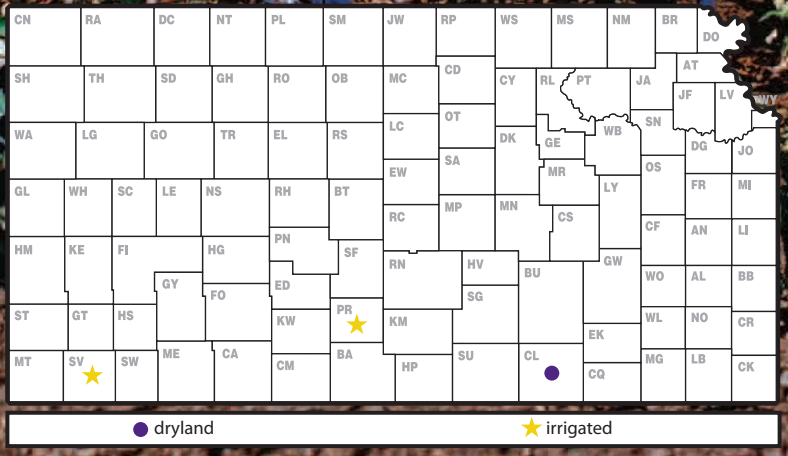
2011

Kansas Performance Tests with

Cotton Varieties

Report of Progress 1064



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2011 Performance Tests

Entrants in 2011 Kansas Cotton Performance Tests

Americot/Nexgen Americot, Inc. Lubbock, TX 806-793-1431	Dyna-Gro Greeley, CO 970-356-4400	PhytoGen Dow AgroSciences Indianapolis, IN 317-337-3000
DP&L (Deltapine) Monsanto St. Louis, MO 800-511-SEED	Fiber Max Bayer CropScience Research Triangle Park, NC 866-99-BAYER	Stoneville Bayer CropScience Research Triangle Park, NC 866-99-BAYER

Contribution no. 12-407-S from the Kansas Agricultural Experiment Station.

2011 PERFORMANCE TESTS

Objectives and Procedures

The Kansas Agricultural Experiment Station established an official cotton testing program in 1980 to provide Kansas growers with unbiased performance comparisons of cotton varieties marketed in the state. Companies enter varieties of their choice and pay entry fees to cover part of the costs of conducting the tests.

Descriptive information is presented with the results for each test. This information, including soil type, establishment methods, irrigation, harvest dates, and growing conditions unique to that location, can help explain test and/or variety performance.

In addition to lint yield and the yield as a percentage of test average, each table includes observations on cotton fiber quality. Each bale receives a rating on micronaire (Mic), length, uniformity index, strength, and color grade.

At the bottom of each column, the least significant difference (LSD) is listed at the 0.05 level. These values indicate how large of a difference is needed to be confident that one variety is superior to another. Differences between varieties that are equal to or greater than the 0.05 LSD have only a 1 in 20 chance of being due to chance or error.

The coefficient of variability (CV) provides an estimate of the consistency of the results of a particular test. In these tests, CV less than 10% generally indicates reliable, uniform data, whereas CV of 10 to 15% are not uncommon and generally indicate the data are acceptable for rough comparisons. Tests with CV greater than 15% still may be useful, but variety comparisons lack precision.

Harvest Statistics

The November 9 Crops report predicted an 83,000-bale crop, up 1% from the previous year. Yields averaged 494 pounds per acre, which is significantly down from the previous high of 787 in 2010. Harvested acreage, at 67,000 acres, is up 17,000 acres from last year (Kansas Agricultural Statistics Service, Topeka).

Statewide Growing Conditions

Weather conditions throughout the cotton growing region in Kansas, especially south central and southwest, were dominated by above-normal temperatures and heat unit accumulations and below-normal precipitation. At the Stevens County location, in-season precipitation was 1.30 inches — nearly 4 inches below normal — with preseason precipitation prior to planting significantly below normal as well. In-season precipitation at the Pratt County site was approximately 2.15 inches, 3 inches below normal. Due to these extreme circumstances, dryland trials at Stevens and Pratt Counties had to be abandoned.

A positive to the heat, however, was the accumulation of heat units, typically a leading challenge in Kansas cotton production. All three studies harvested for yield had cumulative heat unit accumulation significantly above normal. Although drought stress limited boll number per plant, the heat units allowed for a higher percentage of harvestable bolls and had a positive impact on fiber quality. In scenarios where irrigation was adequate, cotton yields were quite productive.

