TITLE:

Cotton Variety Performance as Affected by Irrigation Levels at AG-CARES, Lamesa, TX, 2003

AUTHORS:

Wayne Keeling, Randy Boman, and John Everitt, Professor, Extension Cotton Agronomist, and Research Associate

MATERIALS AND METHODS:

Plot Size:	8 rows x 500' L
Planting Date:	May 7
Varieties:	Paymaster 2280 BR
	Fiber Max 989 BR
	Stoneville 5559 BR
	DeltaPine 555 BR
Herbicides:	Prowl - 3 pt.
	Roundup Weather Max - 22 pt
Fertilizer:	90-50-0
Irrigations:	Base=8.8" applied
	Low = 6.6" (-25%)
	High = 11.0" (+25%)
Harvest Date:	October 14

RESULTS AND DISCUSSION:

Three longer-season “picker” type varieties were compared to a stripper variety (PM 2280BR) under 3 irrigation levels. At the base irrigation level, yields ranged from 817 to 1231 lb lint/A. Yields increased to 933-1487 lb/A at the highest (+25%) irrigation compared to 652-1031 at the low (-25%) irrigation level. Higher yields were produced at each irrigation with FM 989BR, ST 5599BR, and DPL 555BR compared to the stripper variety PM 2280BR. ST 5599BR was the only picker variety to yield higher at the increased irrigation level. Both FM 989BR and DPL 555BR produced similar yields at the base irrigation and +25% irrigation level. A trend toward higher loan value (due to longer staple lengths) resulted with the +25% irrigation treatments. Highest gross returns ($759/A) were achieved with ST 5599BR at the +25% irrigation level. Growth data, yield, loan values and gross returns/A are summarized in Table 1.

Both ST 5599BR and DPL 555BR were later fruiting, with <25% open bolls on September 15 compared to 60-70% open bolls with PM 2280BR. The late August and September rains, combined with above average heat unit accumulations in early October favored the later varieties. Although FM 989BR was not as high yielding as the other picker varieties, it has yielded extremely well in many locations, producing 2000+ lb lint/A in a test at Helms Farm site in Hale County in 2003. This test will be repeated in 2004.

Table 1. Cotton variety performance as affected by irrigation levels at AG-CARES, Lamesa, TX 2003.

Variety	Irrigation Level[1/]	Open Boll Percent		Turnout Percent	Yield LB/A	Loan Value	Gross Returns
		Sept. 15	Sept. 22	Oct. 14			$/A
1 Water 1 - PM 2280BR	Low (-25%)	68.0 a	81.0 a	26.90 f	652.7 g	49.52 d	323.03 h
2 Water 1 - FM 989BR	Low (-25%)	41.0 bcd	75.0 a	30.90 c	858.7 f	49.75 d	427.19 g
3 Water 1 - ST 5599BR	Low (-25%)	25.0 de	41.3 b	31.60 c	1076.7 d	49.75 d	535.87 def
4 Water 1 - DP 555BR	Low (-25%)	19.0 e	48.3 b	34.27 a	1031.3 de	49.58 d	511.53 ef
5 Water 2 - PM 2280BR	Base	70.0 a	84.0 a	28.67 e	817.7 f	49.48 d	404.58 g
6 Water 2 - FM 989BR	Base	42.0 bc	77.3 a	30.90 c	1094.0 cd	50.35 d	550.83 de
7 Water 2 - ST 5599BR	Base	23.7 e	54.7 b	31.57 c	1271.7 b	46.45 e	590.69 cd
8 Water 2 - DP 555BR	Base	27.0 cde	45.3 b	33.27 b	1231.3 bc	52.23 bc	642.85 bc
9 Water 3 - PM 2280BR	High (+25%)	66.7 a	82.0 a	29.37 de	933.7 ed	50.80 cd	473.52 fg
10 Water 3 - FM 989BR	High (+25%)	49.0 b	73.7 a	29.77 d	1039.7 de	54.00 a	451.43 de
11 Water 3 - ST 5599BR	High (+25%)	14.0 e	42.7 b	31.40 c	1487.0 a	51.08 cd	759.39 a
12 Water 3 - DP 555BR	High (+25%)	20.3 e	43.3 b	34.30 a	1283.0 b	53.40 ab	685.12 b
SD (P=.05)		16.90	18.37	0.91	138.94	1.66	73.61
Standard Deviation		9.98	10.85	0.54	82.05	0.98	43.47
CV		25.72	17.39	1.72	7.71	1.94	8.0

[1/] Base=8.8" applied; Low = 6.6 (-25%); High = 11.0 (+25%).

TITLE:

Replicated Conventional and Transgenic Cotton Variety Demonstration Under LEPA Irrigation, AG-CARES, Lamesa, TX, 2003.

