

# Arizona Upland Cotton Variety Testing Program, 2001

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## ***Abstract***

*Each year the University of Arizona conducts variety trials across the state to evaluate the performance of upland cotton varieties. These tests provide unbiased data on the performance of varieties when tested side-by-side under typical production practices. In 2001, we planted a total of 12 trials, one in the Yuma region (Yuma county), two in the western region (La Paz and Mohave counties), five in the central region (Maricopa and Pinal counties), one in the southern region (Pima county), and three in the eastern region (Graham, Greenlee, and Cochise counties). We tested seven to twelve commercially available varieties at each test site. The purpose of this report is to present the results of the 2001 tests conducted in the Yuma, western, central, southern, and eastern regions of Arizona.*

## **Introduction**

Each year the University of Arizona conducts variety trials across the state to evaluate the performance of upland cotton varieties. These trials provide many segments of the cotton industry with unbiased data on yield, fiber quality, and agronomic performance of commercially available varieties when tested side-by-side under typical production practices.

The Arizona Upland Cotton Variety Trial is our most intensive testing program. The tests in this program are conducted at several locations throughout the cotton producing regions of the state, usually on grower's fields. The test plots are large-scale "strip plots" which are replicated and randomized using proper field-plot techniques. Several seed companies enter the varieties they feel have the best chance of producing high yields of good quality fiber. The results of these trials are the closest possible to obtaining "on-farm" experience with a particular variety.

The purpose of this report is to present the results of the 2001 tests conducted in the following regions: Yuma, western, central, southern, and Eastern, Arizona.

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## **Materials and Methods**

Locations and varieties: Trials were planted at twelve locations in 2001 – one in the Yuma region (Yuma), two in the western region (Cibola and Mohave), five in the central region (Buckeye, Gila Bend, Maricopa, Casa Grande, and Coolidge), one in the southern region (Marana), and three in the eastern region (Thatcher, Duncan, and Kansas Settlement). Seven to twelve varieties were planted at each site. Varieties included in the 2001 tests were submitted to the university by the cooperating seed companies that included Deltapine, Paymaster, Stoneville, Sure-Grow, Buttonwillow Research, and Fiber Max.

Experimental design and test protocols: Most tests were conducted on grower-cooperator fields. All cultural practices, including planting date, fertilizer regimes, pest control, irrigation, defoliation, and harvest date were made by the cooperator. The tests at Maricopa and Marana were located on University of Arizona Experimental stations, but production practices typical for the area were used in making all cultural decisions. Insect control regimes were followed for conventional varieties in all tests. Plots were a minimum of 4 rows wide (38 to 40 inch spacing), and extended the full length of the irrigation run. All treatments (varieties) were arranged in a randomized complete block design with three or four replications. At least two rows per plot were machine harvested and the seed cotton from each plot was weighed at the field. Sub-samples of the harvested seed cotton were ginned for turnout and lint yield was calculated from the seed cotton and turnout data. Lint from the grab samples was sent to the USDA classing office for HVI fiber quality analysis. Average premium or discount on the lint for each variety was determined by applying the CCC loan schedule to the HVI data collected from each plot. Price was determined by using the base value for Arizona (50.4 cents per pound) and adding or subtracting the proper premium or discount to the base value. Value per acre was determined by multiplying lint yield by the price per pound.

## **Results**

Variety selection within the last five years has become more complicated with the increasing importance of fiber quality in the market and with the advent of transgenic technology. In our tests, for example, the value of the crop depended on both lint yield and fiber quality. The highest yielding varieties did not always produce the highest value per acre (See Tables).

The introduction of high yielding varieties with transgenic traits has been a great benefit to Arizona growers. However, new conventional varieties are also being developed and released.

Many sources of information on variety performance are publicly available to the industry. The data presented in this report is a good source of information on the performance of these varieties, and they represent a solid starting point for determining the actual performance of a given variety on each individual farm. Other sources of information should be considered when selecting varieties. Seed companies also provide performance data for their varieties. Other growers in the area may have experience with a particular variety. If possible, more than one year of data should be considered in evaluating the performance of a particular variety.

Once the decision to try a new variety is made, incorporating that new variety into each cultural program should proceed in increments. Growers should test it on a limited scale at first to determine how the variety performs on their own farm and to gain experience on the cultural needs of the variety.