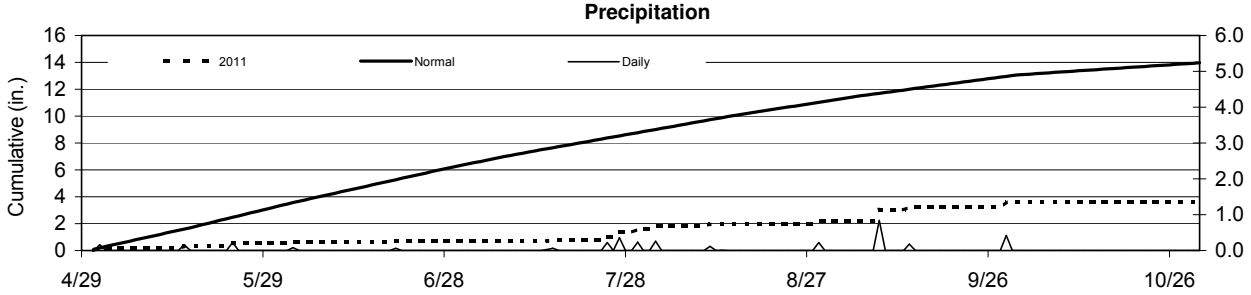
Production

Detailed information on planting, fertilizing, weed control, and disease and insect control can be found in the *Cotton Production in Kansas* publication issued by the Kansas State University Agricultural Experiment Station and Cooperative Extension Service at:
http://www.ksre.ksu.edu/library/crpsl2/mf1088.pdf.

Stevens County Irrigated Cotton Performance Test, 2011

County:	Stevens Co. Irrigated
Location:	Lahey Farms (Moscow), Tom Lahey and Marcus Howe
Soil Type:	Richfield
Seeding Rate:	70,000 seeds/a
Dates:	
Planting:	5/25/2011
Harvest:	11/11/2011
Previous Crop:	Corn

Precipitation



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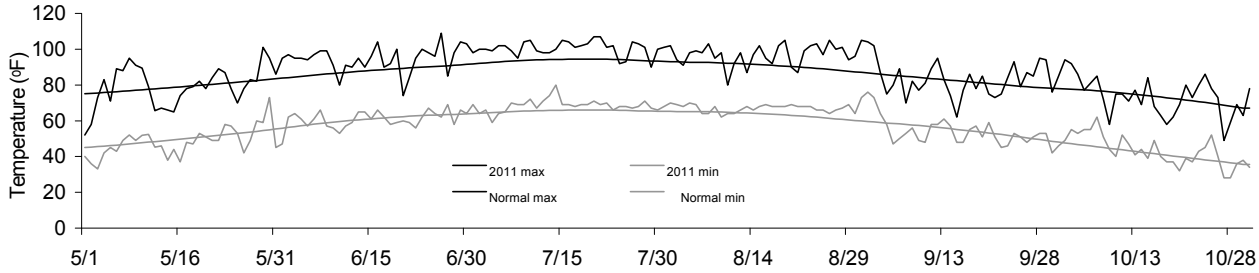
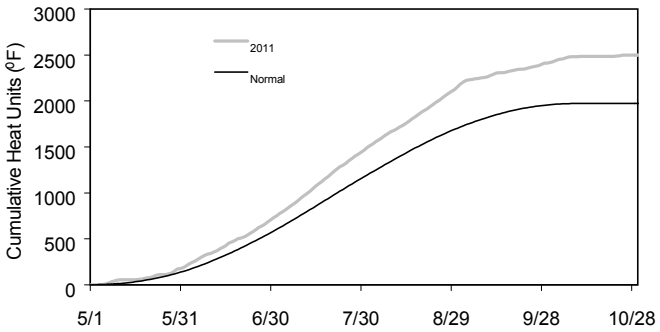




Month	Avg Temp 2011	Avg Temp Normal	Precipitation 2011	Precipitation Normal	GDD 2011	GDD Normal
May	64	64	0.5	3.2	178	138
June	78	74	0.1	3.0	530	431
July	84	80	0.9	2.6	759	607
Aug	82	77	0.6	2.3	684	528
Sept	69	68	1.4	1.9	262	253
Oct	59	58	0.0	1.0	86	16
Total	73	70	3.6	14.0	2498	1972

