

2011

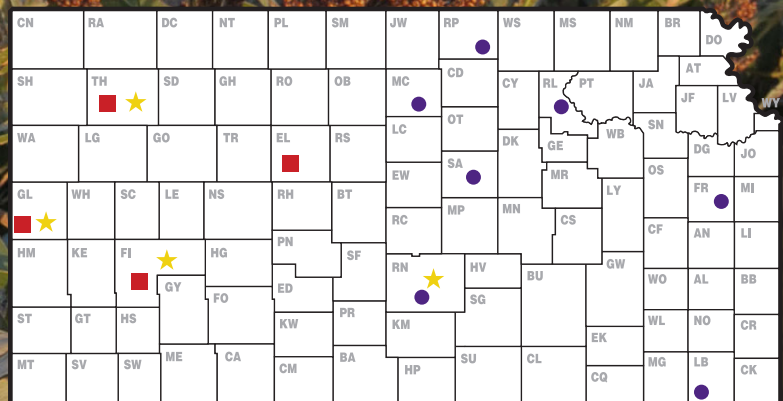
Kansas Performance Tests with **Grain Sorghum Hybrids**

Report of Progress 1059



K-STATE
Research and Extension

Kansas State University
Agricultural Experiment Station
and Cooperative Extension Service



● continuously cropped ■ summer fallow ★ irrigated

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2011 GRAIN SORGHUM CROP REVIEW

Statewide Growing Conditions

The 2011 Kansas grain sorghum growing season was extremely challenging for most of the state. Although grain sorghum is well suited for hot, arid growing conditions, the 2011 crop was stressed beyond its limit of endurance in many regions of the state. The season started with adequate levels of topsoil moisture, but those levels were depleted by extended periods of high heat and very limited rainfall in some areas (Figure 1). Heat stress was a statewide problem that affected pollination and grain-filling, and generally forced the grain sorghum to develop at an accelerated pace. The southern and western regions of the state were particularly devastated by the drought, and many fields in these areas failed to make a crop. The dryland grain sorghum performance tests at Hutchinson, Parsons, and Garden City were abandoned because of acute drought conditions.

The quality of the grain sorghum crop was directly affected by the adverse conditions; less than a quarter of the crop was rated in good or excellent condition by the end of the growing season (Figure 2).

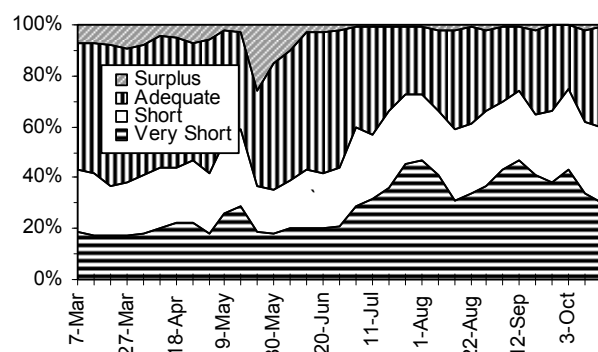


Figure 1. Statewide status of topsoil moisture

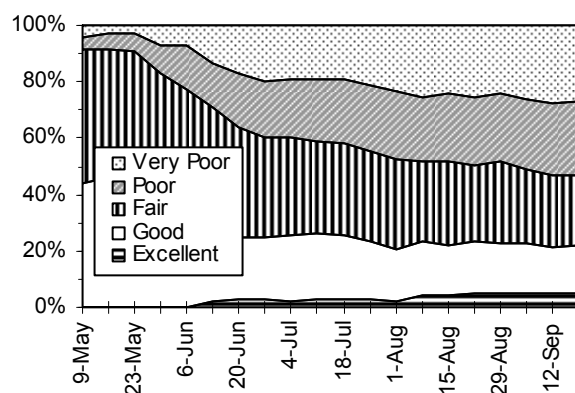


Figure 2. Condition of 2011 Kansas sorghum crop

(Crop-Weather Reports, Kansas Agricultural Statistics Service, Topeka)

Diseases

Grain sorghum proved to be a good choice for Kansas producers in 2011. Its tolerance to heat and drought stress allowed it to be more competitive with corn and soybeans. Overall disease incidence and severity was much less than in any recent year. The most significant disease issue in grain sorghum in 2011 was Fusarium stalk rot, which was particularly common in north central and central Kansas.

In Marshall County and the surrounding counties, high levels of sooty stripe were present in fields planted to susceptible hybrids. Sooty stripe is favored by frequent rainfall and yield losses can approach 35 percent. In these same areas, grain molds could be found on susceptible hybrids.

No other diseases were a significant issue in 2011. Other diseases identified included Fusarium neck rot, charcoal rot, and bacterial leaf streak. (Doug Jardine, Kansas State University Department of Plant Pathology)

Insects

Few early season problems were noted; however, as the sorghum started maturing and flowering, head worms (both corn earworms and fall armyworms) became very active. Reports were received from all over the state about head worms feeding on the grain. These problems continued for about a month as the worms fed on the developing grain from about flowering through soft dough stages. Because of the hot, dry conditions and varied planting dates, some fields (or even parts of fields) were in these stages for much longer than usual. Thus, these insects persisted for what seemed to be a long period, but insecticide applications were effective.

Some fields experienced late-season chinch bug infestations, but most were too late to cause significant yield reductions. (Jeff Whitworth, Kansas State University Department of Entomology)

Harvest Statistics

The Kansas Agricultural Statistics Service predicted a 129.3 million-bushel crop in the October 12 Crops Report, down 24% from last year (Figure 3). The number of acres harvested was down 250,000 acres from last year, at 2.6 million. The average yield estimate of 55 bushels per acre is 21 bushels lower than last year's yield. (Kansas Agricultural Statistics Service, Topeka)

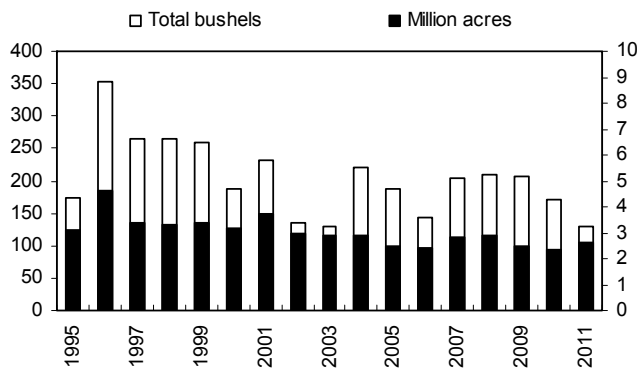


Figure 3. Historical Kansas grain sorghum production

2011 PERFORMANCE TESTS

Objectives and Procedures

Grain Sorghum Performance Tests, conducted annually by the Kansas Agricultural Experiment Station, provide farmers, extension workers, and seed industry personnel with unbiased agronomic information on many of the grain sorghum hybrids marketed in the state. Because entry selection and location are voluntary, not all hybrids grown in the state are included in tests, and the same group of hybrids is not grown at all test locations.

A summary of growing-season weather data is given in individual test discussions. These data are from the nearest weather-reporting station and often are supplemented with information from the test site. Precipitation graphs include cumulative lines for 2011 and the 30-year normal in addition to daily rainfall amounts since last fall. Temperature graphs include daily maximum and minimum temperatures compared with normal. General trends in precipitation and temperature relative to normal are readily observed in the graphs. A table with monthly totals and averages for the growing season also is included.

The growth unit or growing degree day concept was developed to measure the amount of heat available for growth and maturation. To calculate the daily growing degree day accumulation, add the maximum temperature and the minimum temperature for each day, divide by 2, and subtract a base temperature of 35°F. Any temperature below 35°F was considered to be 35°F.

Explanatory information precedes data summaries for each test. Tables 2 through 16 contain results from the individual performance tests. Hybrids are listed in order of increasing days to half bloom when that information is available, so hybrids of similar maturity appear together.

Figures 4 through 8 graphically summarize yield and maturity information over the past 3 years for each region. In these figures, hybrid performance is standardized by using the average of two check hybrids present in every test. The number beside each bar shows the number of tests in which a given hybrid was compared with the check hybrids. Symbols beside each bar indicate if performance of a hybrid was significantly greater (+) or lower (-) than the average performance of the check hybrids. As with individual test results, small differences should not be overemphasized. Relative ranking and large differences are better indicators of performance.

Most tests were planted at a rate 25 to 30% greater than the desired population and thinned only to remove doubles. Planting to stand enables evaluation of product performance for the entire growing season.

Three or four plots (replications) of each hybrid were grown in a randomized complete block design at each location. Each harvested plot consisted of two rows trimmed to a specific length ranging from 20 to 30 feet at the different locations.

Grain yields are reported as bushels per acre of shelled grain (56 lb/bu) adjusted to a moisture content of 12.5%. Yields also are presented as a percentage of test average to speed recognition of highest-yielding hybrids. Hybrids yielding more than 100% of the test average year after year merit consideration. Adaptation to individual farms for appropriate maturity, stalk strength, and other factors must also be considered.

The percentage of lodged stalks is reported when appropriate. Both broken stalks and stalks leaning more than 45 degrees from vertical were considered lodged, although most were harvestable with modern machinery. Severely lodged stalks or dropped heads that could not be picked up by normal harvest procedures were not included in yield. Because harvest often is delayed until latest maturing entries are ripe, early and mid-season hybrids could lodge simply because they must wait well past their optimum harvest date.

Relative maturity is measured in terms of both number of days from planting to half bloom and grain moisture at harvest. Maturity can be critical when considering a sorghum hybrid for a specific cropping system.

Small differences in yield or other characteristics should not be overemphasized. Least significant differences (LSD) are shown at the bottom of each table. Unless two entries differ by at least the LSD shown, little confidence can be placed in one being superior to the other.

The coefficient of variability (CV) can be used to estimate the degree of confidence one can have in published data from replicated tests. In this testing program, a CV of less than 10% generally indicates reliable, uniform data, whereas a CV of 10 to 15% is not uncommon and usually indicates that data are acceptable for the rough performance comparisons desired from these tests. Tests with a CV greater than 15% still may be useful, especially in situations with low yields.