AUTHORS:

Randy Boman, John Farris, Mark Stelter, Mark Kelley, and Tommy Doederlein; Extension Agronomist-Cotton, CEA-Agriculture Dawson County, Extension Assistant-Cotton, Extension Program Specialist-Cotton, and EA-IPM Dawson/Lynn Counties.

MATERIALS AND METHODS:

Varieties: AFD 2485, AFD 3511R, All-Tex Atlas RR, All-Tex Xpress RR, Beltwide Cotton Genetics 28R, Deltapine 5415RR, Douglas King CT210, FiberMax 958, FiberMax 960BR, Paymaster 2266RR, Paymaster 2326RR, Stoneville 5303R, and Stoneville 5599BR

Experimental design: Randomized complete block with 3 replications

Seeding rate: 5 seed per row-foot in 40-inch row spacing (John Deere Max Emerge vacuum planter)

Plot size: 4 rows by variable length due to circular pivot rows (340-810 ft long).

Planting date: Replanted June 11 (May 9 planting was hailed out on May 31)

Weed management: Treflan was applied preplant incorporated at 1 pt/acre across all varieties on April 7. No Roundup herbicide was applied on Roundup Ready varieties due to insufficient weed pressure. A blanket cultivation was performed across all varieties on July 3 and July 21.

Irrigation and rainfall:

LEPA irrigation

April:	2.25"
May:	1.50"
June:	0.00"
July:	2.40"
August:	2.80"
September:	0.00"

Rainfall

April:	0.42"	July:	0.00"
May:	4.50"	August:	2.29"
June:	1.80"	September:	1.67"

Total moisture: 19.63"

Insecticides: Temik was applied at 3.5 lb/acre in-furrow at planting. No other insecticides were applied at this site. This location is in an active boll weevil eradication zone, but no applications were made by the Texas Boll Weevil Eradication Program.

Fertilizer management: Preplant fertilizer consisting of 10-34-0 was applied at 176 lb/acre on April 14. An additional 60 lb N/acre (32-0-0) was fertigated in 30 lb N/acre increments during the growing season.

Harvest aids: Harvest aids included Boll'd (6-lb ethephon/gal) at 1.3 pt/acre plus Ginstar at 6 oz/acre applied at 70 percent open bolls on October 17, with follow-up application of Gramoxone Max at 20 oz/acre on October 28.

Harvest: Plots were harvested on October 31 using a commercial John Deere 7445 with field cleaner bypassed. Harvested material was dumped into a weigh wagon with integral digital scales to determine individual plot weights. Plot yields were adjusted to lb/acre.

Gin turnout: Grab samples were taken by plot and ginned at the Texas A&M Center at Lubbock to determine gin turnouts.

Fiber analysis: Lint samples were submitted to the International Textile Center (ITC) at Texas Tech University for HVI analysis, and USDA loan values were determined for each variety by plot.

Ginning cost: Ginning costs were based on $2.25 per cwt. of bur cotton and $125 per ton for and seed value. Ginning costs do not include checkoff.

Seed and tech fees: Seed and technology fee costs were determined by variety per acre using manufacturer's suggested retail prices for seed, and appropriate technology fees for Bollgard and/or Roundup Ready based on the 5 seed per row-foot.

RESULTS AND DISCUSSION:

Significant differences were noted for most characteristics measured (Tables 1 and 2). Lint turnout ranged from 23.5% to 29.4%. Lint yields varied from a low of 804 lb/acre to a high of 1453 lb/acre. Lint loan values varied from a low of $0.5195/lb to a high of $0.5698/lb. Lint Loan values were generally very high, with the exception of discounts for high micronaire in some replications of Paymaster 2326RR (average 5.0). Micronaire ranged from a low of 4.2 units to a high of 5.0 units. After adding lint and seed value, total value/acre for varieties ranged from a low of $552.77 to a high of $936.28. When subtracting ginning and seed and technology fee costs, the net value/acre among varieties ranged from a high value of $789.24 to $453.78, a difference of $335.46. These data indicate that substantial differences can be obtained in terms of net value/acre due to variety and technology selection. It should be noted that some inclement weather was encountered in this trial prior to harvest. None of the picker type varieties experienced notable preharvest losses due to weather conditions, but high intensity rainfall and/or high wind events were not excessive. Additional multi-site and multi-year applied research is needed to evaluate varieties across a series of environments.

ACKNOWLEDGMENTS:

Appreciation is expressed to Danny Carmichael, Research Associate-AG-CARES; and John Everitt, Research Associate-Texas Agricultural Experiment Station for their assistance on this project and to Dr. John Gannaway, TAES, Lubbock for his cooperation.

DISCLAIMER CLAUSE:

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Table 1. Harvest results from the LEPA irrigated replicated cotton variety demonstration, AG-CARES, 2003.