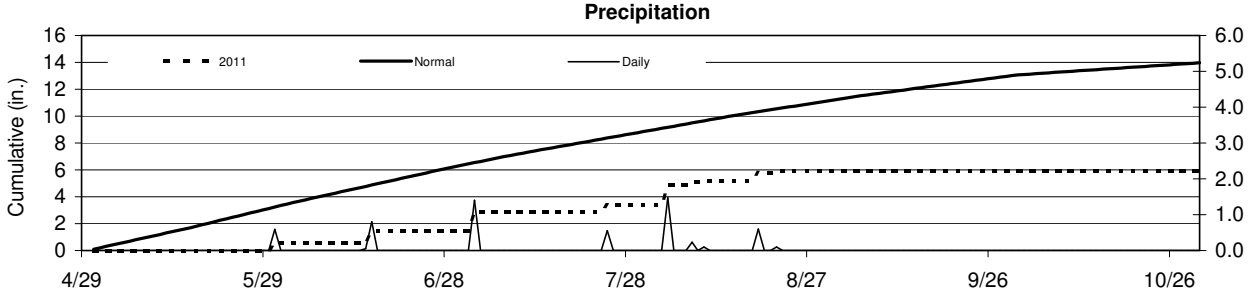
Table 1. Stevens County Irrigated Cotton Performance Test, 2011

		Lint yield, lb/a					2011							
Company	Variety	2011	2010	2009	2-yr avg	3-yr avg	Yield % of test avg	% Lint	Mic	Length in	Unif. %	Strength g/tex	Color grade	
Fibermax	FM_9101GT	1541	--	--	--	--	128	0.35	4.07	1.15	81.60	29.25	51	1
Stoneville	ST_5288_B2F	1414	1976	--	1695	--	118	0.38	4.96	1.11	81.83	25.73	51	1
BayerCS	BCSX_1150B2F	1349	--	--	--	--	112	0.35	4.17	1.14	82.57	30.37	41	1
All-Tex	Edge_B2RF	1317	--	--	--	--	110	0.33	3.89	1.13	82.10	28.87	41	2
Nexgen	NG_2549B2RF	1319	1909	--	1614	--	110	0.34	4.33	1.09	83.97	28.83	51	1
All-Tex	Rapid_B2RF	1268	--	--	--	--	106	0.34	4.68	1.15	83.47	31.47	51	1
Fibermax	FM_2011GT	1266	--	--	--	--	106	0.36	4.54	1.13	82.70	28.07	51	1
DP&L	DP_1212B2RF	1261	--	--	--	--	105	0.36	4.58	1.13	82.43	29.43	51	1
BayerCS	BX_1262B2F	1240	--	--	--	--	103	0.36	4.20	1.16	82.43	30.07	41	2
BayerCS	BX_1264B2F	1219	--	--	--	--	102	0.33	3.81	1.11	81.83	28.17	41	2
Fibermax	FM_9250GTLL	1194	--	--	--	--	100	0.34	4.12	1.14	81.57	27.80	41	2
DP&L	DP_104_B2RF	1174	2078	1349	1626	1533	98	0.32	3.78	1.14	83.33	30.67	51	1
Fibermax	FM_9180B2F	1173	1904	1116	1539	1398	98	0.32	4.29	1.16	83.10	30.85	41	2
Stoneville	ST_4288_B2F	1149	2072	745	1610	1322	96	0.34	4.09	1.12	81.80	28.73	51	1
DP&L	DP0912_B2RF	1148	2248	1258	1698	1551	96	0.36	4.44	1.04	81.05	26.90	41	2
DP&L	DP_1219B2RF	1134	--	--	--	--	95	0.32	3.27	1.14	81.63	29.27	41	1
Fibermax	FM_9058F	1126	--	1319	--	--	94	0.33	4.08	1.15	81.80	28.20	51	1
All-Tex	Epic_RF	1121	--	--	--	--	93	0.35	4.51	1.10	81.73	28.00	41	2
Fibermax	FM_1740B2F	1114	2147	1247	1630	1503	93	0.34	4.21	1.08	80.73	27.63	41	2
PhytoGen	PHY499_WRF	1106	--	--	--	--	92	0.37	4.14	1.09	83.00	28.70	41	2
PhytoGen	PHY367_WRF	1103	2077	1137	1590	1439	92	0.34	3.90	1.12	81.43	27.43	41	1
Fibermax	FM_2484B2F	1102	--	--	--	--	92	0.34	3.71	1.13	81.37	27.70	41	2
Nexgen	NG_3348B2RF	1099	--	--	--	--	92	0.34	3.68	1.13	81.57	29.17	51	1
Nexgen	NG_2051B2RF	1000	--	--	--	--	83	0.32	4.17	1.10	80.53	25.63	51	1
PhytoGen	PHY_375_WRF	911	2075	921	1493	1302	76	0.35	4.28	1.09	80.67	25.90	51	1
	Average	1200	2017	1043	1608	1420	100	0.34	4.16	1.12	81.93	28.43	--	
	CV (%)	18	17	22	17	19		6	11	3	1	7	--	
	LSD(0.05)	227	432	293	330	318		0.02	0.52	0.05	1.63	2.20	--	