Table 1. Entrants in the 2011 Kansas Grain Sorghum Performance Tests

Advanta Hereford, TX 806-333-9048 advantaus.com	Golden Acres Waco, TX 254-761-9838 gaseed.com	Phillips Seed Farms Hope, KS 785-949-2204 phillipsseed.com	Syngenta Seeds (Golden Harvest) Minnetonka, MN 402-616-6534 syngenta.com
Asgrow/DeKalb Monsanto Seed St. Louis, MO 800-335-2676 www.asgrow.com	Ohlde Seed Farms Palmer, KS 785-692-4555	Pioneer Brand Pioneer Hi-Bred, Intl., Inc. Lincoln, NE 800-228-4050 pioneer.com	Triumph Seed Co., Inc. Ralls, TX 888-521-7333 triumphseed.com
Drussel Seed, Inc. Garden City, KS 620-275-2359			

NORTHEAST KANSAS DRYLAND GRAIN SORGHUM TEST

Agronomy North Farm, Manhattan; Jane Lingenfelter, agronomist

Reading silt loam; Wheat in 2010

140 - 0 - 0 lb/a N, P, K

Planted on 5/11/2011; Harvested on 9/27/2011

Target stand of 55,000 plants/acre; 3.8 in. spacing

Generally good conditions during growing season;
some heat stress during pollination.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	3.6	5.1	35	30	0	0
April	2.5	2.6	56	53	825	575
May	5.2	4.5	64	64	914	918
June	4.8	5.1	77	73	1276	1158
July	2.1	4.0	86	79	1340	1369
August	2.3	3.5	81	78	1284	1317
Sept.	1.5	3.8	67	70	1048	1035
Oct.	2.2	2.3	59	53	866	387
Totals:	24.0	30.9	56	52	7,553	6,759

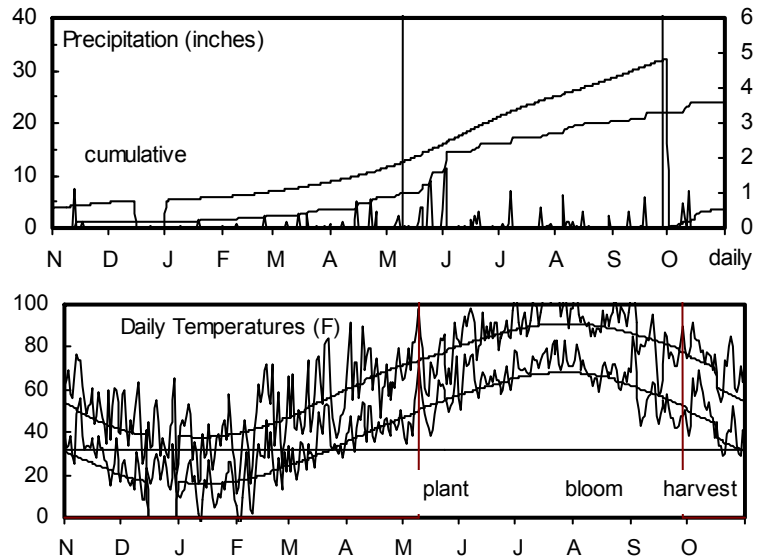


Table 2. Riley County Dryland Grain Sorghum Performance Test, 2009-2011

		YIELD AS %										2010-2011									
		ACRE YIELD, BUSHEL					OF TEST			Days	Grain	Days	Grain	Test	Plnt			Pop.	Hds.		
		2-yr. 3-yr.					AVERAGE			to	Moist.	to	Moist.	Wt.	Ht.	Ldg	1000	per			
BRAND	NAME	2011	2010	2009	avg.	avg.	2011	2010	2009	Blm	%	Blm	%	lb/bu	in.	%	ppa	Plnt			
DEKALB	DKS36-06	96	94	134	95	108	98	94	101	70	14	68	13	63	52	1	36.6	1.3			
MATURITY CHECK	EARLY	73	86	95	80	85	75	86	72	70	12	68	12	58	39	0	31.0	1.5			
DEKALB	DKS37-07	92	95	117	93	101	93	95	88	71	14	69	13	63	49	1	32.9	1.5			
PIONEER	85Y40	104	118	141	111	121	106	118	106	72	14	70	13	62	46	2	34.7	1.3			
PIONEER	85G03	98	113	137	105	116	100	114	103	73	14	70	13	61	50	1	34.2	1.6			
MATURITY CHECK	MEDIUM	92	116	119	104	109	94	116	90	73	14	71	13	62	49	1	26.1	1.6			
DEKALB	DKS49-45	97	100	--	99	--	99	100	--	73	14	71	14	63	49	2	33.9	1.5			
MATURITY CHECK	LATE	103	94	133	98	110	105	95	100	74	14	71	13	63	45	1	30.9	1.6			
DEKALB	DKS44-20	103	105	147	104	118	105	106	111	73	14	72	13	63	45	1	31.5	1.4			
DEKALB	DKS53-67	106	105	147	106	119	108	105	111	74	15	72	14	63	46	1	31.6	1.5			
PIONEER	84G62	108	118	142	113	123	111	118	107	75	15	73	14	62	47	2	31.6	1.3			
TRIUMPH	TRX85131	90	--	--	--	--	92	--	--	--	--	73	14	62	44	1	34.4	1.2			
PIONEER	84P80	112	--	--	--	--	114	--	--	--	--	73	14	62	51	2	28.4	1.6			
AVERAGES		98	100	133	99	110	98	100	133	73	14	71	13	62	47	1	32.2	1.5			
CV (%)		6	10	9	--	--	6	10	9	--	--	1	4	1	2	--	10	9			
LSD (0.05)		9	13	18	--	--	9	13	13	--	--	1	1	1	1	2	5	0			

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

NORTHEAST KANSAS DRYLAND GRAIN SORGHUM TEST

North Central Kansas Exp. Field, Belleville; Randall Nelson, agronomist; Michael Larson and Doug Stensaas, technicians

Crete silt loam; Wheat in 2010

140 - 20 - 0 lb/a N, P, K

Planted on 6/19/2011; Harvested on 10/31/2011

Target stand of 50,000 plants/acre; 4.2 in. spacing

Adequate moisture at planting. Excellent conditions throughout spring. High heat at heading, generally timely rainfall.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	0.5	4.0	34	27	0	0
April	1.6	1.7	52	52	655	534
May	3.4	2.3	64	63	807	886
June	3.1	3.6	75	73	1186	1149
July	5.2	4.7	83	78	1290	1368
August	5.1	3.4	77	77	1254	1310
Sept.	0.5	3.3	61	68	982	987
Oct.	0.5	2.6	54	51	586	375
Totals:	19.9	25.6	53	50	6,760	6,609

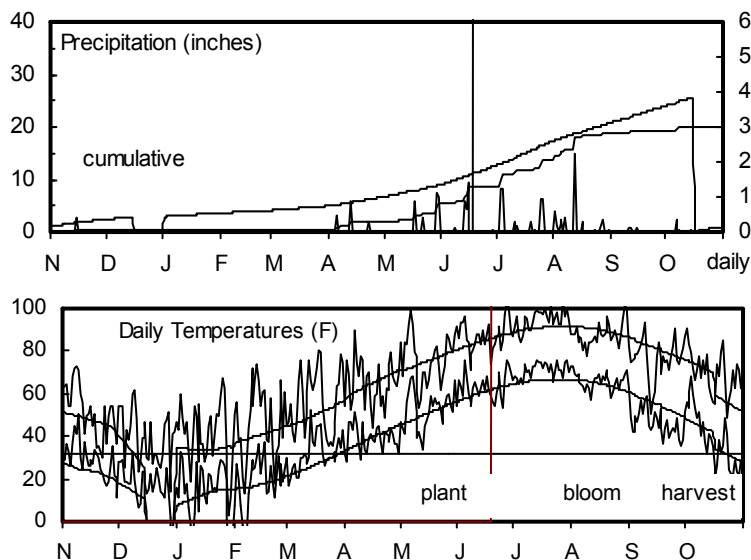


Table 3. Republic County Dryland Grain Sorghum Performance Test, 2009-2011

										YIELD AS %		2010-2011											
		ACRE YIELD, BUSHEL					OF TEST			Days Grain		Days	Grain	Test	Plnt		Pop.	Hds.					
		2-yr. 3-yr.					AVERAGE			to	Moist.	to	Moist.	Wt.	Ht.	Ldg	1000	per					
BRAND	NAME	2011	2010	2009	avg.	avg.	2011	2010	2009	Blm	%	Blm	%	lb/bu	in.	%	ppa	Plnt					
MATURITY CHECK	EARLY	95	104	171	100	123	75	75	101	--	16	55	13	60	45	2	--	1.0					
DEKALB	DKS36-06	137	140	180	139	152	108	100	107	--	16	59	13	61	59	1	--	1.0					
GOLDEN ACRES	5745	120	--	--	--	--	95	--	--	--	--	59	13	60	54	0	--	1.1					
PIONEER	85G03	125	141	186	133	151	99	101	110	--	17	59	14	60	55	2	--	1.1					
ADVANTA	AG2101	137	--	--	--	--	108	--	--	--	--	60	14	59	55	0	--	1.0					
DEKALB	DKS44-20	157	154	176	156	162	124	111	104	--	20	60	14	61	59	0	--	1.2					
ADVANTA	AG2103	149	--	--	--	--	118	--	--	--	--	61	13	60	52	0	--	1.0					
OHLDE	O-575	137	135	175	136	149	108	97	103	--	20	61	13	60	54	1	--	1.1					
DEKALB	DKS37-07	139	133	180	136	151	110	95	107	--	17	62	14	61	59	0	--	1.2					
OHLDE	O-567	126	133	174	129	144	99	95	103	--	17	63	14	59	53	3	--	1.3					
TRIUMPH	TRX95005	91	149	179	120	140	72	107	106	--	19	63	15	59	58	9	--	0.9					
ADVANTA	AG3101	70	--	--	--	--	56	--	--	--	--	63	14	61	60	31	--	0.7					
ADVANTA	XG2105	133	--	--	--	--	105	--	--	--	--	64	13	59	50	0	--	1.2					
PIONEER	85Y40	102	157	191	129	150	80	112	113	--	18	64	14	60	53	5	--	1.1					
PIONEER	84G62	153	161	201	157	172	121	115	119	--	22	64	14	61	53	1	--	1.0					
TRIUMPH	TRX85131	143	--	--	--	--	113	--	--	--	--	64	15	59	57	0	--	1.0					
MATURITY CHECK	MEDIUM	125	149	139	137	138	99	106	82	--	16	64	14	60	59	1	--	1.1					
OHLDE	O-530	93	111	--	102	--	74	79	--	--	20	65	13	61	52	6	--	1.2					
GOLDEN ACRES	5613	136	--	--	--	--	107	--	--	--	--	65	14	60	59	2	--	1.0					
MATURITY CHECK	LATE	149	149	190	149	163	118	107	112	--	21	65	14	59	58	0	--	0.9					
PIONEER	84P80	118	--	--	--	--	93	--	--	--	--	65	14	61	54	5	--	0.9					
GOLDEN ACRES	5556	137	--	--	--	--	108	--	--	--	--	66	13	60	54	0	--	1.1					
OHLDE	O-587	127	134	183	130	148	100	96	108	--	20	66	15	58	55	19	--	1.1					
GOLDEN ACRES	3545	146	--	--	--	--	116	--	--	--	--	66	14	61	59	1	--	1.4					
DEKALB	DKS53-67	154	160	205	157	173	122	115	121	--	21	67	14	60	58	0	--	1.2					
TRIUMPH	TRX05361	90	129	--	110	--	72	92	--	--	21	68	14	59	60	3	--	1.0					
DEKALB	DKS49-45	150	155	--	153	--	119	111	--	--	20	68	14	61	60	0	--	1.2					
AVERAGES		126	140	169	133	145	126	140	169	--	19	63	14	60	56	3	--	1.1					
CV (%)		8	8	5	--	--	8	8	5	--	--	3	0	0	4	--	--	17					
LSD (0.05)		16	19	14	--	--	13	14	8	--	--	3	0	0	4	10	--	0					