## **Acknowledgments**

The valuable cooperation, land, and resources provided by the following cooperators are greatly appreciated: Monte Lee, Del Wakimoto, Bruce Heiden, Paul Ollerton, Lee Smith, Dennis Layton, Glenn Schmidt, and the UofA Experiment stations at Maricopa and Marana. The support and cooperation provided by the participating seed companies – Delta and Pine Land Co., Stoneville, Buttonwillow Research, and Fiber Max, is gratefully acknowledged.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Yuma, AZ

Cooperator: Monte Lee

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Deltapine	SG215BR	1662 * <sup>1</sup>	37.2 *	5.05	1.17	37.5	27.3	81.0	27*	843.73
Deltapine	SG747	1558 *	37.3 *	4.15	1.18	37.5	30.6	80.0	395	847.23
Stoneville	ST4691B	1542 *	36.2 *	4.55	1.14	36.5	29.0	82.0	338	829.82
Stoneville	ST4892BR	1471	37.1 *	3.95	1.18	37.5	30.8	82.0	395	800.40
Deltapine	DP388	1419	37.0 *	4.75	1.20	38.0	30.3	81.5	158	737.66
Buttonwillow	BR9801	1321	34.0 *	4.30	1.17	37.0	30.0	82.0	395	717.60
Deltapine	DP451BR	1303	31.8	4.55	1.11	35.5	27.1	82.0	320	698.17
Stoneville	ST580	1162	34.3 *	4.70	1.16	37.5	30.5	82.5	375	628.48
LSD <sub>0.05</sub> <sup>2</sup>		161	3.3	NS	NS	NS	NS	NS	--	--
OSL <sup>3</sup>		0.0024	0.0409	0.3332	0.3268	0.5000	0.2444	0.0748	--	--
CV (%) <sup>4</sup>		4.77	3.97	9.38	2.83	3.01	5.39	0.77	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

<sup>2</sup>LSD: Least Significant Difference.

<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

\*Premium and/or Discount calculated from estimated color and leaf grades.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Mohave, AZ

Cooperator: Del Wakimoto

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Stoneville	ST4892BR	1479 * <sup>1</sup>	36.0 *	5.4 *	1.11 *	35.5	29.6	83.0 *	240	709.57
Stoneville	ST4691B	1474 *	34.5 *	5.3 *	1.11 *	35.5	29.7	81.5	-190	714.63
Deltapine	DP565	1415 *	33.4	5.0 *	1.14 *	36.5 *	30.9 *	82.0	65	721.22
Deltapine	SG215BR	1409 *	33.4	5.2 *	1.07	34.5	27.8	82.5	-63	702.95
Deltapine	DP448B	1371	31.3	4.6	1.13 *	36.0 *	29.8	81.0	353	738.96
Deltapine	DP458BR	1370	33.0	4.7	1.14 *	36.5 *	31.9 *	82.0	183	714.96
Deltapine	DP33B	1291	32.0	5.1 *	1.15 *	37.0 *	31.1 *	82.0	-40	645.31
Deltapine	PM1560BR	1271	33.3	4.6	1.11 *	35.5	30.3	82.5	363	686.71
Deltapine	SG501BR	1251	33.3	5.1 *	1.09	35.0	30.3	83.5 *	0	627.00
LSD <sub>0.05</sub> <sup>2</sup>		100	1.3	0.5	0.04	1.3	1.2	0.8	--	--
OSL <sup>3</sup>		.0003	.0001	0.0116	0.0108	0.0176	0.0001	0.0001	--	--
CV (%) <sup>4</sup>		5.0	2.73	6.80	2.36	2.57	2.72	0.70	--	--

<sup>1</sup>Means followed by the an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

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<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Cibola, AZ