Variety	Lint turnout %	Seed turnout %	Bur cotton yield lb/acre	Lint yield lb/acre	Seed yield lb/acre	Lint loan value $/lb	Lint value $/acre	Seed value $/acre	Total value $/acre	Ginning cost $/acre	Seed/tech fee $/acre	Net value $/acre	
DP 5415RR	28.3	45.2	4942	1395	2234	0.5656	789.41	139.68	929.09	111.18	28.66	789.24	a
ST 5599BR	29.4	44.3	4936	1453	2187	0.5501	799.59	136.69	936.28	111.06	47.50	777.72	a
AFD 2485	28.1	45.8	4699	1322	2153	0.5698	753.54	134.60	888.14	105.73	10.88	771.53	ab
ST 5303R	28.6	44.3	4826	1378	2137	0.5573	768.49	133.56	902.06	108.58	32.57	760.90	ab
FM 958	28.0	41.5	4707	1322	1953	0.5686	751.68	122.09	873.77	105.93	16.97	750.87	ab
DK CT210	28.6	45.2	4504	1289	2038	0.5635	726.34	127.36	853.70	101.33	15.35	737.01	ab
FM 960BR	28.9	44.9	4732	1370	2126	0.5458	748.09	132.91	881.01	106.47	50.05	724.48	ab
BCG 28R	27.6	43.8	4576	1265	2002	0.5615	710.32	125.16	835.48	102.96	27.40	705.11	b
All-Tex Atlas RR	27.5	48.3	4003	1103	1932	0.5415	597.37	120.79	718.16	90.07	19.06	609.03	c
PM 2326RR	26.9	46.2	4087	1099	1890	0.5241	574.98	118.14	693.12	91.96	19.79	581.38	c
PM 2266RR	26.0	45.8	4124	1072	1888	0.5195	558.01	118.00	676.10	92.79	20.26	563.05	c
AFD 3511R	26.3	46.8	3728	982	1746	0.5530	542.70	109.16	651.86	83.89	21.00	546.97	c
All-Tex Xpress RR	23.5	47.7	3425	804	1634	0.5600	450.63	102.13	552.77	77.07	21.92	453.78	d
Test average	27.5	45.4	4407	1220	1994	0.5523	674.70	124.64	799.35	99.16	25.49	674.70	
CV, %	4.0	4.2	5.9	6.0	5.9	2.3	6.1	5.9	6.0	5.9	--	6.3	
OSL	0.0001	0.0267	<0.0001	<0.0001	<0.0001	0.0007	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001	
LSD 0.05	1.8	3.2	441	124	199	0.0217	69.95	12.44	81.75	9.92	--	72.30	

For net value/acre, means within a column with the same letter are not significantly different at the 0.05 probability level.

CV - coefficient of variation, LSD - least significant difference.

OSL - observed significance level, or probability of a great F value.

Note: some columns may not add up due to rounding error.

Assumes:

$2.25/cwt ginning cost.

$125/ton for seed.

Value for lint based on CCC loan value from grab samples and ITC HVI results.

Table 2. HVI fiber property results from the LEPA irrigated replicated cotton variety demonstration, AG-CARES, 2003.

Variety	Micronaire	Staple	Uniformity	Strength	Elongation	Leaf	Rd	+b	Color grade	
	units	32nds inches	%	g/tex	%	grade	reflectance	yellowness	color 1	color 2
AFD 2485	4.5	36.7	83.5	33.6	4.7	1.0	80.6	7.9	2.0	1.0
AFD 3511R	4.7	34.6	83.1	31.7	6.2	1.0	78.8	8.4	2.3	1.0
All-Tex Atlas RR	4.6	34.0	82.5	30.4	6.9	1.0	78.4	8.5	2.3	1.0
BCG 28R	4.4	35.8	82.2	29.2	5.9	1.0	79.1	8.6	2.0	1.0
DK CT210	4.2	35.3	81.8	31.1	7.2	1.0	81.5	8.4	1.0	1.0
DP 5415RR	4.2	36.6	83.1	30.3	8.1	1.0	80.9	8.3	1.6	1.0
FM 958	4.5	36.7	82.9	34.3	4.5	1.0	80.7	8.3	2.0	1.0
FM 960BR	4.5	33.8	82.8	35.1	4.8	1.0	80.2	8.2	2.0	1.0
PM 2266RR	4.8	33.7	82.6	30.8	7.8	1.6	78.3	8.3	2.6	1.0
PM 2326RR	5.0	34.0	83.9	31.4	7.1	1.0	77.5	8.5	2.6	1.0
ST 5303R	4.6	34.5	84.0	33.2	6.4	1.0	79.6	8.5	2.0	1.0
ST 5599BR	4.6	34.2	81.8	31.6	5.5	1.0	76.2	8.8	3.0	1.0
All-Tex Xpress RR	4.4	34.8	83.8	32.2	5.4	1.0	80.0	7.9	2.3	1.0
Test average	4.5	35.0	82.9	31.9	6.2	1.0	79.4	8.4	2.1	1.0
CV, %	3.5	1.3	0.6	2.8	3.8	30.4	0.7	3.2	17.4	--
OSL	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.4777	<0.0001	0.0126	0.0002	--
LSD 0.05	0.3	0.7	0.8	1.5	0.4	NS	0.9	0.4	0.6	--

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference.