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

NORTH CENTRAL DRYLAND GRAIN SORGHUM TEST

Farmer's field, Beloit; Randall Nelson, agronomist; Michael Larson and Doug Stensaas, technicians

Harney silt loam; Wheat in 2010

170 - 20 - 0 lb/a N, P, K

Planted on 6/15/2011; Harvested on 11/7/2011

Target stand of 50,000 plants/acre; 4.2 in. spacing

Adequate moisture at planting. Excellent conditions throughout spring. Heat stress at boot and heading, generally timely rainfall.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	3.9		33			
April	2.2		54		700	424
May	8.8		63		827	835
June	5.0		76		1202	1197
July	5.2		85		1316	1369
August	4.8		80		1284	1242
Sept.	1.0		66		1039	971
Oct.	0.9		57		605	400
Totals:	31.8		54		6,973	6,438

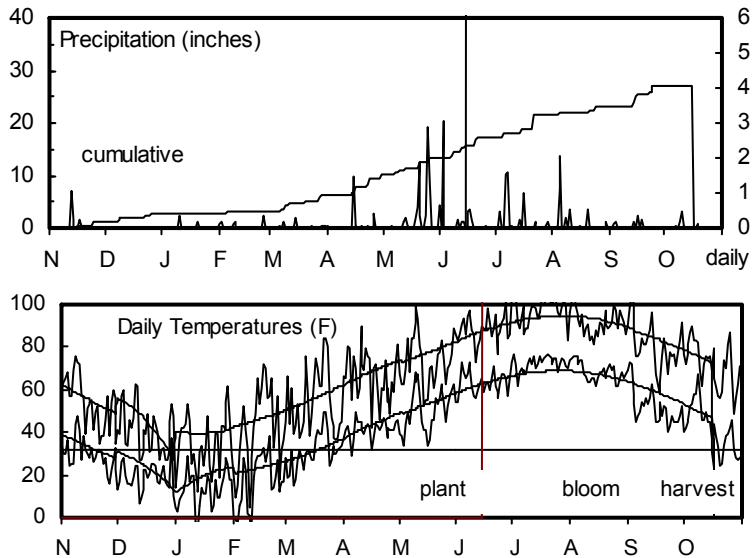


Table 4. Mitchell County Dryland Grain Sorghum Performance Test, 2009-2011

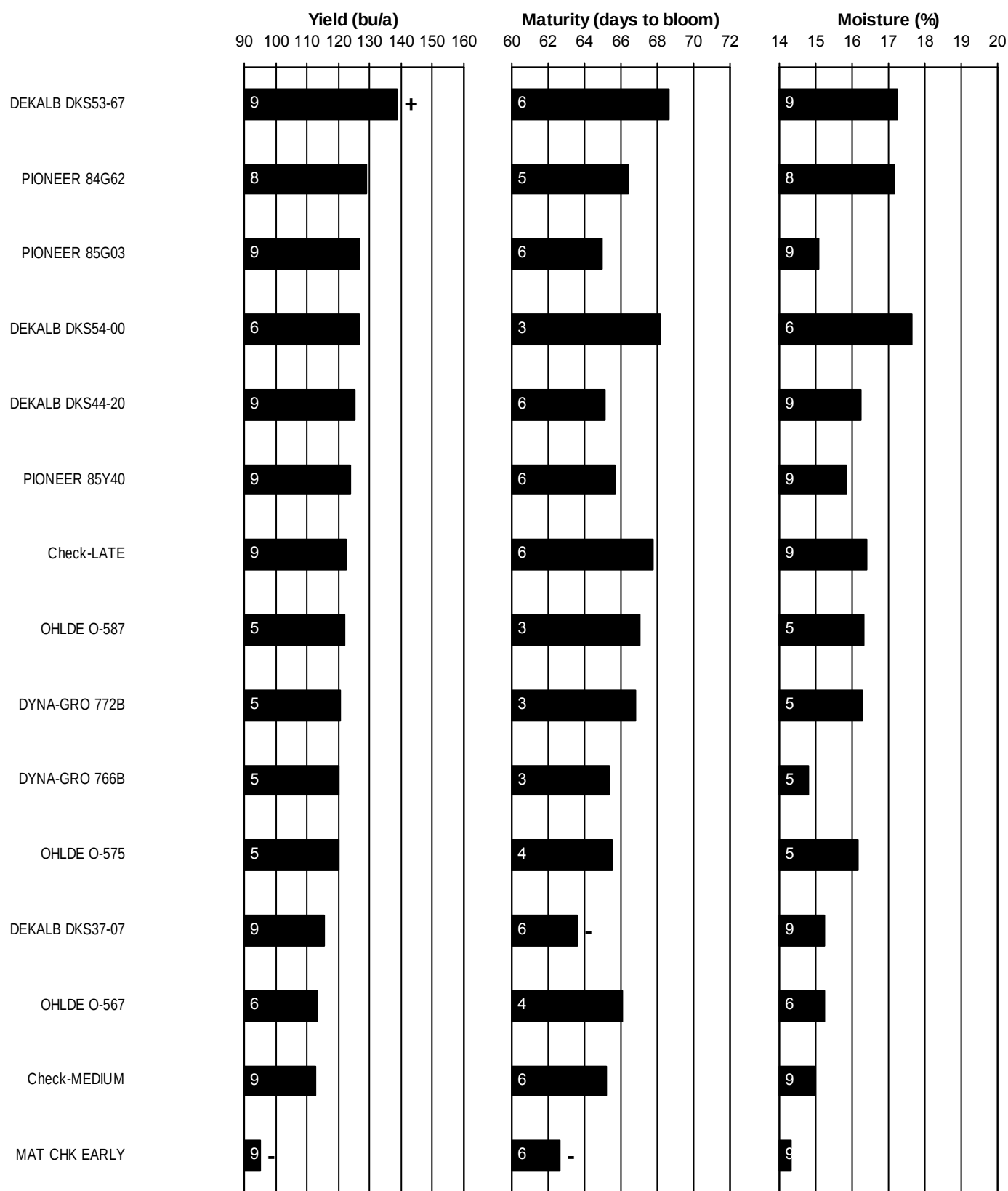
BRAND	NAME	YIELD AS %						2010-2011									
		ACRE YIELD, BUSHEL			OF TEST			Days		Grain		Days		Grain		Test	
		2-yr.		3-yr.		AVERAGE		to		to		to		to		to	
		2011	2010	2009	avg.	2011	2010	2009	Blm	Moist.	%	Blm	Moist.	%	lb/bu	Ht.	Ldg
DEKALB	DKS36-06	20	105	161	63	95	63	109	109	--	13	--	14	60	51	--	--
DEKALB	DKS37-07	18	112	157	65	96	55	116	106	--	13	--	14	60	47	--	--
DEKALB	DKS44-20	22	98	162	60	94	67	102	110	--	13	--	14	60	51	--	--
DEKALB	DKS49-45	17	115	--	66	--	51	119	--	--	13	--	15	59	53	--	--
DEKALB	DKS53-67	87	110	175	99	124	268	114	118	--	13	--	14	61	53	--	--
GOLDEN ACRES	5556	33	--	--	--	--	100	--	--	--	--	--	14	60	52	--	--
GOLDEN ACRES	5745	60	--	--	--	--	183	--	--	--	--	--	14	58	49	--	--
GOLDEN ACRES	H-307	25	--	--	--	--	78	--	--	--	--	--	14	58	49	--	--
MATURITY CHECK	EARLY	8	89	133	49	77	25	92	90	--	14	--	16	60	54	--	--
MATURITY CHECK	LATE	48	96	139	72	94	148	99	94	--	14	--	14	60	52	--	--
MATURITY CHECK	MEDIUM	43	102	129	72	91	131	106	88	--	14	--	14	59	54	--	--
OHLDE	O-525	23	99	--	61	--	71	102	--	--	14	--	15	59	46	--	--
OHLDE	O-530	40	96	--	68	--	124	99	--	--	13	--	14	61	48	--	--
OHLDE	O-567	31	94	146	63	90	95	97	98	--	13	--	14	59	51	--	--
OHLDE	O-575	54	--	--	--	--	166	--	--	--	--	--	14	60	52	--	--
PIONEER	84G62	15	116	--	65	--	46	120	--	--	13	--	14	60	48	--	--
PIONEER	84P80	13	--	--	--	--	41	--	--	--	--	--	14	59	54	--	--
PIONEER	85G03	59	116	166	87	114	181	120	112	--	13	--	14	60	51	--	--
PIONEER	85Y40	33	113	156	73	101	100	117	106	--	13	--	14	59	49	--	--
TRIUMPH	TR 452	24	102	--	63	--	73	106	--	--	13	--	14	59	49	--	--
TRIUMPH	TRX85131	11	--	--	--	--	34	--	--	--	--	--	15	59	48	--	--
AVERAGES		33	97	148	65	93	33	97	148	--	13	--	14	60	50	--	--
CV (%)		9	10	5	--	--	9	10	5	--	--	--	0	0	3	--	--
LSD (0.05)		5	16	11	--	--	14	17	8	--	--	--	0	0	3	--	--