Cooperator: Ron Swan

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/ Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Deltapine	DP448B	2061 *	34.2 *	4.00	1.07	34.0	26.2	80.0	158	1071
Deltapine	DP458BR	1961 *	33.6 *	4.55	1.08	34.5 *	28.4 *	80.5	174	1022
Deltapine	DP565	1933 *	31.8	4.45	1.09 *	35.0 *	27.8	81.0 *	266	1025
Deltapine	SG501BR	1816 *	33.8 *	4.75 *	1.06	34.0	27.9	81.5 *	167	945
Deltapine	DP655BR	1802 *	32.4	4.20	1.07	34.5 *	28.9 *	80.5	216	946
Deltapine	PM1560BR	1754 *	33.7 *	4.20	1.06	34.0	26.3	81.0 *	177	914
Deltapine	SG215BR	1703 b	34.5 *	4.60	1.02	32.5	24.0	80.5	-549	766
Stoneville	ST4892BR	1640 b	33.9 *	4.75 *	1.06	34.0	27.4	80.0	10	833
Stoneville	ST4691R	1631 b	33.9 *	4.55	1.06	34.0	26.7	81.0 *	144	845
LSD <sub>0.05</sub> <sup>2</sup>		220	0.73	0.11	0.01	0.46	0.54	0.48	--	--
OSL <sup>3</sup>		0.0038	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	--	--
CV (%) <sup>4</sup>		9.25	1.70	1.99	0.95	1.05	1.55	0.46	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

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<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Buckeye, AZ

Cooperator: Bruce Heiden

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Deltapine	DP565	1382 * <sup>1</sup>	32.5	4.85	1.13 *	36.5 *	29.0 *	80.5	318	773.15
Deltapine	SG215BR	1363 *	34.3	5.25	1.04	33.0	25.0	82.0 *	-790	598.20
Deltapine	DP33B	1359 *	31.4	4.85	1.11 *	35.5 *	29.5 *	80.5	315	721.01
Deltapine	DP448B	1335 *	32.4	4.65	1.07	28.3 *	28.3 *	79.5	138	709.94
Deltapine	DP458BR	1282	32.5	5.15	1.11 *	35.5 *	29.0 *	80.5	-105	653.88
Deltapine	DP451BR	1215	29.4	4.85	1.08	35.0	27.1	81.0 *	75	631.07
Stoneville	ST4892BR	1174	34.8	5.60 *	1.07	34.0	27.6	82.0 *	-528	540.53
Deltapine	SG501BR	1121	30.6	5.10	1.07	34.0	28.3 *	82.0 *	-270	542.53
Stoneville	ST4691B	1054	30.9	4.80	1.09	35.0	28.6 *	81.0 *	185	550.42
Deltapine	PM1560BR	893	30.6	4.45	1.10	35.5 *	28.2 *	81.0 *	-25	449.28
LSD <sub>0.05</sub> <sup>2</sup>		56	--	0.28	0.02	1.1	1.8	1.1	--	--
OSL <sup>3</sup>		0.0001	--	0.0004	0.0008	0.0020	0.0087	0.0095	--	--
CV (%) <sup>4</sup>		3.14	--	2.36	0.95	1.36	2.62	0.58	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

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<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Gila Bend, AZ

Cooperator: Bruce Heiden

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Deltapine	SG215BR	1201 * <sup>1</sup>	33.0	5.45 *	1.03	33.0	25.4	82.5	-885	501.06
Stoneville	ST4892BR	1113	33.0	5.60 *	1.08	34.5	28.8	81.5	-455	515.53
Deltapine	SG501BR	1074	32.2	5.45 *	1.03	33.0	28.0	81.0	-760	462.16
Deltapine	DP422BR	1073	32.0	4.95	1.05	33.5	26.5	80.5	-243	520.04
Deltapine	DP458BR	1054	32.0	5.60 *	1.10	35.0	29.1	81.0	-320	484.66
Deltapine	DP451BR	1027	30.0	5.30	1.10	35.0	27.4	81.0	-320	484.65
Deltapine	PM1560BR	1012	31.0	4.90	1.08	34.5	26.8	81.0	-93	507.88
LSD <sub>0.05</sub> <sup>2</sup>		41	--	0.35	NS	NS	NS	NS	--	--
OSL <sup>3</sup>		.0001	--	0.0001	0.1397	0.2291	0.0945	0.4432	--	--
CV (%) <sup>4</sup>		2.56	--	1.39	2.20	2.43	3.36	1.02	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

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<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Maricopa, AZ