TITLE:

Replicated Dryland Cotton Systems Variety Trial Demonstration, AG-CARES, Lamesa, TX, 2003.

AUTHORS:

Randy Boman, John Farris, Mark Stelter, Mark Kelley, and Tommy Doederlein; Extension Agronomist-Cotton, CEA-Agriculture Dawson County, Extension Assistant-Cotton, Extension Program Specialist-Cotton, and EA-IPM Dawson/Lynn Counties.

MATERIALS AND METHODS:

Varieties: AFD 2485, All-Tex Atlas RR, Beltwide Cotton Genetics 24R, Deltapine 5415RR, Douglas King CT210, FiberMax 958, Paymaster 2379RR, Paymaster 2326RR, Paymaster HS26, and Stoneville 5303R

Experimental design: Randomized complete block with 3 replications

Seeding rate: 4 seed per row-foot in 40-inch row spacing (John Deere Max Emerge vacuum planter)

Plot size: 4 rows by length of field (~800 ft)

Planting date: May 30

Weed management: Treflan was applied preplant incorporated at 1 pt/acre across all varieties on April 30. Roundup WeatherMax herbicide was broadcast applied on Roundup Ready varieties on June 26 at 22 oz/acre. A post directed application of Roundup WeatherMax was applied on August 13 at 22 oz/acre on Roundup Ready varieties. Spot spraying was conducted on conventional varieties on July 22, using a 1 percent solution. All varieties were uniformly cultivated one time, and the conventional types received an additional cultivation.

Rainfall:

April:	0.42"	July:	0.00"
May:	4.50"	August:	2.29"
June:	1.80"	September:	1.67"
Total moisture:	10.68"		

Insecticides: No insecticides were applied at this site. This location is in a active boll weevil eradication zone, but no applications were made by the Texas Boll Weevil Eradication Program.

Fertilizer management: No fertilizers were applied at this site.

Harvest aids: Harvest aids included Gramoxone Max was applied at 26 oz/acre on November 17.

Harvest: Plots were harvested on November 19 using a commercial John Deere 7445 with field cleaner bypassed. Harvested material was dumped into a weigh wagon with integral digital scales to determine individual plot weights. Plot yields were adjusted to lb/acre.

Gin turnout: Grab samples were taken by plot and ginned at the Texas A&M Center at Lubbock to determine gin turnouts.

Fiber analysis: Lint samples were submitted to the International Textile Center (ITC) at Texas Tech University for HVI analysis, and USDA loan values were determined for each variety by plot.

Ginning costs and seed values: Ginning costs were based on $2.25 per cwt. of bur cotton and $125/ton for seed value. Ginning costs do not include checkoff.

Systems costs: Systems cost was determined by variety per acre using manufacturer's suggested retail prices for seed, and appropriate technology fees for Roundup Ready based on the 4 seed per row-foot.

RESULTS AND DISCUSSION:

Weed pressure at this site would generally be considered light and consisted mainly of silverleaf nightshade, and pigweed "escapes." Significant differences were noted for most characteristics measured (Tables 1 and 2). Lint turnout ranged from 24.2% to 28.0%. Lint yields varied from a low of 364 lb/acre to a high of 520 lb/acre. Lint loan values varied from a low of $0.4836/lb to a high of $0.5521/lb. Lint Loan values were generally very high, with the exception of discounts for high micronaire in some replications of Paymaster 2379RR (average 4.9). Micronaire ranged from a low of 3.5 units to a high of 4.9 units. After adding lint and seed value, total value/acre for varieties ranged from a low of $229.42 to a high of $329.26. When subtracting ginning and systems costs, the net value/acre among varieties ranged from a high of $263.81 to $152.82, a difference of $110.99. These data indicate that substantial differences can be obtained in terms of net value/acre due to variety and technology selection. It should be noted that some inclement weather was encountered in this trial prior to harvest. None of the picker type varieties experience preharvest losses due to weather conditions, and high intensity rainfall and/or high wind events were not excessive. Additional multi-site and multi-year applied research is needed to evaluate varieties across a series of environments.