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

Table 5. NORTHEAST Kansas Grain Sorghum Hybrid Yield Summary (% of test avg.), 2011

BRAND/NAME	RLD	RPD	MTD	AVG.	BRAND/NAME	RLD	RPD	MTD	AVG.
ADVANTA					PIONEER				
AG2101	--	108	--	--	84G62	111	121	46	92
AG2103	--	118	--	--	84P80	114	93	41	83
AG3101	--	56	--	--	85G03	100	99	181	127
XG2105	--	105	--	--	85Y40	106	80	100	96
DEKALB					TRIUMPH				
DKS36-06	98	108	63	90	TR 452	--	--	73	--
DKS37-07	93	110	55	86	TRX05361	--	72	--	--
DKS44-20	105	124	67	99	TRX85131	92	113	34	80
DKS49-45	99	119	51	90	TRX95005	--	72	--	--
DKS53-67	108	122	268	166	MATURITY CHECK				
GOLDEN ACRES					EARLY	75	75	25	58
3545	--	116	--	--	LATE	105	118	148	124
5556	--	108	100	--	MEDIUM	94	99	131	108
5613	--	107	--	--	AVERAGES (bu/a)	98	126	33	86
5745	--	95	183	--	CV (%)	6	8	9	--
H-307	--	--	78	--	LSD (0.05)	9	13	14	--
OHLDE									
O-525	--	--	71	--					
O-530	--	74	124	--					
O-567	--	99	95	--					
O-575	--	108	166	--					
O-587	--	100	--	--					



Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

Figure 4. NORTHEAST Kansas sorghum hybrid standardized performance summary, 2009-2011

SOUTHEAST KANSAS NO-TILL DRYLAND GRAIN SORGHUM TEST

East Central Kansas Experiment Field, Ottawa; Eric Adee, agronomist; Jim Kimball, technician

Woodson silt loam; Soybean in 2010

120 - 40 - 13 lb/a N, P, K

Planted on 5/17/2011; Harvested on 10/21/2011

Target stand of 55,000 plants/acre; 3.8 in. spacing

Adequate moisture from planting through the first 45 days. Rainfall in July was only .88 inches for the entire month. More rain came in August, but the damage was already done from the extreme heat in July.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	7.6	5.6	36	32	0	0
April	2.2	2.9	58	56	752	634
May	5.1	4.1	64	65	941	953
June	2.7	4.9	78	74	1259	1186
July	0.9	4.0	86	80	1352	1401
August	2.4	3.2	81	79	1297	1362
Sept.	2.4	4.0	67	71	1054	1062
Oct.	0.3	2.1	59	55	694	416
Totals:	23.6	30.8	56	53	7,349	7,014

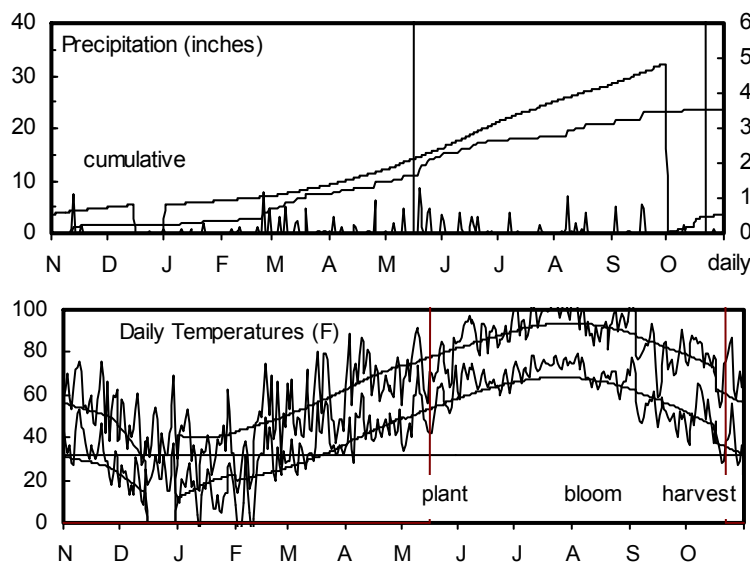


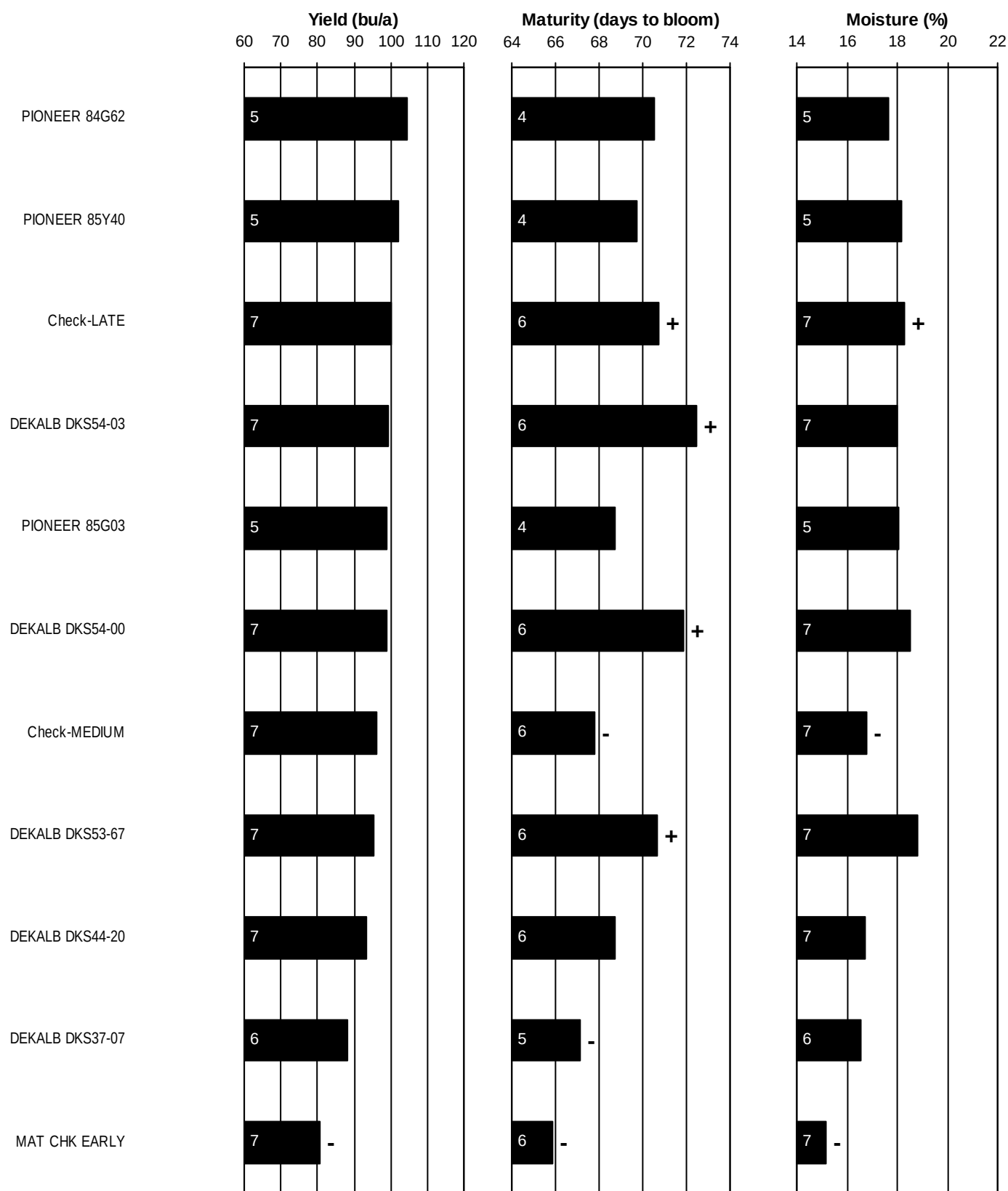
Table 6. Franklin County Dryland Grain Sorghum Performance Test, 2009-2011

		ACRE YIELD, BUSHEL					YIELD AS %			2010-2011											
BRAND	NAME	2011	2010	2009	2-yr. avg.	3-yr. avg.	OF TEST			Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Pop. 1000 ppa	Hds. per Plnt			
							AVERAGE														
MATURITY CHECK	EARLY	62	49	89	55	67	86	84	91	--	16	67	14	54	36	--	40.7	1.3			
DEKALB	DKS36-06	77	50	99	63	75	107	88	101	--	16	67	15	58	46	--	31.6	1.6			
MATURITY CHECK	MEDIUM	70	59	109	64	79	97	102	111	--	17	67	15	56	44	--	29.0	1.7			
DEKALB	DKS44-20	82	69	90	76	80	114	120	92	--	15	68	14	59	40	--	26.9	1.6			
MATURITY CHECK	LATE	76	62	128	69	89	106	107	131	--	20	69	17	57	44	--	40.4	1.3			
PIONEER	84P80	82	--	--	--	--	114	--	--	--	--	70	18	57	48	--	38.6	1.4			
PIONEER	85Y40	74	55	109	64	79	102	96	111	--	18	70	17	57	46	--	34.5	1.4			
DEKALB	DKS49-45	69	52	--	60	--	96	91	--	--	19	71	18	55	45	--	36.2	1.4			
PIONEER	84G62	80	55	108	67	81	111	95	110	--	17	71	15	57	46	--	40.0	1.3			
PIONEER	85G03	66	54	101	60	74	92	94	102	--	18	71	19	55	49	--	38.9	1.4			
DEKALB	DKS53-67	82	50	85	66	72	115	86	86	--	20	72	17	57	45	--	30.8	1.5			
TRIUMPH	TRX95005	51	--	--	--	--	71	--	--	--	--	73	17	55	41	--	36.0	1.5			
DEKALB	DKS54-00	71	63	87	67	74	100	110	89	--	18	74	17	55	47	--	36.6	1.2			
TRIUMPH	TRX85131	63	--	--	--	--	88	--	--	--	--	75	16	56	43	--	30.5	1.6			
DEKALB	DKS54-03	73	56	100	64	76	101	97	102	--	17	76	15	57	41	--	32.4	1.1			
	AVERAGES	72	58	98	65	76	72	58	98	--	18	71	16	56	44	--	34.8	1.4			
	CV (%)	11	10	6	--	--	11	10	6	--	--	2	10	2	2	--	12.2	13.1			
	LSD (0.05)	11	8	8	--	--	15	14	8	--	--	2	2	1	1	--	6.1	0.3			

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

Parsons, Labette County dryland performance test abandoned.



Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

Figure 5. SOUTHEAST Kansas sorghum hybrid standardized performance summary, 2009-2011

CENTRAL KANSAS DRYLAND GRAIN SORGHUM TEST

Clayton Short farm, Assaria; Jane Lingenfelser, agronomist

Hord silt loam; Wheat in 2010

170 - 0 - 0 lb/a N, P, K

Planted on 5/12/2011; Harvested on 9/28/2011

Target stand of 50,000 plants/acre; 4.2 in. spacing

Bird damage after a season of extreme drought affected yields.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	5.4	6.9	35	37		
April	0.9	3.0	55	55	772	593
May	4.3	5.1	65	65	935	923
June	2.7	4.2	79	75	1264	1211
July	1.8	4.3	87	81	1347	1431
August	2.7	3.5	83	80	1309	1394
Sept.	1.2	2.5	67	71	1069	1072
Oct.	0.8	1.3	58	30	730	407
Totals:	19.9	30.9	56	54	7,426	7,031

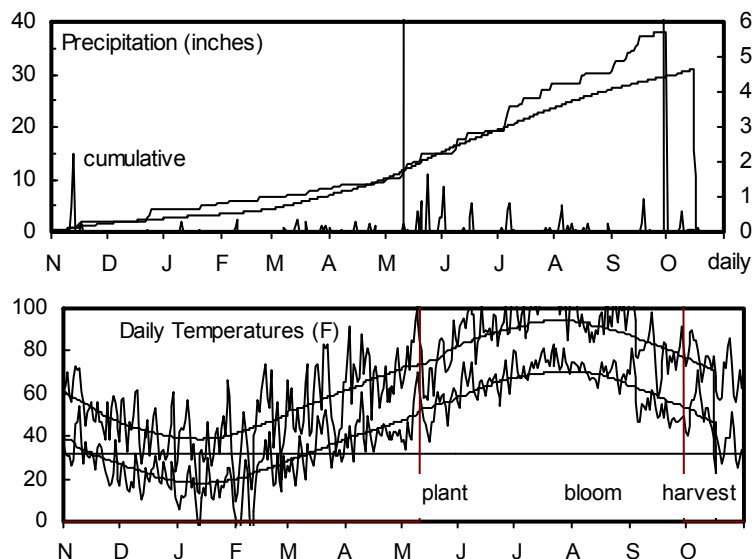


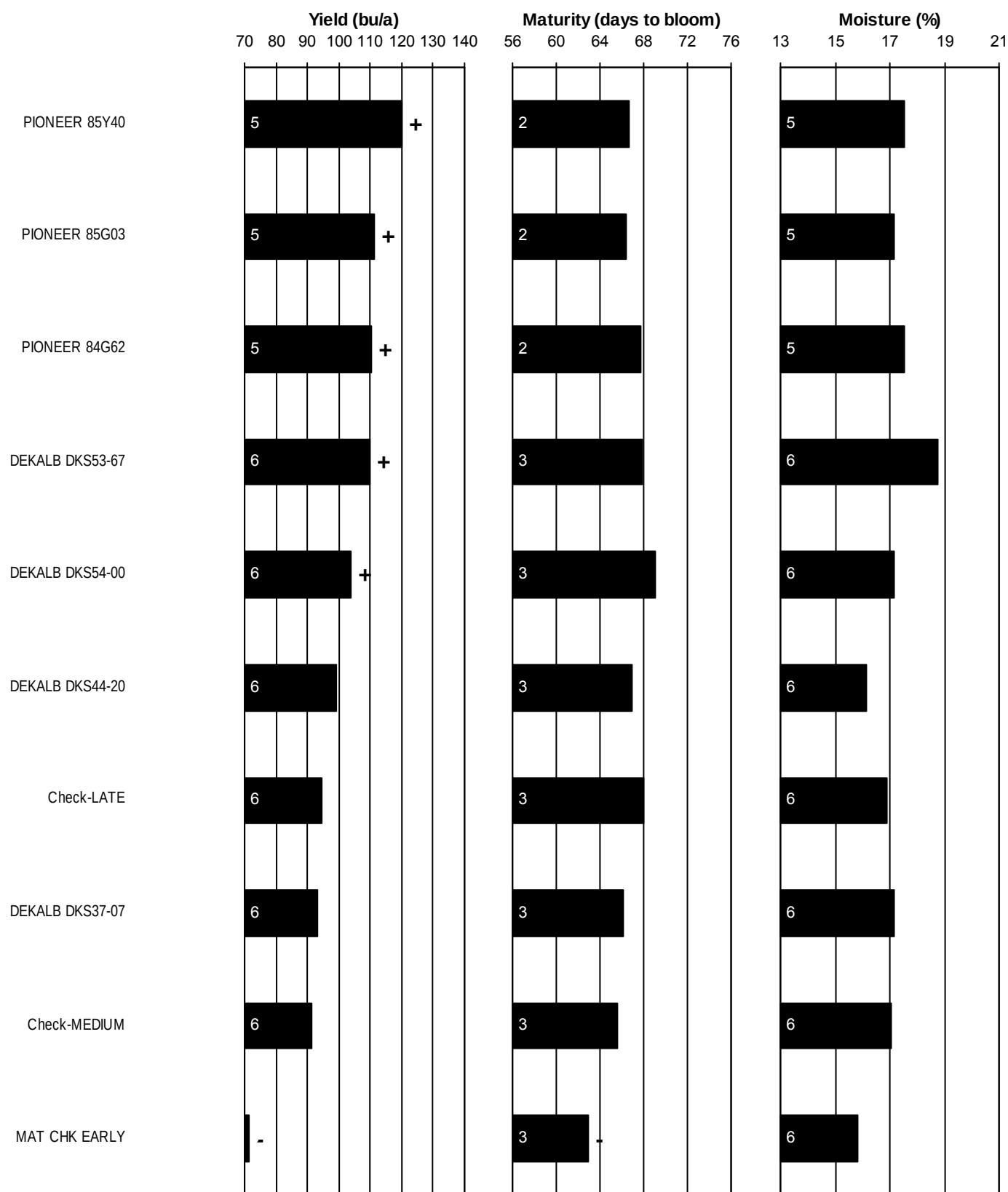
Table 7. Saline County Dryland Grain Sorghum Performance Test, 2009-2011

BRAND	NAME	YIELD AS %										2010-2011							Pop. 1000 ppa	Hds. per Plnt
		ACRE YIELD, BUSHEL					OF TEST					Days Grain		Days Grain		Test lb/bu	Plnt in.	Ldg %		
		2011	2010	2009	2-yr. avg.	3-yr. avg.	AVERAGE			to Blm	Moist. %	to Blm	Moist. %							
							2011	2010	2009											
ADVANTA	AG2101	17	--	--	--	--	63	--	--	--	--	--	--	17	54	34	10	38.2	1.9	
ADVANTA	AG2103	34	--	--	--	--	122	--	--	--	--	--	--	18	49	31	8	39.5	1.9	
ADVANTA	AG3101	47	--	--	--	--	172	--	--	--	--	--	--	20	55	38	4	40.2	1.9	
ADVANTA	XG2105	11	--	--	--	--	42	--	--	--	--	--	--	17	54	29	6	32.1	1.7	
DEKALB	DKS37-07	26	66	152	46	81	96	77	107	--	21	--	17	54	31	6	42.2	1.7		
DEKALB	DKS44-20	13	97	162	55	91	48	113	114	--	15	--	13	61	28	5	40.8	2.0		
DEKALB	DKS49-45	36	82	--	59	--	131	95	--	--	20	--	16	52	37	4	47.3	1.6		
DEKALB	DKS53-67	40	95	168	67	101	144	111	118	--	21	--	18	53	40	10	35.7	2.2		
DEKALB	DKS54-00	40	93	151	66	95	144	108	106	--	19	--	16	53	39	4	34.4	1.4		
DEKALB	DKS54-03	18	86	--	52	--	64	100	--	--	19	--	18	53	39	6	38.2	1.6		
MATURITY CHECK	EARLY	16	75	113	45	68	57	87	80	--	17	--	17	54	26	13	38.5	2.2		
MATURITY CHECK	LATE	20	90	140	55	83	73	105	98	--	19	--	17	54	29	5	39.8	2.2		
MATURITY CHECK	MEDIUM	16	92	134	54	81	58	107	94	--	22	--	17	54	32	6	37.7	2.1		
OHLDE	O-530	22	--	--	--	--	78	--	--	--	--	--	17	54	33	13	36.4	2.1		
OHLDE	O-567	13	--	--	--	--	47	--	--	--	--	--	17	54	34	15	38.2	1.5		
OHLDE	O-575	24	--	--	--	--	87	--	--	--	--	--	18	51	37	12	36.9	1.8		
PIONEER	84G62	31	94	161	62	95	111	109	113	--	18	--	18	53	34	5	41.5	1.3		
PIONEER	84P80	64	--	--	--	--	231	--	--	--	--	--	15	60	37	6	34.7	1.6		
PIONEER	85G03	38	99	157	69	98	138	115	110	--	19	--	14	53	39	21	38.5	2.4		
PIONEER	85Y40	45	97	171	71	104	162	113	120	--	20	--	22	55	40	9	39.6	2.0		
TRIUMPH	TRX03473	25	--	--	--	--	92	--	--	--	--	--	22	48	35	16	41.5	2.0		
TRIUMPH	TRX05361	23	74	--	49	--	84	86	--	--	17	--	14	52	35	2	38.2	1.6		
TRIUMPH	TRX84732	21	--	--	--	--	77	--	--	--	--	--	17	54	33	12	30.3	2.0		
TRIUMPH	TRX85131	22	--	--	--	--	81	--	--	--	--	--	17	54	38	10	37.5	1.6		
TRIUMPH	TRX95005	23	102	153	63	93	85	118	108	--	17	--	17	54	34	10	41.1	1.3		
	AVERAGES	28	86	143	57	86	28	86	143	--	19	--	17	54	34	8	38.2	1.8		
	CV (%)	15	7	6	--	--	15	7	6	--	--	--	6	1	8	--	7.7	13.2		
	LSD (0.05)	6	9	11	--	--	21	10	8	--	--	--	1	1	0	16	4.2	0.3		

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

Hutchinson, Reno County dryland performance test abandoned.



Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

Figure 6. CENTRAL Kansas sorghum hybrid standardized performance summary, 2009-2011

WESTERN KANSAS FALLOW GRAIN SORGHUM TEST

Agricultural Research Center, Hays; Wayne Aschwege, technician

Harney silt loam; Fallow in 2010

80 - 0 - 0 lb/a N, P, K

Planted on 6/3/2011; Harvested on 10/24/2011

Target stand of 35,000 plants/acre; 6.0 in. spacing

Hot and very dry throughout season.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	0.9	3.5	37	33		
April	0.6	1.8	54	50	645	478
May	1.9	3.1	63	61	796	833
June	2.0	3.8	77	71	1173	1109
July	0.1	3.4	85	78	1285	1344
August	3.6	2.8	81	76	1242	1286
Sept.	0.9	2.3	66	68	1010	984
Oct.	0.9	0.7	45	28	659	358
Totals:	10.9	21.3	55	50	6,809	6,392

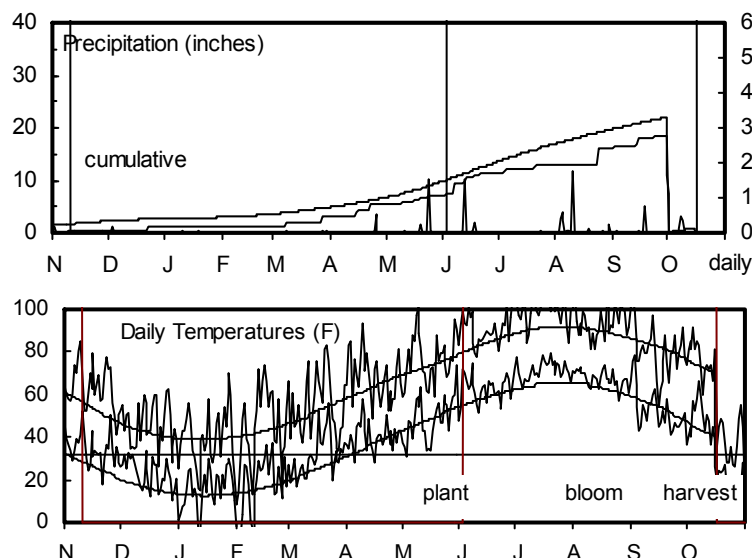


Table 8. Ellis County Dryland Grain Sorghum Performance Test, 2009-2011

										YIELD AS %		2010-2011											
		ACRE YIELD, BUSHEL					OF TEST			Days	Grain	Days	Grain	Test	Plnt		Pop.	Hds.					
		2-yr. 3-yr.					AVERAGE			to	Moist.	to	Moist.	Wt.	Ht.	Ldg	1000	per					
BRAND	NAME	2011	2010	2009	avg.	avg.	2011	2010	2009	Blm	%	Blm	%	lb/bu	in.	%	ppa	Pint					
ASGROW	PULSAR	50	92	125	71	89	131	87	91	65	10	67	9	53	33	16	30.9	1.4					
MATURITY CHECK	EARLY	29	89	121	59	80	78	84	88	62	10	67	10	53	30	8	28.8	1.3					
DEKALB	DKS28-05	40	95	129	67	88	105	89	94	61	9	67	8	51	37	5	29.5	1.4					
DEKALB	DKS37-07	50	89	136	69	92	131	84	99	66	11	71	10	56	40	72	29.1	1.4					
MATURITY CHECK	MEDIUM	42	112	126	77	93	110	105	92	68	13	72	11	57	40	15	26.8	1.2					
DEKALB	DKS44-20	39	121	156	80	105	103	113	113	65	12	72	11	55	38	54	28.0	1.3					
DEKALB	DKS36-06	46	103	143	74	97	122	97	104	68	12	74	12	53	37	25	27.8	1.2					
PIONEER	85G03	40	111	156	76	102	106	104	113	70	13	75	12	59	42	26	25.3	1.5					
TRIUMPH	TRX95005	39	--	--	--	--	104	--	--	--	--	75	11	58	39	30	26.8	1.1					
OHLDE	O-567	43	116	157	80	105	114	109	114	71	11	75	10	56	38	16	29.9	1.1					
PIONEER	85Y40	40	133	148	87	107	106	125	107	70	12	76	11	59	39	23	28.1	1.3					
OHLDE	O-575	39	--	--	--	--	103	--	--	--	--	76	12	56	38	4	28.4	1.0					
MATURITY CHECK	LATE	47	125	125	86	99	125	118	91	75	12	77	11	57	39	23	31.2	1.1					
ADVANTA	AG2101	36	--	--	--	--	95	--	--	--	--	77	12	56	40	1	27.6	1.0					
OHLDE	O-530	39	103	142	71	95	103	97	103	70	12	77	12	59	37	19	29.3	1.1					
OHLDE	O-525	31	108	141	69	93	82	102	103	71	12	78	12	60	36	13	27.9	1.0					
TRIUMPH	TRX03473	27	--	--	--	--	70	--	--	--	--	78	13	55	37	1	28.2	0.8					
ADVANTA	AG2103	42	--	--	--	--	111	--	--	--	--	78	12	58	35	8	30.1	1.0					
TRIUMPH	TRX85131	36	--	--	--	--	95	--	--	--	--	78	14	57	35	6	29.9	0.9					
ADVANTA	XG2105	25	--	--	--	--	67	--	--	--	--	80	14	54	34	2	28.2	0.8					
PIONEER	84P80	37	--	--	--	--	97	--	--	--	--	81	14	57	40	6	27.8	1.0					
PIONEER	84G62	22	115	--	69	--	59	108	--	75	13	81	14	58	38	4	27.3	0.9					
TRIUMPH	TRX05361	30	124	--	77	--	80	117	--	77	14	83	13	58	41	2	32.0	0.7					
	AVERAGES	38	106	138	72	94	38	106	138	69	12	75	12	56	37	16	28.6	1.1					
	CV (%)	12	11	10	--	--	12	11	10	--	--	2	12	3	9	--	10	17					
	LSD (0.05)	7	16	19	--	--	17	15	14	--	--	2	2	3	12	15	4	0					

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

WESTERN KANSAS FALLOW GRAIN SORGHUM TEST

Northwest Research-Extension Center, Colby; Patrick Evans, agronomist

Keith silt loam; Fallow in 2010

80 - 0 - 0 lb/a N, P, K

Planted on 5/31/2011; Harvested on 10/24/2011

Target stand of 25,000 plants/acre; 8.4 in. spacing

Good stands were established and growing conditions were favorable until an August 10 hailstorm. Many heads were broken off, leaves and stalks were damaged.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	0.8	2.3	33	28	0	0
April	1.5	1.4	50	49	523	421
May	1.8	2.9	58	59	697	762
June	1.5	3.4	73	70	1105	1054
July	4.7	3.1	80	76	1234	1285
August	2.7	2.1	77	74	1149	1216
Sept.	0.3	1.6	62	66	926	910
Oct.	2.6	0.4	54	48	659	324
Totals:	16.0	17.2	52	49	6,294	5,972

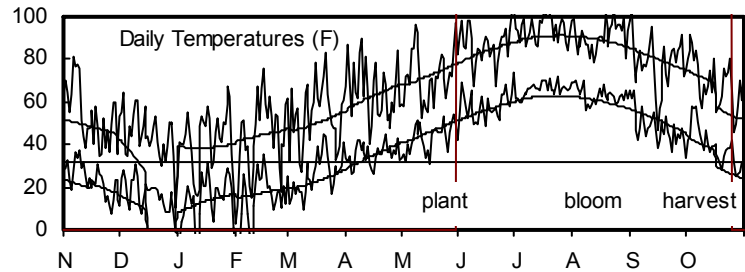
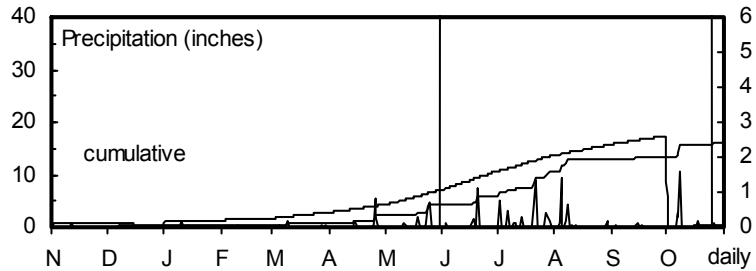