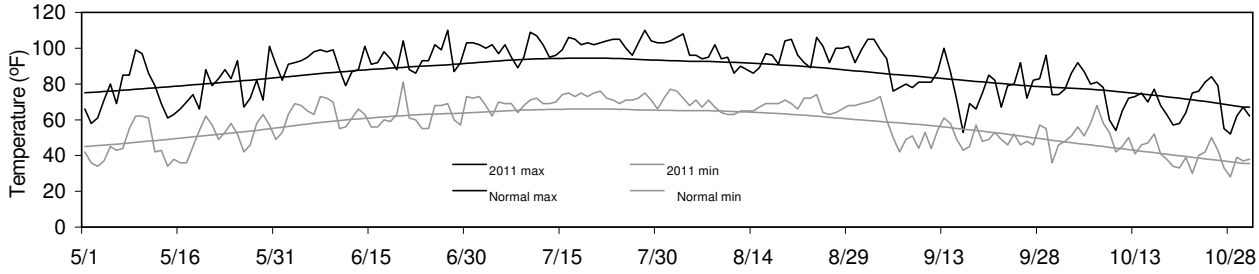
Pratt County Irrigated Cotton Performance Test, 2011

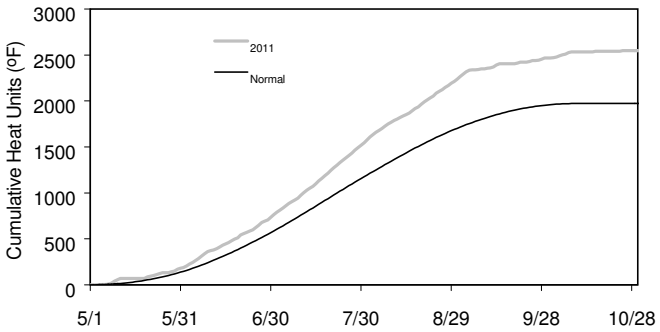
County:	Pratt Co. Irrigated
Location:	Stuart Briggeman Farm (Cullison)
Soil Type:	Saltcreek and Narron Fine Sandy Loam
Seeding Rate:	70,000 seeds/a
Dates:	
Planting:	5/18/2011
Harvest:	11/19/2011
Previous Crop:	Corn

Precipitation



Temperature





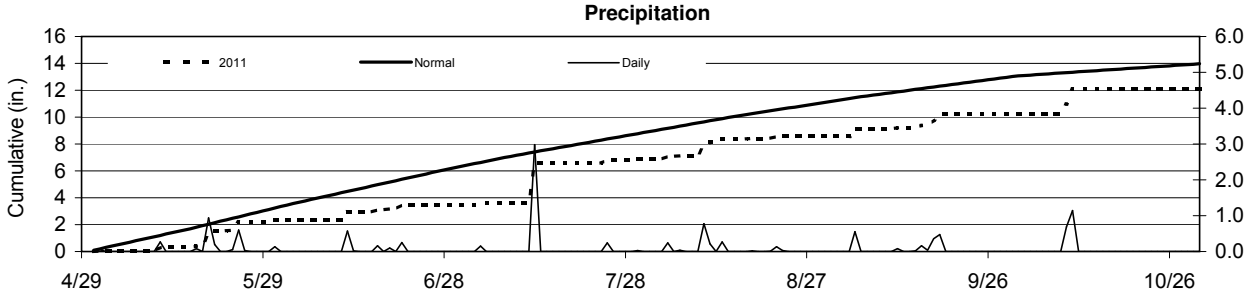
Month	Avg Temp 2011	Avg Temp Normal	Precipitation 2011	Precipitation Normal	GDD 2011	GDD Normal
May	63	64	0.6	3.2	180	138
June	78	74	0.9	3.0	554	431
July	86	80	2.0	2.6	812	607
Aug	82	77	2.5	2.3	692	528
Sept	67	68	0.0	1.9	231	253
Oct	58	59	0.0	1.0	81	16
Total	72	70	5.9	14.0	2549	1972

