, micronaire, fiber length, staple length, fiber strength, and uniformity. Although PHY 310 R was one of the higher yielding varieties tested, this variety had the lowest quality in fiber length, staple length, fiber strength and uniformity. PHY 310 R was also the only variety at this location to receive discount points to the value per acre.

More variability was seen as the Maricopa, AZ site. Seven varieties were tested and all data showed a significant difference. DP 455 BR tended to have the highest yield along with the highest fiber quality resulting in the value per acre being the highest over the seven varieties. The same was seen for the lowest yielding variety, PHY 470 WR, with it having the least value per acre. All varieties falling between these two varieties showed not to have much of a significant difference.

Among the 8 varieties tested in Stanfield, AZ the only significant differences were seen in lint yield, percent lint and fiber strength. Although PHY 470 WR had the lowest yield and percent lint, the fiber strength in this variety was among this higher quality numbers. DP 555 BR showed to be one of the best performing varieties with all numbers being high and having the highest value per acre.

Southern Region: The only location in this region, Marana, AZ, showed to have very little differences between varieties. All varieties tested, eight, showed no significant difference in yield and micronaire. Differences seen in percent lint, fiber strength, staple length, fiber strength, and uniformity were not uniform over one variety. All varieties received premium points resulting in a small spread on a value per acre bases.

Eastern Region: Results in Thatcher, AZ, showed to have differences in lint yield, percent lint, fiber length, staple length, and fiber strength. The Stoneville variety ST 5242 BR had the highest yield of 1607 lbs per acre with the Fiber Max variety FM 991 B2R having the lowest yield of 1211 lbs per acre. Even though ST 5342 BR had a high lint yield the staple length and fiber strength were among the lower numbers. However, the value per acre was the highest of the eleven varieties tested.

Eleven varieties were tested at the Kansas Settlement, AZ location. Differences were seen in all fiber quality and yield categories. DP 444 BR was the highest yielding variety and PHY 710 R was the lowest. New Mexico State entered a numbered variety at this location that was comparable to the top varieties in this trial along with having good value compared to the commercial varieties.

Acknowledgements

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2005 Upland Cotton Variety Trial Results

Mohave Valley, AZ

Planting Date:	2 May 2005	Final Irrigation Date:	3 October 2005	Harvest Date:	10 December 2005
Total Irrigations:	10	Total N Applied:	202 LBS	General Soil Texture:	Silty Clay Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality						Premium/ Discount ⁵ (Points)	Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index			
Delta and Pine	DP 449 BR	868 a ¹	33.0 ab	4.8 ab	1.11 b	35.8 a	31.0 b	80.1 c	584	502	
Stoneville	ST 5599 BR	797 ab	30.4 bc	4.9 ab	1.15 ab	37.0 a	33.1 ab	82.2 ab	594	461	
Delta and Pine	DP 455 BR	725 bc	31.9 abc	4.8 ab	1.14 ab	36.5 a	32.2 ab	81.0 b	526	415	
Bayer Crop Sciences	FM 958 LL	695 c	34.0 a	5.2 a	1.12 ab	35.9 a	32.5 abc	81.3 cd	328	383	
Stoneville	ST 4575 BR	677 c	31.2 c	4.7 bc	1.18 a	38.0 a	33.1 ab	81.9 abc	530	388	
Bayer Crop Sciences	FM 966 LL	632 cd	30.9 c	4.5 c	1.13 ab	36.3 a	30.8 c	81.5 bcd	616	370	
Stoneville	ST 5242 BR	581 d	31.7 bc	4.8 bc	1.13 ab	36.2 a	34.2 a	82.4 a	515	332	
LSD _{0.05} ²		86.961	1.613	0.275	0.045	1.623	1.897	0.783	238.103	53.08	
OSL ³		0.0001	0.004	0.31	0.0734	0.1222	0.0176	0.0002	0.2534	0.0001	
CV (%) ⁴		8.12	3.36	3.81	2.63	2.96	3.91	0.64	30.1	8.65	

¹Means followed by the same letter do not significantly differ (P=.05, Duncan's New MRT).

²LSD: Least Significant Difference.

³OSL: Observed Significance Level.

⁴CV: Coefficient of Variation.

⁵Average premium or discount applied to the lint based on CCC loan schedule.