Table 9. Thomas County Dryland Grain Sorghum Performance Test, 2009-2011

		YIELD AS %																
		ACRE YIELD, BUSHELS					OF TEST			2010-2011								
				2-yr.	3-yr.	AVERAGE			Days	Grain	Days	Grain	Test	Plnt				
BRAND	NAME	2011	2010	2009	avg.	avg.	2011	2010	2009	to	Moist.	to	Moist.	Wt.	Ht.	Ldg	Pop.	Hds.
										Blm	%	Blm	%	lb/bu	in.	%	1000	per
DEKALB	DKS28-05	44	142	143	93	110	84	95	113	61	11	65	11	53	44	20	29.2	1.6
MATURITY CHECK	EARLY	41	134	103	88	93	78	89	81	61	10	66	9	55	38	26	27.7	1.6
ASGROW	PULSAR	55	135	136	95	109	103	90	107	65	11	68	11	55	44	24	28.9	1.6
DEKALB	DKS36-06	54	156	135	105	115	101	104	106	65	13	70	13	56	46	14	30.2	1.4
DEKALB	DKS37-07	54	157	137	105	116	101	105	107	66	12	70	11	56	45	27	29.2	1.3
MATURITY CHECK	MEDIUM	57	161	127	109	115	107	107	100	69	13	70	13	57	44	25	28.5	1.4
DEKALB	DKS44-20	56	144	131	100	110	105	96	104	67	12	70	12	58	43	6	27.9	1.5
OHLDE	O-525	49	--	--	--	--	92	--	--	--	--	70	13	60	44	17	26.9	1.4
OHLDE	O-530	49	--	--	--	--	93	--	--	--	--	70	13	58	44	21	27.4	1.3
MATURITY CHECK	LATE	55	149	126	102	110	104	99	100	71	13	71	12	55	44	18	28.9	1.2
PIONEER	85G03	69	161	131	115	120	129	108	103	69	13	72	15	59	44	12	28.2	1.7
PIONEER	85Y40	47	168	135	108	117	89	112	106	69	14	72	14	57	45	19	27.4	1.5
PIONEER	84P80	58	--	--	--	--	110	--	--	--	--	73	13	58	46	27	27.2	1.4
PIONEER	84G62	56	171	--	113	--	105	114	--	71	13	73	14	58	46	20	29.7	1.4
AVERAGES		53	150	127	102	110	53	150	127	67	12	70	12	57	44	20	28.4	1.5
CV (%)		14	9	7	--	--	14	9	7	--	--	2	13	3	3	39	6	10
LSD (0.05)		11	20	13	--	--	20	13	10	--	--	2	2	2	2	11	3	0

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

WESTERN KANSAS FALLOW GRAIN SORGHUM TEST

Southwest Research-Extension Center, Tribune; Alan Schlegel, agronomist; DeWayne Bond; technician

Richfield silt loam; Wheat in 2010

80 - 25 - 0 lb/a N, P, K

Planted on 5/31/2011; Harvested on 10/31/2011

Target stand of 25,000 plants/acre; 8.4 in. spacing

Dry early, then wetter than normal.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	0.2	1.8	35	30	0	0
April	1.2	1.3	51	49	504	430
May	0.7	2.3	59	59	851	772
June	4.1	2.5	74	70	1046	1063
July	4.3	2.6	80	76	1158	1287
August	2.8	2.3	78	74	1086	1209
Sept.	0.8	1.3	64	66	751	934
Oct.	2.2	0.6	54	49	473	340
Totals:	16.2	14.7	53	49	5,869	6,035

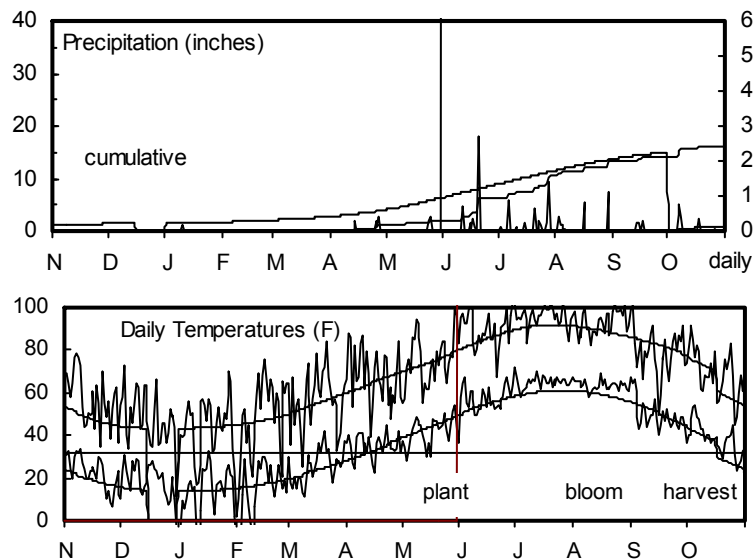


Table 10. Greeley County Dryland Grain Sorghum Performance Test, 2009-2011

		YIELD AS %										2010-2011							
		ACRE YIELD, BUSHELS					OF TEST			Days	Grain	Days	Grain	Test	Plnt		Pop.	Hds.	
				2-yr.	3-yr.	AVERAGE			to	Moist.	to	Moist.	Wt.	Ht.	Ldg	1000	per		
BRAND	NAME	2011	2010	2009	avg.	avg.	2011	2010	2009	Blm	%	Blm	%	lb/bu	in.	%	ppa	Pint	
PIONEER	87P06	139	--	--	--	--	98	--	--	--	--	66	12	58	45	--	29.4	1.9	
PIONEER	86G08	136	123	--	129	--	95	112	--	64	13	66	13	58	51	--	26.9	2.0	
DEKALB	DKS28-05	148	88	87	118	108	104	80	119	65	14	67	13	56	52	--	29.2	2.1	
ASGROW	PULSAR	132	96	81	114	103	93	87	111	66	13	69	13	58	49	--	39.4	1.9	
MATURITY CHECK	EARLY	111	91	79	101	94	78	83	108	65	14	69	13	55	42	--	29.5	1.8	
DEKALB	DKS36-06	146	124	91	135	120	103	113	125	68	13	72	13	60	55	--	29.8	1.8	
DEKALB	DKS37-07	145	120	80	132	115	102	110	110	69	15	74	14	59	53	--	27.0	2.0	
MATURITY CHECK	LATE	154	122	53	138	110	108	111	73	74	13	74	14	58	53	--	30.3	1.6	
DEKALB	DKS44-20	141	118	74	130	111	99	108	101	71	13	74	13	58	53	--	30.2	1.7	
DRUSSEL SEED	DSS B6506	136	123	81	130	113	96	112	111	72	14	76	13	59	54	--	26.1	1.9	
MATURITY CHECK	MEDIUM	146	118	54	132	106	103	107	74	75	14	76	14	59	53	--	27.5	1.8	
PIONEER	85Y40	144	104	80	124	109	101	95	110	73	15	77	13	59	53	--	28.0	1.8	
DRUSSEL SEED	DSS B64	149	126	85	138	120	105	115	116	73	13	77	13	56	51	--	26.5	2.1	
PIONEER	85G03	153	123	55	138	110	108	112	76	76	13	79	14	58	55	--	27.7	2.2	
TRIUMPH	TRX03473	154	--	--	--	--	108	--	--	--	--	80	14	56	54	--	29.1	1.6	
TRIUMPH	TR 448	142	121	--	132	--	100	110	--	75	13	80	14	59	50	--	26.7	1.8	
AVERAGES		142	110	73	126	108	142	110	78	70	14	73	13	58	51	--	28.3	1.9	
CV (%)		9	10	8	--	--	9	10	14	--	--	2	2	2	3	--	8	9	
LSD (0.05)		18	16	8	--	--	12	14	19	--	--	2	0	1	2	--	3	0	

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

Table 11. WESTERN Kansas Grain Sorghum Hybrid Yield Summary (% of test avg.), 2011

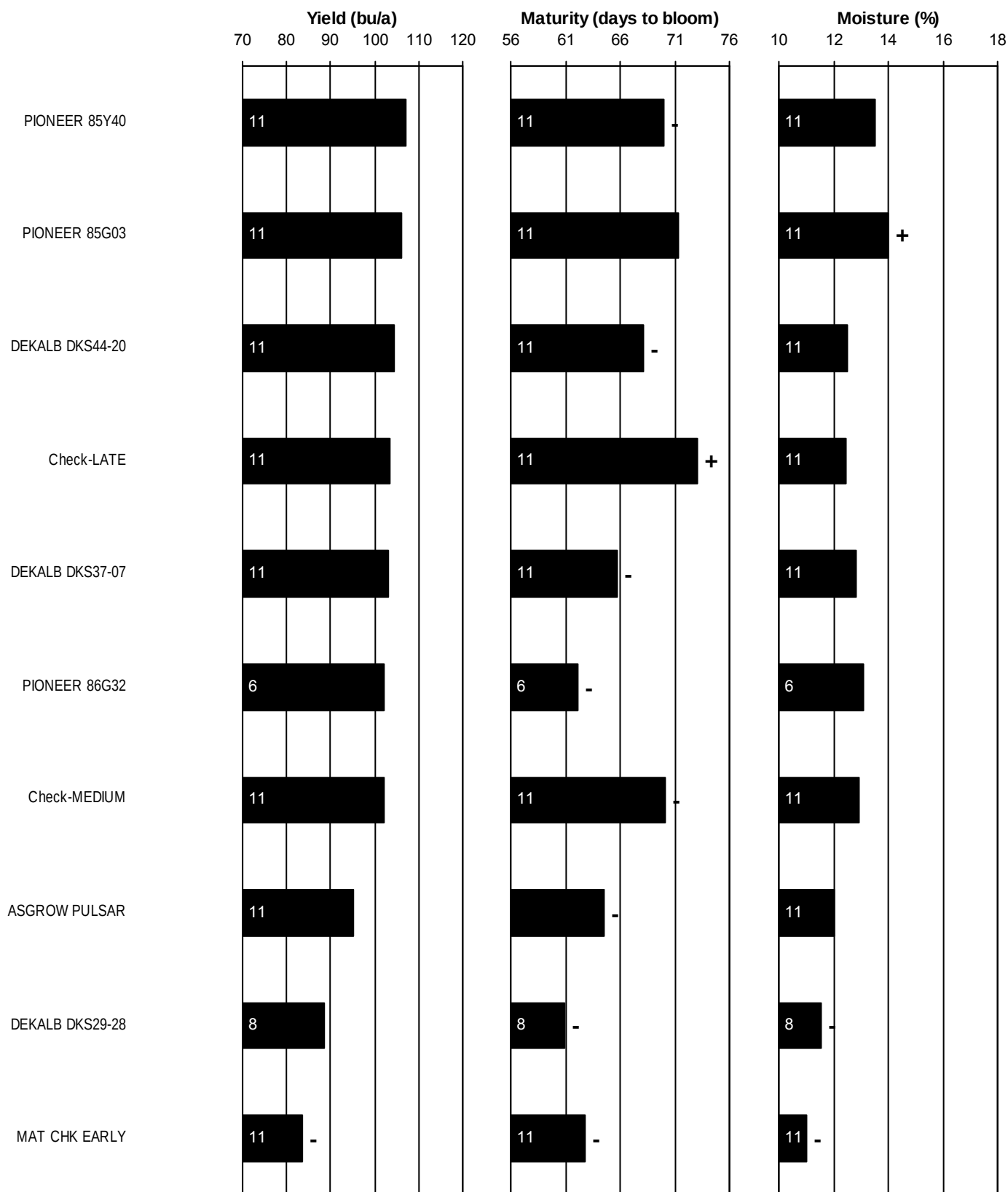
BRAND/NAME	ELD	THD	GRD	FND	AVG.	BRAND/NAME	ELD	THD	GRD	FND	AVG.
ADVANTA						AVERAGES (bu/a)	38	53	142	--	78
AG2101	95	--	--	--	--	CV (%)	12	14	9	--	--
AG2103	111	--	--	--	--	LSD (0.05)	17	20	12	--	--
XG2105	67	--	--	--	--						
ASGROW											
PULSAR	131	103	93	--	109						
DEKALB											
DKS28-05	105	84	104	--	98						
DKS36-06	122	101	103	--	109						
DKS37-07	131	101	102	--	111						
DKS44-20	103	105	99	--	102						
DRUSSEL SEED											
DSS B64	--	--	105	--	--						
DSS B6506	--	--	96	--	--						
OHLDE											
O-525	82	92	--	--	--						
O-530	103	93	--	--	--						
O-567	114	--	--	--	--						
O-575	103	--	--	--	--						
PIONEER											
84G62	59	105	--	--	--						
84P80	97	110	--	--	--						
85G03	106	129	108	--	114						
85Y40	106	89	101	--	99						
86G08	--	--	95	--	--						
87P06	--	--	98	--	--						
TRIUMPH											
TR448	--	--	100	--	--						
TRX03473	70	--	108	--	--						
TRX05361	80	--	--	--	--						
TRX85131	95	--	--	--	--						
TRX95005	104	--	--	--	--						
MATURITY CHECK											
EARLY	78	78	78	--	78						
LATE	125	104	108	--	113						
MEDIUM	110	107	103	--	106						