Cooperator: UA Maricopa Agricultural Center

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Deltapine	DP448B	1449 * <sup>1</sup>	33.7	4.95	1.13 *	36.5 *	29.3 *	81.5 *	140	750.14
Deltapine	DP451BR	1365 *	28.6	4.97	1.11 *	35.3 *	26.7	80.7	-63	698.86
Deltapine	SG215BR	1347	33.5	5.35 *	1.06	33.5	24.3	81.5 *	-645	592.34
Deltapine	DP33B	1274	30.7	5.00	1.13 *	36.0 *	29.2 *	82.0 *	138	659.39
Deltapine	DP565	1244	31.5	5.00	1.14 *	36.5 *	29.1 *	81.0	-73	617.87
Deltapine	DP420R	1201	31.9	4.90	1.06	33.5	25.6	81.5 *	-268	571.25
Deltapine	SG105	1152	32.3	5.15	1.12 *	35.5 *	27.4	81.0	-105	568.47
Deltapine	SG501BR	1122	32.1	5.10	1.09	35.0	27.9	83.0 *	-145	549.53
Deltapine	DP458BR	1069	30.9	4.85	1.11 *	35.5 *	29.2 *	81.0	123	551.69
Stoneville	ST4691B	992	32.5	5.30	1.09	35.3 *	27.0	81.7 *	-283	464.66
Stoneville	ST4892BR	991	33.2	5.55 *	1.07	34.5	27.4	81.5 *	-395	460.31
Deltapine	PM1560BR	832	31.9	4.55	1.06	33.5	26.0	80.0	-78	412.06
LSD <sub>0.05</sub> <sup>2</sup>		92	--	0.23	0.03	1.1	1.3	1.21	--	--
OSL <sup>3</sup>		0.0001	--	0.0001	0.0001	0.0001	0.0001	0.0408	--	--
CV (%) <sup>4</sup>		4.75	--	3.06	1.95	2.09	3.20	1.5	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

<sup>2</sup>LSD: Least Significant Difference.

<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Casa Grande, AZ

Cooperator: Paul Ollerton

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Deltapine	SG215BR	1281 * <sup>1</sup>	35.5	5.3 *	1.06	30.8	24.4	82.0	-809	543.67
Deltapine	DP565	1280 *	35.7	4.9	1.14 *	36.5 *	29.2 *	81.0	353	690.29
Deltapine	DP33B	1205 *	33.2	5.0	1.12 *	36.0 *	29.2 *	81.0	123	621.68
Deltapine	DP448B	1173	34.1	5.1	1.11	35.5 *	27.3	81.5	-105	578.80
Deltapine	DP458BR	1148	33.4	5.1	1.12 *	35.5 *	29.9 *	81.5	-75	570.15
Deltapine	SG501BR	1113	34.0	5.2 *	1.08	35.5 *	28.2	82.0	-105	549.04
Stoneville	ST4691B	1048	35.0	5.1	1.09	35.0 *	26.8	81.5	-120	515.46
Deltapine	PM1560BR	1037	35.5	4.6	1.12 *	36.0 *	28.1	82.0	335	557.60
Stoneville	ST4892BR	947	33.0	5.3 *	1.09	35.0 *	27.3	82.0	-220	456.04
LSD <sub>0.05</sub> <sup>2</sup>		96	--	0.2	0.03	2.9	1.0	NS	--	--
OSL <sup>3</sup>		.0001	--	0.0001	0.0004	0.0208	0.0001	0.1030	--	--
CV (%) <sup>4</sup>		5.78	--	2.87	1.90	5.68	2.45	0.74	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

<sup>2</sup>LSD: Least Significant Difference.

<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Coolidge, AZ

Cooperator: Lee Smith

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Stoneville	ST4691B	1708 * <sup>1</sup>	35.2	4.8	1.14	36.5	27.0	80.5	335	918.27
Stoneville	ST4892BR	1617 *	36.0	5.1 *	1.13	36.5	27.7	81.5	125	836.48
Deltapine	SG215BR	1436	35.0	4.9 *	1.08	34.5	25.4	81.5	185	750.09
Deltapine	DP448B	1374	33.9	4.2	1.15	37.0 *	29.0 *	82.0	350	517.80
Deltapine	PM1560BR	1334	35.0	4.0	1.15	37.0 *	28.5 *	81.0	350	719.10
Deltapine	SG501BR	1291	33.4	4.7	1.11	36.0	28.1	81.0	335	693.82
Deltapine	DP33B	1181	30.4	4.2	1.13	36.0	28.3	81.5	343	635.89
Deltapine	DP565	1158	33.0	3.9	1.18 *	37.5 *	29.2 *	81.5	375	626.96
Deltapine	DP458BR	990	33.0	4.2	1.13	36.0	29.3 *	81.5	370	535.60
LSD <sub>0.05</sub> <sup>2</sup>		109	--	0.2	0.02	0.8	0.9	NS	--	--
OSL <sup>3</sup>		.0001	--	0.0001	0.0001	0.0001	0.0001	0.1101	--	--
CV (%) <sup>4</sup>		5.56	--	3.53	1.30	1.60	2.09	0.78	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