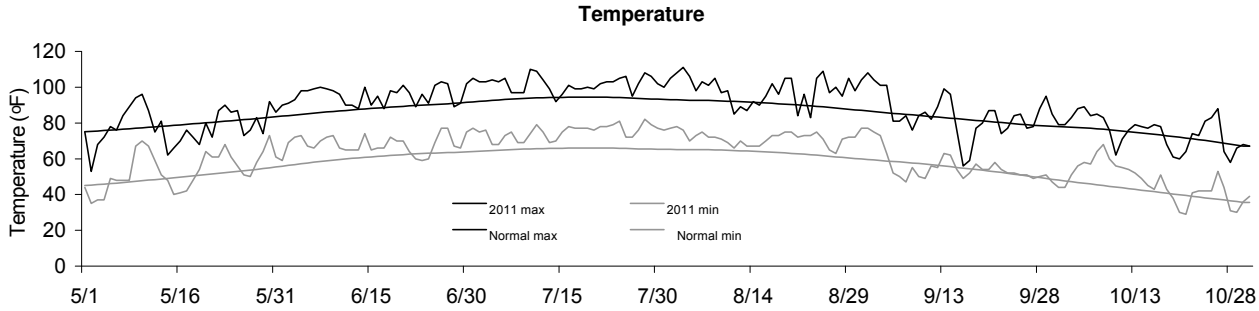
Table 2. Pratt County Irrigated Cotton Performance Test, 2011