⁶Value of lint per acre based on CCC loan schedule of discount and premiums and assuming a base value of 52.00 cents per pound.

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2005 Upland Cotton Variety Trial Results

Parker, AZ

Planting Date:	9 April 2005	Final Irrigation Date:	21 September 2005	Harvest Date:	30 November 2005
Total Irrigations:	11	Total N Applied:	250 LBS	General Soil Texture:	Sandy Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality						Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index	Premium/ Discount ⁵ (Points)	
Delta and Pine	DP 449 BR	1712 a ¹	35.3 a	4.4 b	1.11 bc	35.8 b	30.3 cd	80.6 abc	574	989
Delta and Pine	DP 455 BR	1503 b	33.2 a	4.7 a	1.10 cd	35.3 bc	30.6 cd	80.1 c	516	859
Stoneville	ST 5599 BR	1315 bc	34.0 a	4.8 a	1.12 abc	36.0 ab	32.2 ab	81.5 a	571	759
Stoneville	ST 5242 BR	1299 c	32.5 a	4.2 bc	1.13 ab	36.0 ab	33.6 a	81.1 ab	391	726
Stoneville	ST 4575 BR	1168 cd	32.2 a	4.1 c	1.14 a	36.8 a	31.1 bc	80.5 bc	614	679
Bayer Crop Sciences	FM 958 LL	1011 de	35.5 a	4.8 a	1.10 bcd	35.3 bc	30.7 cd	81.4 ab	434	570
Bayer Crop Sciences	FM 966 LL	893 e	33.1 a	4.4 bc	1.09 d	34.8 c	29.2 d	80.7 abc	298	492
LSD _{0.05} ²		194.652	2.621	0.252	0.021	0.873	1.462	0.895	155.095	113.5
OSL ³		0.0001	0.0916	0.0001	0.0005	0.0035	0.0002	0.0371	0.0041	0.0001
CV (%) ⁴		10.3	5.24	3.8	1.27	1.65	3.17	0.75	21.51	10.54

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2005 Upland Cotton Variety Trial Results

Wellton, AZ

Planting Date: 16 March 2005 Final Irrigation Date: 29 July 2005 Harvest Date: 30 August 2005

Total Irrigations: 6 Total N Applied: 60 LBS General Soil Texture: Silt Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality						Premium/ Discount ⁵ (Points)	Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index			
Stoneville	ST 4574 BR	1079 a ¹	37.7 a	5.1 a	1.11 a	35.7 abc	27.3 ab	82.3 a	228	585	
Delta and Pine	DP 445 BR	1031 ab	36.3 a	4.9 ab	1.14 a	36.7 a	28.7 a	82.6 a	605	599	
Stoneville	ST 5599 BR	1003 ab	35.0 a	5.0 ab	1.09 a	35.0 bc	25.0 c	80.4 c	172	540	
Delta and Pine	DP 444 BR	922 bc	36.0 a	4.3 d	1.12 a	36.0 ab	26.2 bc	82.1 bc	462	522	
Delta and Pine	DP 434 R	900 bcd	36.7 a	4.8 abc	1.11 a	36.0 ab	25.5 bc	80.8 bc	417	503	
Bayer CropScience	FM 960 R	885 bcd	35.7 a	4.4 cd	1.09 a	35.3 abc	23.9 c	80.8 bc	490	490	
Stoneville	ST 5242 BR	827 cd	32.3 b	4.6 bcd	1.06 a	34.3 c	24.3 c	80.9 bc	210	450	
Bayer CropScience	FM 989 B2R	754 d	31.7 b	4.8 abc	1.09 a	35.0 bc	25.3 bc	80.4 c	192	406	
LSD _{0.05} ²		141.575	2.451	0.412	0.044	1.296	2.084	1.338	437.6	69.404	
OSL ³		0.0037	0.0012	0.0117	0.0863	0.0400	0.0040	0.0130	0.3821	0.0005	
CV (%) ⁴		8.74	3.98	4.97	2.26	2.08	4.62	0.94	76.63	7.74	

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2005 Upland Cotton Variety Trial Results

Somerton, AZ

Planting Date: 30 March 2005 Final Irrigation Date: 30 August 2005 Harvest Date: 7 November 2005

