



Result Demonstration/Applied Research Report

JONES COUNTY DRYLAND COTTON VARIETY DEMONSTRATION - 2007

Cooperator: Erick Richards

Dr. Ed Bynum, Extension Agent - IPM for Jones, Mitchell, Nolan, and Scurry Counties
Todd Vineyard, CEA-AG, Jones County, Anson, Texas
Dr. Billy E. Warrick, Professor and Extension Agronomist

SUMMARY

Twenty-four cotton varieties were planted to compare fiber yield and quality characteristic under similar dryland production conditions. Stoneville ST 5327 RF, Deltapine 110 RF, Phytogen 485 WF, Deltapine 147 RF, Cotton Genetics 3520 B2F, and Deltapine 455 BR all had lint yields above 1,400 lbs per acre. FiberMax 960 B2F had the highest loan value at 59.85 cents per pound. This is only one years result and continued testing is recommended before making a significant switch to a new variety.

PROBLEMS

Several new varieties of cotton become available each year and when combined with the varieties already available makes planting seed selection increasingly difficult. Producers need local data to help in selecting adapted high yielding varieties with desirable fiber quality traits. The primary fiber quality characteristics of interest to producers are higher strength and longer staple.

OBJECTIVE

With improved varieties being introduced each season, testing is a necessary part of any farming operation. This field test was established to compare new and traditional varieties. The main focus is to find those varieties that provide high lint yield with desirable fiber traits. Since some varieties have a limited success within a narrow range of production conditions, local testing is necessary and justified. This demonstration will allow area producers to determine if new varieties being introduced are more productive than what they currently plant. Also, it will provide area producers with the opportunity to examine differences in plant development between the old and new varieties.

MATERIALS AND METHODS

Cooperator:	Erick Richards
County Precinct:	2
Location:	East of FM 2703 on CR 210, Jones County, TX
Planting Date:	June 11, 2007
Planting Rate:	1 seed every 4 inches
Row Width:	40 in. centers
Row Length:	820 feet
Rows Planted/variety:	6 rows
Planting Pattern:	skip row, 2 in - 1 out
Last years crop:	wheat
Irrigated:	No.
Soil Moisture at Planting:	Very Good
Tillage System:	Conventional
Soil type:	Rowena clay loam
Soil pH:	8.2
Fertilizer:	June 11, 2007 - applied 4 gal/row acre of High Energy N and 2 gal/row acre of ProGenerator
Herbicide:	Roundup Original @ 22 oz/ac applied OTT at 4 true leaf stage and again during the season with a hooded sprayer
Insecticide:	I ntruder @ 1.0 oz/ac during squaring for fleahopper
Plant Growth Regulators:	Pix @ 12 oz/ac at 5 NAWF
Harvest Date:	November 23, 2007

The test plots were stripper harvested to determine the yield per acre. The sample for each variety was large enough to weigh with a boll buggy. Grab samples from each variety were ginned at the Texas AgriLife Research and Extension Center at Lubbock to determine the percent turnout of lint and seed. A portion of the ginned lint was then taken to the International Textile Center for fiber quality analysis. Yield and fiber quality information are summarized in Table 1.

RESULTS, DISCUSSION AND ECONOMIC ANALYSIS

As seen in Table 1, the yields in this test ranged from 949 to 1553 pounds per acre. Stoneville ST 5327 F, Deltapine 110 F, Phytogen 485 WF, Deltapine 147 F, Cotton Genetics 3520 B2F, and Deltapine 455 BR all had lint yields above 1,400 lbs per acre in this test. FiberMax 960 B2F had the highest loan value at 59.85 cents per pound. Yields this year were significantly higher due to favorable moisture throughout the growing season. Fiber quality for all of the varieties was very good which resulted in very high loan values and excellent economic returns.

Table 1. Yield per row acre, fiber quality, and economic returns from Erick Richards' 2007 Dryland Cotton Variety Test (Jones County).