ACKNOWLEDGMENTS:

Appreciation is expressed to Danny Carmichael, Research Associate - AG-CARES; and John Everitt, Research Associate, Texas Agricultural Experiment Station, for their assistance on this project and to Dr. John Gannaway, TAES, Lubbock for his cooperation.

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Table 1. Results from the dryland replicated cotton systems variety demonstration, AG-CARES, 2003.

Variety	Lint turnout %	Seed turnout %	Bur cotton yield lb/acre	Lint yield lb/acre	Seed yield lb/acre	Lint loan value $/lb	Lint value $/acre	Seed value $/acre	Total value $/acre	Ginning cost $/acre	Systems cost $/acre	Net value $/acre	
FM 958	28.0	42.3	1857	520	787	0.5385	280.05	49.20	329.26	41.79	23.65	263.81	a
AFD 2485	26.9	41.0	1896	511	778	0.5393	276.27	48.63	324.90	42.68	18.75	263.47	a
BCG 24R	27.3	43.8	1835	501	805	0.5388	269.98	50.35	320.34	41.30	49.24	229.79	ab
Douglas King CT210	24.2	42.8	1842	446	789	0.5240	234.75	49.32	284.07	41.45	22.35	220.27	abc
ST 5303R	26.8	43.6	1815	486	793	0.5270	255.11	49.55	304.66	40.85	53.41	210.40	bcd
DP 5415RR	26.7	43.8	1693	453	743	0.5521	250.06	46.44	296.51	38.09	50.26	208.15	bcd
PM HS26	25.0	44.7	1456	364	651	0.5241	190.93	40.73	231.68	32.76	21.94	176.97	ced
PM 2326RR	25.7	44.6	1580	407	706	0.5011	203.24	44.11	247.34	35.55	43.13	168.67	ed
All-Tex Atlas RR	26.0	45.5	1514	394	689	0.4931	194.24	43.07	237.31	34.07	42.54	160.70	e
PM 2379RR	26.4	45.3	1470	389	667	0.4836	187.72	41.70	229.42	33.07	43.53	152.82	e
Test average	26.3	43.7	1696	447	741	0.5222	234.24	46.31	280.55	38.16	36.88	205.51	
CV, %	3.2	2.6	10.4	10.5	10.4	5.3	11.2	10.4	10.9	10.4	--	13.1	
OSL	0.0018	0.0041	0.0242	0.0041	0.1706	0.1142	0.0006	0.1720	0.0014	0.0241	--	0.0004	
LSD 0.05	1.4	2.0	303	81	NS	NS	45.15	NS	52.63	6.81	--	46.46	

For net value/acre, means within a column with the same letter are not significantly different at the 0.05 probability level.

CV - coefficient of variation, LSD - least significant difference.

OSL - observed significance level, or probability of a great F value.

Note: some columns may not add up due to rounding error.

Assumes:

$2.25/cwt ginning cost.

$125/ton for seed.

Value for lint based on CCC loan value from grab samples and ITC HVI results.

Table 2. HVI fiber property results from the dryland replicated cotton systems variety demonstration, AG-CARES, 2003.

Variety	Micronaire	Staple	Uniformity	Strength	Elongation	Leaf	Rd	+b	Color grade	
	units	32nds inches	%	g/tex	%	grade	reflectance	yellowness	color 1	color 2
AFD 2485	4.7	36.2	82.9	32.1	3.8	1.3	76.2	7.4	3.6	1.0
All-Tex Atlas RR	4.5	32.6	81.5	29.5	5.9	2.0	73.4	7.7	4.0	1.0
BCG 24R	4.5	34.2	81.7	28.8	6.6	1.0	78.6	7.7	3.0	1.0
Douglas King CT210	3.5	34.7	80.1	29.1	6.2	1.0	79.2	7.6	2.6	1.0
DP 5415RR	4.3	35.3	81.2	29.1	6.5	1.0	77.9	7.8	3.0	1.0
FM 958	4.7	36.2	82.6	32.6	3.7	1.6	76.8	7.2	3.6	1.0
PM HS26	4.7	33.3	82.8	30.9	6.6	1.3	75.7	7.8	3.6	1.0
PM 2326RR	4.8	33.7	82.9	30.7	5.6	1.3	74.4	7.7	4.0	1.0
PM 2379RR	4.9	32.8	82.2	29.2	7.6	1.6	75.8	7.9	3.6	1.0
ST 5303R	4.8	34.2	82.7	31.6	5.2	1.0	77.0	7.9	3.3	1.0
Test average	4.5	34.3	82.1	30.4	5.8	1.3	76.5	7.7	3.4	1.0
CV, %	5.3	1.5	0.7	1.6	4.6	30.9	1.2	2.2	12.7	--
OSL	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0769	<0.0001	0.0009	0.0198	--
LSD 0.05	0.4	0.9	0.9	0.8	0.4	NS	1.5	0.2	0.8	--

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference.