Total Irrigations: 6 Total N Applied: 50 LBS General Soil Texture: Clay Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality						Premium/ Discount ⁵ (Points)	Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index			
Bayer CropScience	FM 958 LL	1024 a ¹	31.3 a	5.4 a	1.13 a	36.7 a	27.4 a	82.1 a	60	539	
Stoneville	ST 4575 BR	944 a	31.0 a	4.9 a	1.11 a	35.7 a	27.0 a	81.9 a	243	512	
Stoneville	ST 5599 BR	904 a	33.7 a	5.4 a	1.09 a	35.0 a	25.9 a	82.0 a	-163	455	
Bayer CropScience	FM 960 R	851 a	32.3 a	4.9 a	1.13 a	36.3 a	27.8 a	82.5 a	237	462	
Delta and Pine	DP 434 R	801 a	31.7 a	4.7 a	1.15 a	37.0 a	26.1 a	80.4 b	360	386	
Delta and Pine	DP 432 R	794 a	31.0 a	4.8 a	1.14 a	36.3 a	27.2 a	82.1 a	487	453	
Bayer CropScience	FM 989 B2R	762 a	30.0 a	4.8 a	1.14 a	36.5 a	26.7 a	81.9 a	348	460	
Stoneville	ST 5242 BR	758 a	31.0 a	4.8 a	1.14 a	36.7 a	27.2 a	81.9 a	267	415	
Delta and Pine	DP 444 BR	609 a	27.0 a	4.3 a	1.13 a	36.3 a	27.2 a	82.6 a	368	339	
LSD _{0.05} ²		338.169	5.553	0.67	0.051	1.572	2.103	0.930	225.4	185.564	
OSL ³		0.3846	0.4961	0.0914	0.4953	0.2975	0.6027	0.0109	0.0013	0.4777	
CV (%) ⁴		23.61	10.35	7.77	2.55	2.46	4.43	0.64	52.15	23.54	

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2005 Upland Cotton Variety Trial Results

Goodyear, AZ

Planting Date:	7 April 2005	Final Irrigation Date:	13 September 2005	Harvest Date:	15 December 2005
Total Irrigations:	12	Total N Applied:	157.5 LBS	General Soil Texture:	Silt Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality					Premium/ Discount ⁵ (Points)	Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index		
Delta and Pine	DP 449 BR	1798 a ¹	33.5 a	4.7 ab	1.10 a	35.6 a	29.5 a	81.2 b	359	1001
Delta and Pine	DP 555 BR	1786 a	36.1 a	4.9 a	1.06 a	34.6 a	27.4 cd	80.2 b	109	936
Dow AgroSciences	PHY 310 R	1781 a	34.5 a	4.7 ab	1.07 a	34.3 a	28.5 abc	80.7 b	308	947
Delta and Pine	DP 455 BR	1642 a	34.6 a	4.7 ab	1.06 a	34.0 a	27.5 bcd	81.2 b	259	898
Stoneville	ST 4575 BR	1620 a	34.8 a	4.7 ab	1.06 a	34.0 a	28.8 ab	81.0 b	215	879
Stoneville	ST 5599 BR	1574 a	31.8 a	4.9 a	1.08 a	34.8 a	27.8 bcd	80.4 b	136	841
Stoneville	ST 5242 BR	1559 a	35.1 a	4.5 b	1.06 a	34.0 a	26.5 d	81.0 b	261	849
Dow AgroSciences	PHY 470 WR	1537 a	32.0 a	4.5 b	1.08 a	34.7 a	28.6 abc	82.6 a	365	858
LSD _{0.05} ²		250.2	4.12	0.30	0.043	1.72	1.26	0.97	402.7	163.9
OSL ³		0.2418	0.3694	0.0410	0.5949	0.7464	0.0022	0.0030	0.8342	0.4441
CV (%) ⁴		10.18	8.18	4.36	2.73	3.38	3.03	0.81	108.19	12.24

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2005 Upland Cotton Variety Trial Results