<sup>2</sup>LSD: Least Significant Difference.

<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Marana, AZ

Cooperator: UA Marana Agricultural Center

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Deltapine	DP448B	1094 * <sup>1</sup>	35.0 f	4.3	1.12 *	35.5	27.7	79.0	308	585.02
Deltapine	SG105	1062 *	35.6	4.6 *	1.13 *	36.0 *	28.0 *	83.0 *	365	574.22
Deltapine	SG215BR	1030 *	34.2	4.3	1.10	35.0	24.7	81.5	238	543.49
Deltapine	DP565	1016 *	35.2	4.1	1.14 *	36.8 *	28.0 *	80.8	354	548.06
Deltapine	SG747	973 *	33.0	4.3	1.12	35.5	25.4	80.5	263	516.43
Deltapine	SG501BR	922	32.2	4.4 *	1.10	34.5	28.0 *	81.5	235	486.50
Stoneville	ST4892BR	922	36.7	4.0	1.10	35.5	27.9	80.5	328	494.87
Deltapine	DP458BR	896	35.5	4.4 *	1.13 *	36.0 *	29.2 *	80.5	350	483.21
Deltapine	DP33B	855	31.4	4.0	1.12	35.5	27.2	79.5	188	462.17
Deltapine	PM1560BR	804	35.4	3.6	1.13 *	36.0 *	29.0 *	81.5	235	424.56
Stoneville	ST4691B	768	32.30	4.1	1.12 *	36.0 *	27.8	80.0	353	423.98
LSD <sub>0.05</sub> <sup>2</sup>		110	--	0.2	0.03	0.9	1.3	1.4	--	--
OSL <sup>3</sup>		.0001	--	0.0001	0.0033	0.0048	0.0001	0.0002	--	--
CV (%) <sup>4</sup>		7.96	--	3.41	1.79	1.82	3.15	1.19	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test.

<sup>2</sup>LSD: Least Significant Difference.

<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Thatcher, AZ

Cooperator: Dennis Layton

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Fiber Max	FM989BR	1323 * <sup>1</sup>	34.3 *	3.9	1.12 *	36.0 *	29.1 *	80.0	350	713.17
Deltapine	DP5690R	1270 *	34.6 *	4.0	1.10 *	35.0	29.4 *	80.3	345	684.14
Deltapine	DP655BR	1204	33.2	3.9	1.12 *	36.0 *	30.4 *	79.3	378	652.30
Deltapine	PM1560BR	1201	35.6 *	3.7	1.13 *	36.3 *	28.9 *	81.0	-53	599.00
Stoneville	ST4892BR	1180	34.4 *	3.8	1.08	34.7	26.6	81.0	-370	550.99
Stoneville	ST4793R	1180	34.9 *	4.5 *	1.06	33.7	25.4	80.0	-198	572.29
Deltapine	SG501BR	1179	33.8	4.0	1.08	34.7	27.8	81.0	273	626.62
LSD <sub>0.05</sub> <sup>2</sup>		74	1.4	0.4	0.03	1.0	1.7	NS	--	--
OSL <sup>3</sup>		0.0066	0.0508	0.0363	0.0008	0.0011	0.0006	0.0778	--	--
CV (%) <sup>4</sup>		3.42	2.23	5.95	1.37	1.64	3.46	0.75	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

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<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Duncan, AZ