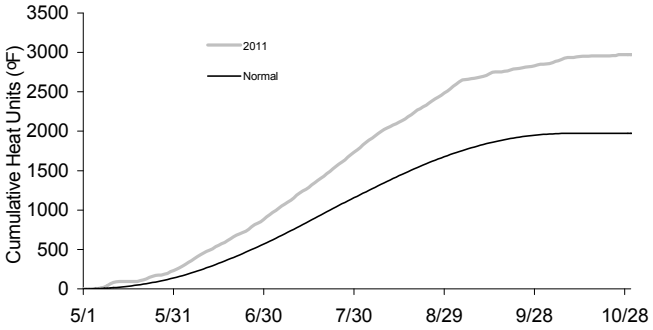
		Lint yield, lb/a					2011							
			RN	PR	2-yr	3-yr	Yield % of	%		Length	Unif.	Strength	Color	
Company	Variety	2011	2010	2009	avg	avg	test avg	Lint	Mic	in	%	g/tex	grade	
Fibermax	FM_1740B2F	1745	2061	1152	1903	1653	133	0.32	3.81	1.14	82.60	31.05	41	1
BayerCS	BX_1262B2F	1722	--	--	--	--	131	0.32	3.81	1.18	81.15	31.95	42	2
Fibermax	FM_2011GT	1671	--	--	--	--	127	0.33	3.83	1.17	83.50	30.90	41	2
Fibermax	FM_9058F	1570	--	721	--	--	120	0.30	3.79	1.17	80.90	29.00	51	1
BayerCS	BX_1264B2F	1561	--	--	--	--	119	0.29	3.42	1.17	82.30	31.10	41	4
BayerCS	BCSX_1150B2F	1559	--	--	--	--	119	0.30	4.09	1.22	84.10	32.90	52	1
All-Tex	Rapid_B2RF	1531	--	--	--	--	117	0.30	3.67	1.18	83.20	34.90	61	1
PhytoGen	PHY499_WRF	1504	--	--	--	--	115	0.31	3.67	1.15	83.65	33.10	42	2
Stoneville	ST_4288_B2F	1505	2114	951	1809	1523	115	0.29	3.83	1.14	83.10	29.60	43	1
Nexgen	NG_2549B2RF	1456	--	--	--	--	111	0.30	3.88	1.09	83.70	28.80	52	1
Fibermax	FM_9250GTLL	1454	--	--	--	--	111	0.29	3.74	1.18	84.00	32.30	51	1
DP&L	DP_1212B2RF	1442	--	--	--	--	110	0.32	4.22	1.19	82.20	32.85	51	1
Fibermax	FM_2484B2F	1415	--	--	--	--	108	0.32	3.79	1.17	82.40	30.30	41	1
All-Tex	Edge_B2RF	1397	--	--	--	--	106	0.31	4.10	1.14	80.80	30.80	51	1
Stoneville	ST_5288_B2F	1317	2107	--	1712	--	100	0.33	4.17	1.14	80.20	28.80	51	1
PhytoGen	PHY367_WRF	1294	2131	1139	1712	1521	99	0.29	3.24	1.19	83.30	31.90	42	2
DP&L	DP_1219B2RF	1242	--	--	--	--	95	0.27	3.54	1.19	82.80	33.73	41	3
PhytoGen	PHY_375_WRF	1195	1849	993	1522	1346	91	0.30	3.78	1.13	82.75	28.55	42	2
DP&L	DP_104_B2RF	1169	1839	--	1504	--	89	0.29	3.51	1.16	84.43	32.50	51	3
Fibermax	FM_9180B2F	1141	2178	850	1659	1390	87	0.29	3.64	1.17	84.53	32.43	41	1
All-Tex	Epic_RF	1111	--	--	--	--	85	0.29	3.84	1.14	82.75	30.50	42	1
Nexgen	NG_2051B2RF	1106	--	--	--	--	84	0.27	3.66	1.14	81.20	26.70	51	3
Nexgen	NG_1572RF	1092	--	--	--	--	83	0.28	3.10	1.17	82.17	29.50	51	1
DP&L	DP0912_B2RF	1076	1885	864	1481	1275	82	0.30	4.21	1.09	82.25	31.15	42	1
Nexgen	NG_1551_RF	997	--	--	--	--	76	0.26	3.74	1.12	81.85	35.95	41	2
Fibermax	FM_9101GT	994	--	--	--	--	76	0.29	3.68	1.19	82.90	30.45	41	4
Nexgen	NG_3348B2RF	896	2115	--	1505	--	68	0.29	3.58	1.14	84.20	30.70	41	4
Nexgen	NG_4010_B2RF	476	2038	--	1257	--	36	0.26	3.82	1.17	84.40	32.60	42	2
	Average	1313	2084	1021	1699	1473	100	0.29	3.59	1.16	82.92	31.52	--	
	CV (%)	30	23	24	27	26		8	9	3	1	7	--	
	LSD(0.05)	386	614	320	500	440		0.02	0.44	0.04	1.65	2.35	--	

Cowley County Dryland Cotton Performance Test, 2011

County:	Cowley Co. Dryland
Location:	Ray Farms (Winfield), David and Martin Ray and Andy Lee
Soil Type:	Vanoss Silt Loam
Seeding Rate:	70,000 seeds/a
Dates:	
Planting:	5/18/2011
Harvest:	10/30/2011
Previous Crop:	Soybean







Month	Avg Temp 2011	Avg Temp Normal	Precipitation 2011	Precipitation Normal	GDD 2011	GDD Normal
May	66	64	2.4	3.2	232	138
June	82	74	1.1	3.0	650	431
July	88	80	3.4	2.6	881	607
Aug	85	77	1.7	2.3	777	528
Sept	70	68	1.7	1.9	312	253
Oct	61	60	1.8	1.0	122	16
Total	75	70	12.1	14.0	2972	1972