Stanfield, AZ

Planting Date:	3 May 2005	Final Irrigation Date:	16 September 2005	Harvest Date:	1 December 2005
Total Irrigations:	Sub-surface Drip	Total N Applied:	140 LBS	General Soil Texture:	Sandy Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality					Premium/ Discount ⁵ (Points)	Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index		
Delta and Pine	DP 555 BR	1659 a ¹	38.7 a	4.7 a	1.08 a	34.7 a	28.1 abc	80.2 a	252	904
Delta and Pine	DP 455 BR	1454 ab	37.8 ab	4.9 a	1.08 a	34.7 a	28.5 ab	80.1 a	295	805
Stoneville	ST 5599 BR	1282 b	34.3 a-d	4.9 a	1.05 a	34.0 a	27.2 bc	79.8 a	202	692
Delta and Pine	DP 449 BR	1278 b	32.4 cd	4.9 a	1.10 a	35.3 a	30.0 a	81.8 a	533	733
Stoneville	ST 4575 BR	1021 c	34.9 abc	4.6 a	1.07 a	34.0 a	28.6 ab	80.7 a	228	555
Stoneville	ST 5242 BR	1009 c	33.6 bcd	4.7 a	1.05 a	33.7 a	26.1 c	81.2 a	138	541
Dow AgroSciences	PHY 310 R	930 c	35.8 abc	4.6 a	1.03 a	33.3 a	27.0 bc	81.1 a	-18	482
Dow AgroSciences	PHY 470 WR	845 c	30.0 d	4.5 a	1.07 a	34.3 a	29.5 a	80.7 a	362	470
LSD _{0.05} ²		226.2	4.16	0.34	0.045	1.55	2.06	1.34	458.9	153.5
OSL ³		0.0001	0.0114	0.0971	0.0731	0.2309	0.0168	0.1009	0.3924	0.0002
CV (%) ⁴		10.83	6.8	4.1	2.39	2.59	4.17	0.95	104.48	13.44

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⁶Value of lint per acre based on CCC loan schedule of discount and premiums and assuming a base value of 52.00 cents per pound.

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2005 Upland Cotton Variety Trial Results

Maricopa, AZ

Planting Date: 19 April 2005 Final Irrigation Date: 12 September 2005 Harvest Date: 14 November 2005

Total Irrigations: 10 Total N Applied: 180 LBS General Soil Texture: Loam

Company	Variety	Fiber Quality								Value ⁶ (\$/Acre)
		Lint Yield (lbs/Acre)	Percent Lint	Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index	Premium/ Discount ⁵ (Points)	
Delta and Pine	DP 455 BR	1156 a ¹	35.5 a	5.0 a	1.08 a	34.8 ab	31.0 a	81.0 ab	148	618
Delta and Pine	DP 449 BR	1026 b	33.2 bc	5.0 a	1.10 a	35.5 a	30.5 ab	81.8 a	388	573
Stoneville	ST 5242 BR	972 bc	31.1 d	4.5 c	1.07 bc	34.3 bcd	28.1 d	81.5 a	323	536
Dow AgroSciences	PHY 310 R	920 cd	35.4 a	4.7 b	1.04 c	33.5 d	29.6 bc	80.4 b	54	483
Stoneville	ST 5599 BR	830 de	33.7 bc	4.7 b	1.07 abc	34.5 bc	28.8 cd	81.4 a	286	455
Stoneville	ST 4575 BR	758 ef	34.8 bc	4.7 b	1.05 bc	33.8 cd	29.3 bcd	81.7 a	-16	391
Dow AgroSciences	PHY 470 WR	689 f	33.0 c	4.6 bc	1.07 abc	34.5 bc	29.0 cd	81.9 a	183	371
LSD _{0.05} ²		91.2	1.58	0.19	0.028	0.91	1.20	0.81	224.2	46.7
OSL ³		0.0001	0.0002	0.0001	0.0149	0.0050	0.0011	0.0182	0.0132	0.0001
CV (%) ⁴		6.77	3.14	2.76	1.78	1.78	2.74	0.67	77.46	6.42

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2005 Upland Cotton Variety Trial Results

Coolidge, AZ

Planting Date: 14 April 2005 Final Irrigation Date: 20 August 2005 Harvest Date: 20 October 2005