TITLE:

Results of the Dryland Regional Cotton Variety Test at AG-CARES, Lamesa, TX 2003.

AUTHORS:

John R. Gannaway, Lyndon Schoenhals, Anna Hall, and Valerie Morgan, Professor, Senior Research Associate, Research Associate, and Technician

MATERIALS AND METHODS:

Test:	Regional Cotton Variety
Planting Date:	May 30
Row Spacing:	40-in.
Planting Pattern:	Solid
Herbicide:	Treflan @ 1.25 pt/A applied pre-plant
Fertilizer:	None
Rainfall:	April - September, 9.9 inches
Insecticide:	None
Harvest Aids:	Gramoxone Max @ 6 oz/A on October 16
	Gramoxone Max @ 16 oz/A on October 28
Harvest Date:	November 5
Freeze Date:	November 23

RESULTS AND DISCUSSION:

Yield ranged from 528 lbs/A down to 185 lbs./A. This was more than twice what yields were in 2002. Fiber quality was acceptable in most cases. However, 11 of the entries exhibited micronaire values of 5.0 or greater.

Table 1. Results of the dryland cotton variety test at AG-CARES, Lamesa, TX 2003.

				Agronomic Properties						% Open	
		% Turnout		% Lint		Boll	Seed	Lint	Seed Per	Boll	Storm
Designation	Yield	Lint	Seed	Picked	Pulled	Size	Index	Index	Boll	Oct. 20	Resistance
Stoneville 5303 R	528	30.3	46.3	38.8	29.3	5.1	9.8	6.4	30.4	83	2.7
AFD 2485	501	29.3	41.6	40.2	30.1	4.9	10.5	7.4	26.9	49	3.0
FiberMax 819 RR	499	26.4	41.9	38.6	28.2	3.6	9.1	6.2	22.3	80	2.7
Deltapine 458 B/RR	498	29.9	46.3	39.4	29.7	3.7	8.0	5.4	27.2	76	2.8
Deltapine 468 BG2/RR	490	29.0	42.2	36.0	27.7	4.1	8.6	5.0	29.6	62	3.0
FiberMax 800 BR	478	26.7	38.9	38.9	29.1	5.7	10.7	7.1	30.9	23	2.9
Beltwide Cotton Genetics 28R	475	27.8	41.4	39.7	30.4	4.0	7.9	5.6	28.1	83	2.7
Deltapine 494 RR	474	29.8	41.4	41.6	31.6	4.2	8.3	6.2	28.2	64	2.6
Stoneville 474	453	28.2	41.6	38.7	28.7	4.5	10.3	7.0	24.7	73	2.6
Beltwide Cotton Genetics 24R	453	29.9	44.2	40.3	30.5	3.5	7.8	5.6	25.3	80	2.8
Deltapine 488 BG/RR	452	29.2	40.7	39.6	29.6	4.4	8.5	6.0	29.1	72	2.5
FiberMax 800 RR	447	27.1	40.9	38.6	29.4	5.1	10.8	7.1	27.7	53	2.5
Deltapine 5415 RR	440	27.4	43.0	38.5	29.3	4.3	8.3	5.3	31.1	66	2.7
Stoneville 4793 R	435	27.4	39.4	40.4	30.9	4.3	9.9	7.0	24.8	60	2.7
FiberMax 832	430	25.7	40.4	37.7	28.0	5.4	10.8	6.8	30.0	40	2.7
Paymaster 2167 RR	428	29.2	41.1	39.5	29.9	4.2	8.7	6.3	26.1	82	2.6
Stoneville 4892 BR	425	29.4	40.4	40.3	30.0	4.1	9.9	7.3	22.5	77	2.8
Paymaster 2266 RR	416	26.3	42.6	36.5	26.7	4.1	10.0	6.2	24.4	81	3.1
Hazera Seed HA 14	402	22.6	43.4	31.2	21.9	3.4	11.7	5.7	18.1	56	1.9
Stoneville 2448R	396	29.6	43.4	37.1	28.2	4.5	9.9	6.2	26.8	91	2.9
FiberMax 989	386	25.7	42.3	37.4	26.8	4.8	9.3	5.8	30.7	13	2.9
FiberMax 958	377	22.3	40.7	40.3	29.8	4.5	10.1	7.1	25.1	62	2.9
Tamcot Luxor	370	27.5	39.5	37.8	27.1	4.9	10.6	7.1	26.1	74	2.5
NM 970123	370	27.3	38.7	38.9	27.9	4.7	11.3	7.8	23.3	60	2.9
Acala w1218	363	27.4	41.2	37.6	29.2	4.9	10.0	6.6	27.9	56	2.8

Table 1 Cont.. Results of the dryland cotton variety test at AG-CARES, Lamesa, TX 2003.