Table 3. Cowley County Dryland Cotton Performance Test, 2011

		Lint yield, lb/a					2011							
Company	Variety	2011	2010	2009	2-yr avg	3-yr avg	Yield % of test avg	% Lint	Mic	Length in	Unif. %	Strength g/tex	Color grade	
PhytoGen	PHY499_WRF	1407	--	--	--	--	140	0.32	4.08	1.09	82.53	32.07	51	1
PhytoGen	PHY367_WRF	1172	--	1076	--	--	117	0.28	3.74	1.11	81.23	30.80	51	1
BayerCS	BX_1262B2F	1185	--	--	--	--	118	0.29	3.81	1.15	81.93	33.07	51	1
Americot	AM_1511B2RF	1181	--	--	--	--	118	0.31	4.22	1.07	80.43	30.20	41	2
Stoneville	ST_4288_B2F	1152	--	568	--	--	115	0.26	3.83	1.10	79.90	28.87	51	1
BayerCS	BX_1264B2F	1141	--	--	--	--	114	0.28	3.63	1.14	81.63	30.10	51	1
Fibermax	FM_2011GT	1117	--	--	--	--	112	0.29	3.95	1.12	82.20	30.17	41	2
All-Tex	Rapid_B2RF	1071	--	--	--	--	107	0.28	4.54	1.13	82.67	33.60	51	1
All-Tex	Edge_B2RF	1054	--	--	--	--	105	0.27	4.19	1.16	81.37	31.13	51	1
DP&L	DP_1212B2RF	1042	--	--	--	--	104	0.30	4.14	1.14	81.97	31.97	51	3
PhytoGen	PHY_375_WRF	1014	--	704	--	--	101	0.29	4.05	1.09	80.93	27.10	51	1
All-Tex	Epic_RF	1008	--	--	--	--	101	0.29	3.88	1.08	80.77	29.80	41	1
Fibermax	FM_9250GTLL	982	--	--	--	--	98	0.28	3.94	1.11	81.90	30.10	51	1
Fibermax	FM_9058F	968	--	861	--	--	97	0.25	3.70	1.17	81.20	30.15	41	2
Fibermax	FM_2484B2F	950	--	--	--	--	95	0.29	3.47	1.15	80.67	30.40	41	2
DP&L	DP_1219B2RF	948	--	--	--	--	95	0.28	3.66	1.12	80.53	32.23	41	2
BayerCS	BCSX_1150B2F	895	--	--	--	--	89	0.27	3.53	1.17	82.47	34.80	51	3
DP&L	DP0912_B2RF	867	--	599	--	--	87	0.30	4.18	1.06	81.00	29.80	51	3
Fibermax	FM_1740B2F	878	--	681	--	--	88	0.27	3.90	1.10	80.90	29.17	41	2
Fibermax	FM_9180B2F	870	--	931	--	--	87	0.25	3.42	1.15	82.00	31.63	51	1
Fibermax	FM_9101GT	840	--	--	--	--	84	0.28	3.86	1.14	82.00	29.40	51	1
Nexgen	NG_2051B2RF	692	--	--	--	--	69	0.26	3.53	1.11	80.57	28.47	51	1
DP&L	DP_104_B2RF	546	--	777	--	--	54	0.25	3.59	1.11	81.97	30.20	51	3
	Average	1002	--	746	--	--	100	0.28	3.86	1.12	81.43	30.67	--	
	CV (%)	24	--	34	--	--		9	9	3	1	6	--	
	LSD(0.05)	246	--	273	--	--		0.02	0.43	0.04	1.33	1.80	--	

To access crop performance testing information electronically, visit our website. The information contained in this publication, plus more, is available for viewing or downloading at:

www.agronomy.ksu.edu/kscpt

Excerpts from the
University Research Policy Agreement with Cooperating Seed Companies

Permission is hereby given to Kansas State University (KSU) to test varieties and/or hybrids designated on the attached entry forms in the manner indicated in the test announcements. I certify that seed submitted for testing is a true sample of the seed being offered for sale.

I understand that all results from Kansas Crop Performance Tests belong to the University and the public and shall be controlled by the University so as to produce the greatest benefit to the public. Performance data may be used in the following ways: 1) Tables may be reproduced in their entirety provided the source is referenced and data are not manipulated or reinterpreted; 2) Advertising statements by an individual company about the performance of its entries may be made as long as they are accurate statements about the data as published, with no reference to other companies' names or cultivars. In both cases, the following must be included with the reprint or ad citing the appropriate publication number and title: "See the official Kansas State University Agricultural Experiment Station and Cooperative Extension Service Report of Progress 1064, '2011 Kansas Performance Tests with Cotton Varieties,' or the Kansas Crop Performance Test website, *www.agronomy.ksu.edu/kscpt*, for details. Endorsement or recommendation by Kansas State University is not implied."

Contributors

Main Station, Manhattan, KS
Lucas Haag, Senior Author
Jason Waite
Scott Staggenborg
Stewart Duncan

Cooperators
Stuart Briggeman, Cullison
Lahey Farms, Moscow
Ray Enterprises, Winfield
Rose Farms, Haviland

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SRP 1064 April 2012