Total Irrigations: 10 Total N Applied: 160 LBS General Soil Texture: Sandy Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality					Premium/ Discount ⁵ (Points)	Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index		
Stoneville	ST 4575 BR	1690 a ¹	37.4 a	5.1 ab	1.12 a	36.2 a	28.4 b	82.2 ab	296	929
Dow AgroSciences	PHY 310 R	1626 ab	37.8 a	5.1 a	1.05 b	33.8 b	28.1 b	80.9 c	-76	833
Stoneville	ST 5599 BR	1548 abc	35.6 a	5.1 a	1.12 a	36.0 a	28.6 b	81.5 bc	278	848
Delta and Pine	SP 455 BR	1465 bcd	35.4 a	4.6 d	1.15 a	36.8 a	30.8 a	81.3 cd	642	856
Delta and Pine	DP 449 BR	1424 cd	34.3 a	4.9 bc	1.14 a	36.0 a	30.6 a	81.3 bc	453	798
Dow AgroSciences	PHY 470 WR	1314 d	34.2 a	4.7 cd	1.12 a	36.0 a	28.6 b	83.0 a	566	758
Stoneville	ST 5242 BR	1309 d	33.9 a	4.8 c	1.11 a	35.6 a	28.7 b	81.6 bc	471	743
LSD _{0.05} ²		161.8	4.07	0.18	0.039	1.22	1.25	1.08	257.1	99.6
OSL ³		0.0002	0.3127	0.0001	0.0019	0.0016	0.0001	0.0118	0.0002	0.0135
CV (%) ⁴		8.34	8.77	2.88	2.69	2.62	3.25	1.02	52.42	9.25

¹Means followed by the same letter do not significantly differ (P=.05, Duncan's New MRT).

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⁶Value of lint per acre based on CCC loan schedule of discount and premiums and assuming a base value of 52.00 cents per pound.

University of Arizona Cooperative Extension

2005 Upland Cotton Variety Trial Results

Marana, AZ

Planting Date:	15 April 2005	Final Irrigation Date:	2 August 2005	Harvest Date:	21 October 2005
Total Irrigations:	5	Total N Applied:	100 LBS	General Soil Texture:	Clay Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality					Premium/ Discount ⁵ (Points)	Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index		
Stoneville	ST 4575 BR	1541 a ¹	37.8 ab	4.8 a	1.11 b	35.8 b	26.8 e	82.6 a	548	886
Delta and Pine	DP 449 BR	1509 a	36.5 b	4.5 a	1.15 b	37.0 ab	30.8 c	81.3 bc	640	881
Delta and Pine	DP 555 BR	1469 a	39.1 a	4.5 a	1.13 b	36.3 b	28.1 d	80.4 c	595	852
Stoneville	ST 5599 BR	1424 a	37.3 ab	4.7 a	1.12 b	36.3 b	29.2 d	80.4 c	501	811
Stoneville	ST 5242 BR	1410 a	37.4 ab	4.8 a	1.12 b	35.8 b	25.8 e	81.6 abc	554	811
Bayer CropScience	FM 989 B2R	1317 a	36.1 b	4.5 a	1.14 b	36.7 b	31.9 bc	80.8 bc	665	772
Bayer CropScience	FM 966 LL	1287 a	35.7 b	4.6 a	1.14 b	36.8 b	34.0 a	82.0 ab	656	754
Bayer CropScience	FM 960 B2R	1273 a	35.5 b	4.4 a	1.19 a	38.0 a	32.9 ab	81.7 ab	664	746
LSD _{0.05} ²		192.3	2.18	0.28	0.037	1.14	1.22	1.13	97.5	113.2
OSL ³		0.0560	0.0401	0.0649	0.0082	0.0104	0.0001	0.0063	0.0118	0.1005
CV (%) ⁴		9.26	3.99	4.05	2.2	2.11	2.76	0.94	10.93	9.39

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2005 Upland Cotton Variety Trial Results

Thatcher, AZ

Planting Date: 29 April 2005 Final Irrigation Date: 15 September 2005 Harvest Date: 27 October 2005