				Agronomic Properties						% Open	
		% Turnout		% Lint		Boll	Seed	Lint	Seed Per	Boll	Storm
Designation	Yield	Lint	Seed	Picked	Pulled	Size	Index	Index	Boll	Oct. 20	Resistance
Syngenta NX 2108ss	353	27.4	41.0	40.5	30.0	4.1	9.2	6.6	25.0	88	2.8
All-Tex Atlas	312	26.5	40.9	35.8	25.7	4.3	10.3	6.2	24.7	77	2.8
AFD 2070	309	28.8	40.0	38.5	28.9	5.0	10.4	6.8	28.4	78	2.9
AFD 2074	306	27.4	43.6	38.9	29.5	4.3	9.3	6.3	26.8	77	2.9
FiberMax 5013	304	28.4	42.6	38.7	27.6	3.7	8.9	6.1	23.3	90	2.7
Hazera Seed HA 195	298	21.2	39.3	32.9	23.1	3.4	11.2	6.1	18.6	39	2.0
Paymaster 2326 RR	292	29.0	43.8	39.3	27.9	3.3	8.5	5.8	22.1	82	3.1
Stoneville 2454 R	286	28.0	36.6	39.9	29.4	3.8	9.4	6.6	23.1	73	2.8
Acala 1517-99	279	26.5	42.5	35.5	24.2	4.6	10.8	6.5	24.9	57	2.2
Hazera Seed HA 175	272	19.7	40.1	31.6	23.7	3.0	11.0	5.7	16.5	75	1.9
FiberMax 5024 BXN	264	26.1	39.5	38.4	26.9	3.5	9.1	6.0	22.2	85	3.2
PhytoGen 72 Acala	261	21.9	37.8	39.2	28.7	4.3	9.6	6.5	26.0	76	2.6
Acala 1517-95	253	23.4	39.9	35.9	26.5	4.9	11.5	7.0	25.0	58	2.4
All-Tex Atlas RR	250	27.9	39.0	38.4	28.5	3.9	9.7	6.4	23.2	86	3.2
NM 970513	185	21.3	37.0	35.0	24.8	4.0	10.8	6.1	22.8	76	2.4
Mean	380	26.9	41.2	38.0	28.1	4.2	9.7	6.4	25.5	68	2.7
C.V.%	19.0	3.0	3.4	3.4	3.6	6.8	4.8	3.0	6.1	26.3	9.5
LSD 0.05	85	1.4	2.4	2.2	1.8	0.5	0.8	0.3	2.6	21	0.3

Table 1A. Results of the dryland cotton variety test at AG-CARES, Lamesa, TX 2003.

Designation	Micro-naire	Length	Uni-formity	Strength	Elon-gation	Leaf Index	Rd	+b	Color Grade[1/]	Loan Value/lb.	Loan Value/A
Stoneville 5303 R	5.2	1.05	83.1	29.9	5.9	1	76.9	8.3	31-1,31-2	0.4818	254.39
AFD 2485	5.0	1.13	82.7	30.7	4.5	1	76.9	7.5	31-2,41-1	0.5330	267.03
FiberMax 819 RR	4.5	1.15	84.0	30.5	6.0	2	77.7	7.2	31-2,41-1	0.5540	276.45
Deltapine 458 B/RR	4.8	1.07	81.1	29.5	6.6	1	79.8	8.4	21-1,21-2	0.5285	263.19
Deltapine 468 BG2/RR	4.6	1.10	82.2	28.9	6.9	2	75.2	8.1	31-2,41-2	0.5448	266.95
FiberMax 800 BR	4.4	1.16	82.0	30.5	6.0	1	79.1	8.0	21-2,31-1	0.5653	270.21
Beltwide Cotton Genetics 28R	4.5	1.11	81.0	27.8	6.2	1	76.7	8.0	21-2,41-1	0.5485	260.54
Deltapine 494 RR	4.8	1.11	82.1	29.4	6.5	1	76.5	8.4	31-1,31-2	0.5548	262.98
Stoneville 474	4.9	1.07	82.2	27.3	7.2	1	77.7	9.0	21-3,31-3	0.5175	234.43
Beltwide Cotton Genetics 24R	5.0	1.03	81.1	28.1	7.4	1	78.4	7.7	21-2,41-1	0.4933	223.46
Deltapine 488 BG/RR	4.7	1.11	81.7	29.2	6.3	1	77.2	8.4	31-1,31-2	0.5525	249.73
FiberMax 800 RR	4.6	1.10	83.6	31.8	5.2	1	78.1	8.6	21-2,31-1	0.5643	252.24
Deltapine 5415 RR	4.3	1.10	82.1	27.7	7.3	1	79.5	8.2	21-1,31-1	0.5280	232.32
Stoneville 4793 R	5.1	1.03	81.9	27.4	7.1	1	76.1	9.4	21-4,31-4	0.4915	213.80
FiberMax 832	4.2	1.15	82.1	30.7	5.3	1	79.0	8.3	21-2,31-1	0.5628	242.00
Paymaster 2167 RR	5.3	0.96	79.4	27.6	7.2	1	74.3	7.7	31-2,41-2	0.4450	190.46
Stoneville 4892 BR	5.6	1.03	82.1	27.0	7.2	1	74.9	8.4	31-2,41-3	0.4628	196.69
Paymaster 2266 RR	4.9	1.05	82.0	29.1	7.4	2	76.2	8.3	31-2	0.5210	216.74
Hazera Seed HA 14	3.9	1.33	82.7	34.4	7.1	1	72.4	10.3	32-1,32-2	0.5410	217.48
Stoneville 2448R	5.0	1.05	82.4	29.8	6.5	1	75.7	8.5	31-1,41-3	0.4993	197.72
FiberMax 989	3.5	1.16	81.9	31.1	5.5	1	79.9	8.0	21-2	0.5578	215.31
FiberMax 958	5.1	1.13	81.5	30.5	4.1	1	78.8	7.7	21-2,31-2	0.5225	196.98
Tamcot Luxor	4.6	1.04	82.9	28.3	6.9	1	76.0	8.4	31-3,41-1	0.5023	185.85
NM 970123	4.7	1.12	82.2	31.1	5.9	1	78.1	7.9	31-1,31-2	0.5500	203.50
Acala w1218	4.9	1.10	82.1	30.6	6.3	2	75.4	8.0	31-1,41-2	0.5285	191.85