Variety	Yield Per Row Acre				Fiber Quality					CCC Loan Value	Lint Gross Return (\$/acre)	Seed Gross Return (\$/acre)	Total Gross Return (\$/acre)
	In Pounds		% Turnout		Color-Leaf	Fiber Length (staple)	Mic	Strength (gram/tex)	Uniformity				
	Lint	Seed	Lint	Seed									
Stoneville 5327 F	1553	2328	33.2	49.8	212	37	4.0	31.8	80.8	58.05	901.26	174.59	1075.85
Deltapine 110 F	1472	2199	31.8	47.4	312	38	4.2	32.5	76.7	59.50	875.83	164.93	1040.76
Phytogen 485 WF	1463	2342	30.9	49.5	313	37	4.3	29.9	77.0	58.05	849.32	175.62	1024.93
Deltapine 147 F	1473	2203	34.0	50.9	211	38	3.8	29.5	81.9	57.85	852.37	165.23	1017.60
Cotton Genetics 3520 B2F	1457	2183	33.2	49.8	313	37	4.1	26.5	76.9	58.10	846.48	163.69	1010.17
FiberMax 9063 B2F	1382	2251	32.4	52.8	212	37	4.1	29.9	82.6	59.50	822.26	168.82	991.08
Phytogen 370 WR	1398	2168	32.2	49.9	311	36	4.0	30.4	78.3	59.10	826.40	162.61	989.01
Stoneville ST 4554 B2F	1390	2132	32.7	50.2	213	36	4.4	27.8	79.9	58.85	818.13	159.89	978.02
Deltapine 434 R	1398	2009	34.6	49.8	211	38	3.9	27.5	81.0	59.05	825.31	150.66	975.98
Americot 1532 B2F	1392	2171	32.7	50.9	211	38	4.0	26.2	81.1	57.70	803.30	162.85	966.15
Deltapine 455 BR	1448	1904	34.1	44.8	211	37	3.7	32.6	80.7	56.80	822.42	142.80	965.23
FiberMax 960 B2R	1328	2037	33.6	51.5	111	37	3.8	29.5	84.4	59.85	795.07	152.76	947.83
FiberMax 9058 F	1333	2010	32.9	49.6	212	38	3.9	30.0	81.4	59.05	787.25	150.72	937.97
Deltapine 494 R	1320	1843	34.8	48.5	311	37	4.1	31.0	80.3	59.65	787.65	138.24	925.88
FiberMax 1880 B2F	1319	2264	30.5	52.3	311	37	3.5	27.7	79.7	56.75	748.51	169.82	918.33
Stoneville ST 4700 B2F	1267	2064	30.9	50.4	312	38	4.1	27.1	80.3	59.55	754.23	154.77	909.00
Deltapine 167 F	1286	2086	32.2	52.2	212	38	3.9	31.3	81.9	57.60	740.77	156.45	897.22
Paymaster 3535 BR	1274	1832	34.3	49.3	313	36	3.9	27.5	80.2	59.10	752.87	137.39	890.27
Stoneville ST 6611 B2F	1228	2065	31.2	52.5	211	37	4.2	29.4	81.0	58.50	718.15	154.89	873.04
Phytogen 470 WR	1228	1951	31.2	49.6	211	36	4.0	29.5	81.3	59.10	725.81	146.33	872.14
AllTex ARID B2F	1160	2281	28.0	55.0	312	36	3.9	27.3	80.1	58.85	682.91	171.07	853.98
Americot X 821 R	1109	1859	29.4	49.3	211	36	3.9	26.7	79.8	59.30	657.89	139.45	797.34
Stoneville ST 4427 B2F	1107	1878	29.7	50.3	313	36	3.8	30.2	80.1	57.60	637.57	140.86	778.43
Deltapine 143 B2F	949	1639	29.3	50.6	313	37	3.5	29.7	81.1	57.60	546.51	122.93	669.44

Seed income calculated using a price of \$150 per ton.

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Stoneville Pedigreed Seed owned by BayerCropScience who provided Stoneville ST 5327 B2F, Stoneville ST 4554 B2F, Stoneville ST 4700 B2F, Stoneville ST 6611 B2F, and Stoneville ST 4427 B2F.

Delta and Pine Land Company who provided Deltapine 110 F, Deltapine 147 F, Deltapine 434 R, Deltapine 455 BR, Deltapine 494 R, Deltapine 167 F, Paymaster 3535 BR, and Deltapine 143 B2F.

Dow Agrosiences who provided Phytogen 485 WF, Phytogen 370 WF, and Phytogen 470 WR.

Croplan Genetics who provided Croplan Genetics 3520 B2F.

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