Total Irrigations: 6 Total N Applied: 90 LBS General Soil Texture: Clay Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality						Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index	Premium/ Discount ⁵ (Points)	
Stoneville	ST 5242 BR	1607 a ¹	36.4 abc	4.2 a	1.09 c	35.3 de	27.1 f	81.5 a	487	912
Stoneville	ST 4575 BR	1458 ab	37.1 a	4.1 a	1.10 c	35.0 e	28.0 ef	81.9 a	482	828
Bayer CropScience	FM 981 LL	1446 ab	33.9 de	4.0 a	1.14 abc	36.7 a-d	30.7 ab	80.7 a	628	843
Delta and Pine	DP 494 R	1385 bc	36.8 ab	4.2 a	1.13 bc	36.0 b-e	30.6 abc	81.5 a	610	804
Delta and Pine	DP 488 BR	1365 bc	35.0 b-e	3.9 a	1.13 bc	36.3 a-e	29.2 cde	80.1 a	558	786
Delta and Pine	DP 655 BR	1352 bc	34.3 de	4.0 a	1.15 ab	37.0 abc	30.3 bcd	81.2 a	657	792
Bayer CropScience	FM 989 B2R	1344 bc	34.6 cde	3.8 a	1.13 bc	36.3 a-e	31.4 ab	81.4 a	637	784
Stoneville	ST 5599 BR	1335 bc	35.5 a-d	3.9 a	1.10 c	35.3 de	29.1 de	80.1 a	368	744
Bayer CropScience	FM 960 B2R	1322 bc	34.9 b-e	3.9 a	1.18 a	37.7 a	31.9 a	82.2 a	640	772
Delta and Pine	DP 555 BR	1311 bc	36.8 ab	3.7 a	1.11 bc	35.7 cde	28.1 ef	80.5 a	553	754
Bayer CropScience	FM 991 B2R	1211 c	33.5 e	3.8 a	1.18 a	37.3 ab	31.3 ab	82.1 a	633	707
LSD _{0.05} ²		174.5	1.72	0.52	0.042	1.3	1.37	1.88	112.6	97.6
OSL ³		0.0195	0.0016	0.5719	0.0016	0.0046	0.0001	0.2357	0.0005	0.0263
CV (%) ⁴		7.45	2.86	7.71	2.18	2.1	2.7	1.36	11.63	7.23

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University of Arizona Cooperative Extension

2005 Upland Cotton Variety Trial Results

Kansas Settlement, AZ

Planting Date:	14 April 2005	Final Irrigation Date:	10 September 2005	Harvest Date:	25 October 2005
Total Irrigations:	Center Pivot	Total N Applied:	100 LBS	General Soil Texture:	Sandy Loam

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality					Premium/ Discount ⁵ (Points)	Value ⁶ (\$/Acre)
				Micronaire	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)	Uniformity Index		
Delta and Pine	DP 444 BR	843 a ¹	39.4 ab	3.3 e	1.08 cd	34.7 cd	28.3 ef	80.3 bc	178	454
Stoneville	ST 5242 BR	829 a	40.1 a	3.9 a	1.01 e	32.0 e	26.5 g	80.3 bc	-135	420
Stoneville	ST 5599 BR	677 ab	38.9 ab	3.7 c	1.08 cd	34.7 cd	28.4 ef	79.3 cde	340	376
New Mexico State	151799 WS	590 b	33.7 d	3.6 cd	1.16 a	37.7 a	32.8 a	82.4 a	628	344
Stoneville	ST 4575 BR	548 b	40.1 a	4.0 a	1.08 cd	34.7 cd	28.9 de	80.7 b	220	297
Bayer CropScience	FM 989 B2R	537 b	37.3 bc	3.6 cd	1.08 cd	34.7 cd	29.9 bc	79.2 de	423	302
Delta and Pine	DP 432 R	536 b	37.3 bc	3.8 b	1.09 bc	35.0 bc	30.2 b	80.7 b	443	302
Bayer CropScience	FM 981 LL	527 b	35.2 cd	3.8 b	1.09 bc	35.0 bc	29.0 de	80.2 bcd	477	299
Delta and Pine	DP 434 R	510 b	39.4 ab	3.6 cd	1.12 b	36.0 b	27.8 f	79.8 b-e	587	295
Bayer CropScience	FM 960 B2R	504 b	35.7 cd	3.5 d	1.10 bc	35.7 bc	29.3 cd	79.0 e	438	284
Dow AgroSciences	PHY 710 R	461 b	38.0 ab	3.7 c	1.05 d	33.7 d	29.7 bc	79.5 cde	232	251
LSD _{0.05} ²		194.6	2.07	0.09	0.031	1.13	0.62	0.94	218.2	108.9
OSL ³		0.0046	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0217
CV (%) ⁴		19.16	3.23	1.52	1.65	1.90	1.25	0.69	36.78	19.41

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