Table 1A Cont. Results of the dryland cotton variety test at AG-CARES, Lamesa, TX 2003.

Designation	Micro-naire	Length	Uni-formity	Strength	Elon-gation	Leaf Index	Rd	+b	Color Grade[1/]	Loan Value/lb.	Loan Value/A
Syngenta NX 2108ss	4.9	1.01	81.9	27.9	6.8	2	78.0	8.2	21-2,31-2	0.4808	169.72
All-Tex Atlas	4.9	0.98	81.1	28.9	7.6	1	75.8	7.4	41-1	0.4778	149.07
AFD 2070	4.9	1.01	80.5	27.6	6.3	1	75.0	8.0	41-1	0.4893	151.19
AFD 2074	4.7	1.07	81.8	28.5	6.8	1	76.7	8.0	31-2	0.5265	161.11
FiberMax 5013	5.0	1.00	81.8	29.7	6.9	1	75.8	7.9	31-2,41-1	0.4555	138.47
Hazera Seed HA 195	3.6	1.30	82.2	34.7	6.4	2	70.9	10.4	33-1,42-1	0.4873	145.22
Paymaster 2326 RR	5.0	1.02	81.4	29.5	7.1	2	75.4	8.4	31-2,41-3	0.4785	139.72
Stoneville 2454 R	5.1	0.99	80.4	27.4	7.3	1	77.3	8.5	31-2,31-3	0.4733	135.36
Acala 1517-99	4.4	1.15	82.1	33.3	5.6	2	74.9	8.2	31-2,41-1	0.5538	154.51
Hazera Seed HA 175	3.9	1.26	82.3	35.1	6.7	1	71.8	9.9	32-2,42-1	0.5283	143.70
FiberMax 5024 BXN	4.7	1.01	80.2	28.4	7.1	1	79.3	8.4	21-1,31-1	0.4960	130.94
PhytoGen 72 Acala	4.2	1.12	81.5	28.9	7.5	1	78.9	8.4	21-2,31-1	0.5590	145.90
Acala 1517-95	4.5	1.14	83.1	33.8	5.1	2	73.6	7.7	41-1,41-2	0.5463	138.21
All-Tex Atlas RR	4.8	0.92	79.7	27.6	7.4	1	76.9	8.8	31-1,31-3	0.4730	118.25
NM 970513	4.2	1.12	83.1	34.8	4.8	2	75.2	8.0	31-2,41-1	0.5545	102.58
Mean	4.7	1.09	81.9	29.8	6.4	1	76.5	8.3		0.5180	
C.V.%	6.4	2.7	1.1	5.0	5.3	34.2	1.8	4.4		4.9	
LSD 0.05	0.5	0.05	1.6	2.5	0.6	1	2.4	0.6		0.0400	

1/ Fiber quality determinations were made on samples from two reps. It the color grade from these two samples were identical, only one color grade is reported. If they were different, both are reported.