Cooperator: Stan Jones

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Deltapine	SG215BR	946 * <sup>1</sup>	36.4 *	4.80 *	1.03	33.0	25.1	83.0	-293	438.76
Fiber Max	FM989BR	941 *	36.2 *	4.35	1.11	35.5	28.3	80.5	320	510.31
Deltapine	DP436R	877 *	33.2	4.70 *	1.10	35.5	25.0	82.0	200	440.08
Deltapine	DP451BR	870	34.0	4.70 *	1.10	35.5	25.6	82.0	235	461.13
Deltapine	DP422BR	846	34.0	4.55	1.09	34.5	27.4	82.5	-40	391.26
NMSU	1517-99	843	34.3	4.30	1.17 *	37.5 *	30.9 *	83.5	275	412.72
Buttonwillow	BR303	833	34.0	4.65 *	1.12	36.0	30.1 *	81.0	338	395.45
Buttonwillow	BR9802	806	34.6	5.00 *	1.08	34.5	29.2	83.5	53	401.21
Deltapine	SG521R	798	35.8 *	4.75 *	1.06	34.0	24.1	82.0	43	399.71
NMSU	B7514	782	35.1 *	4.50	1.18 *	38.0 *	31.5 *	81.5	308	392.88
Buttonwillow	BW9605	720	36.2 *	4.20	1.12	36.0	32.0 *	82.0	323	416.02
NMSU	1517-95	648	34.1	4.70 *	1.16 *	37.0 *	31.6 *	82.0	323	338.26
LSD <sub>0.05</sub> <sup>2</sup>		73	1.5	0.40	0.05	1.7	1.9	NS	--	--
OSL <sup>3</sup>		.0001	.0002	0.0323	0.0008	0.0012	0.0001	0.0544	--	--
CV (%) <sup>4</sup>		6.13	2.89	3.93	1.97	2.13	3.04	1.00	--	--

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<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.

# University of Arizona Cooperative Extension

## 2001 Upland Cotton Variety Trial Results

Kansas Settlement, AZ

Cooperator: Glenn Schmidt

Company	Variety	Lint Yield (lbs/Acre)	Percent Lint	Fiber Quality				Uniformity Index	Premium/Discount <sup>5</sup> (points)	Value <sup>6</sup> (\$/acre)
				Mic	Fiber Length (100ths)	Staple Length (32nds)	Fiber Strength (g/tex)			
Fiber Max	FM989BR	952 * <sup>1</sup>	36.1 *	3.70	1.11	36.0	28.5 *	81.0	358	517.53
NMSU	B7514	859	34.4 *	3.80	1.15	36.5	30.5 *	81.5	378	461.69
Deltapine	SG215BR	821	34.2	3.70	1.05	33.5	25.9	81.0	-168	393.56
Deltapine	SG521R	820	35.5 *	3.90	1.07	34.0	26.1	82.5	198	417.91
NMSU	1517-99	817	34.2	3.60	1.14	36.5	31.0 *	81.5	400	464.69
Deltapine	DP422BR	770	35.7 *	4.00	1.06	34.0	24.8	81.0	-30	370.25
Buttonwillow	BR9802	762	33.9	4.25	1.06	33.5	28.2	82.5	8	381.87
NMSU	1517-95	743	32.7	3.50	1.14	36.5	30.9 *	82.5	323	418.57
Buttonwillow	BR303	704	33.0	3.95	1.17	37.0	29.6 *	80.5	370	375.27
Deltapine	DP436R	683	32.6	3.80	1.10	35.0	26.1	81.5	103	343.25
Buttonwillow	BW9605	671	34.5 *	3.80	1.12	36.0	30.8 *	82.5	390	380.07
Deltapine	DP451BR	575	31.7	3.65	1.09	35.0	25.8	79.5	188	277.27
LSD <sub>0.05</sub> <sup>2</sup>		55	1.8	NS	NS	NS	2.5	NS	--	--
OSL <sup>3</sup>		.0001	.0005	0.2431	0.1029	0.1761	0.0007	0.1839	--	--
CV (%) <sup>4</sup>		4.98	3.85	6.04	3.44	3.86	4.10	1.23	--	--

<sup>1</sup>Means followed by an "\*" are not significantly different than the top yielding or highest-value variety according to a Fisher's LSD means separation test..

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<sup>3</sup>OSL: Observed Significance Level.

<sup>4</sup>CV: Coefficient of Variation.

<sup>5</sup>Average premium or discount applied to the lint based on CCC loan schedule.

<sup>6</sup>Value of lint per acre based on CCC loan schedule of discounts and premiums and assuming a base value of 50.40 cents per pound.