ELD = Ellis Co., Hays

THD = Thomas Co., Colby

GRD = Greeley Co., Tribune

FND = Finney Co., Garden City
abandoned.



Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

Figure 7. WESTERN Kansas sorghum hybrid standardized performance summary, 2009-2011

SOUTH CENTRAL KANSAS NO-TILL IRRIGATED GRAIN SORGHUM TEST

South Central Kansas Experiment Field, Hutchinson; William Heer, agronomist

Ost loam; Soybean in 2010

170 - 0 - 0 lb/a N, P, K

Planted on 6/3/2011; Harvested on 10/5/2011

Target stand of 90,000 plants/acre; 2.3 in. spacing

Bird damage after a season of extreme drought affected yields.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	3.5	3.7	36	32	0	0
April	0.3	2.6	56	55	703	617
May	1.7	3.8	65	65	894	927
June	0.9	4.3	81	75	1246	1196
July	0.0	3.5	88	81	1319	1416
August	1.7	3.1	83	79	1284	1361
Sept.	0.6	3.3	67	70	1063	1053
Oct.	1.0	1.8	58	54	752	407
Totals:	9.8	26.1	57	53	7,261	6,977

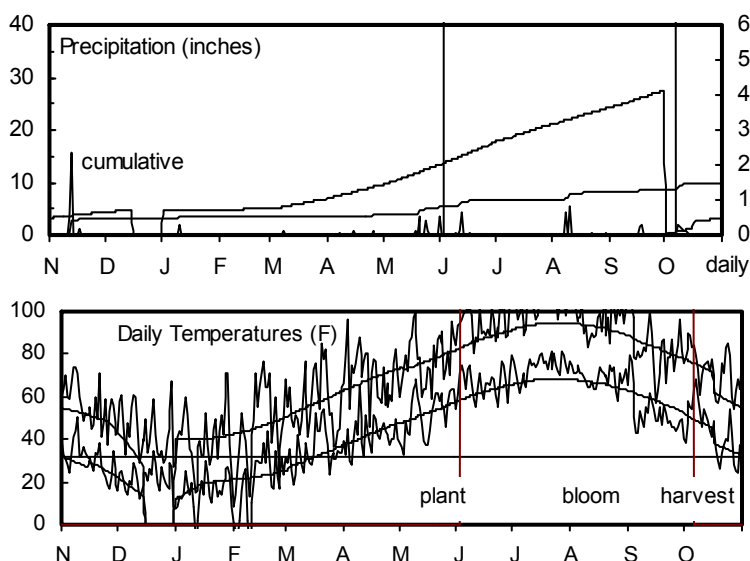


Table 12. Reno County No-Till Irrigated Grain Sorghum Performance Test, 2009-2011

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS %			2010-2011									
		2-yr. 3-yr.					OF TEST			Days Grain		Days Grain		Test		Plnt		Pop.	
		avg. avg.					AVERAGE			to Moist.		to Moist.		Wt.		Ht.		Ldg	
		2011	2010	2009	avg.	avg.	2011	2010	2009	Blm	%	Blm	%	lb/bu	in.	%	1000	per	Hds.
MATURITY CHECK	EARLY	70	37	89	54	65	65	88	70	63	13	56	12	60	45	1	--	--	--
PIONEER	85G03	102	--	--	--	--	95	--	--	--	--	59	14	60	64	6	--	--	--
MATURITY CHECK	MEDIUM	99	35	98	67	77	92	84	76	68	16	60	12	63	64	2	--	--	--
GOLDEN ACRES	3696	108	--	--	--	--	100	--	--	--	--	61	14	61	63	11	--	--	--
GOLDEN ACRES	3552	101	--	--	--	--	94	--	--	--	--	61	12	62	60	3	--	--	--
TRIUMPH	TRX95005	109	49	--	79	--	101	117	--	71	14	61	11	62	63	6	--	--	--
PIONEER	85Y40	115	--	--	--	--	106	--	--	--	--	61	15	61	63	18	--	--	--
DEKALB	DKS49-45	117	33	--	75	--	109	79	--	70	14	62	12	63	66	1	--	--	--
GOLDEN ACRES	3545	116	--	--	--	--	107	--	--	--	--	62	13	62	62	1	--	--	--
MATURITY CHECK	LATE	113	50	144	82	102	105	119	113	71	13	62	12	62	64	4	--	--	--
TRIUMPH	TRX85131	96	--	--	--	--	89	--	--	--	--	62	14	62	57	9	--	--	--
PIONEER	84P80	132	--	--	--	--	122	--	--	--	--	63	12	63	65	6	--	--	--
PIONEER	84G62	125	--	--	--	--	116	--	--	--	--	64	15	62	60	8	--	--	--
DEKALB	DKS54-00	109	36	146	73	97	101	86	114	72	13	65	12	62	64	3	--	--	--
DEKALB	DKS54-03	109	39	156	74	101	101	92	122	72	13	65	13	62	63	4	--	--	--
TRIUMPH	TRX05361	100	--	--	--	--	92	--	--	--	--	65	12	62	68	4	--	--	--
DEKALB	DKS53-67	115	47	146	81	103	107	111	114	69	14	65	15	62	63	11	--	--	--
AVERAGES		108	42	128	75	93	108	42	128	70	14	62	13	62	62	5	--	--	--
CV (%)		9	15	8	--	--	9	15	8	--	--	2	20	2	3	135	--	--	--
LSD (0.05)		14	9	15	--	--	13	21	12	--	--	2	4	2	2	10	--	--	--

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

WESTERN KANSAS IRRIGATED GRAIN SORGHUM TEST

Northwest Research-Extension Center, Colby; Patrick Evans, agronomist

Keith silt loam; Sunflower in 2010

175 - 50 - 0 lb/a N, P, K

Planted on 5/31/2011; Harvested on 10/24/2011

Target stand of 90,000 plants/acre; 2.3 in. spacing

Good stands were established and growing conditions were favorable until an August 10 hailstorm. Many heads were broken off, leaves and stalks were damaged.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	0.8	2.3	33	28	0	0
April	1.5	1.4	50	49	523	421
May	1.8	2.9	58	59	697	762
June	1.5	3.4	73	70	1105	1054
July	4.7	3.1	80	76	1234	1285
August	2.7	2.1	77	74	1149	1216
Sept.	0.3	1.6	62	66	926	910
Oct.	2.6	0.4	54	48	643	324
Totals:	16.0	17.2	52	49	6,278	5,972

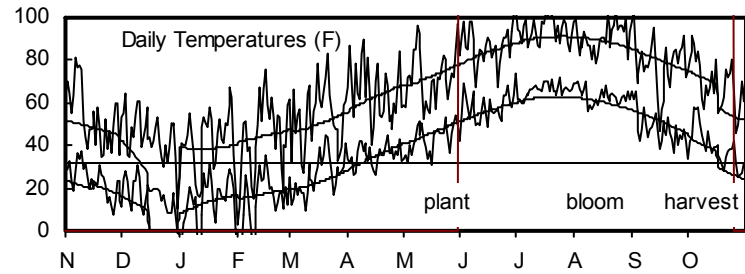
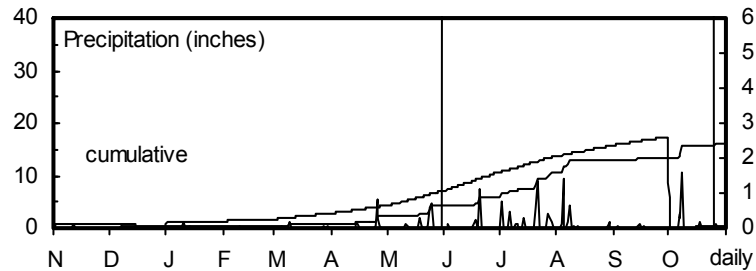


Table 13. Thomas County Irrigated Grain Sorghum Performance Test, 2009-2011

		YIELD AS %																	2010-2011	
		ACRE YIELD, BUSHEL					OF TEST			Days	Grain	Days	Grain	Test	Plnt			Pop.	Hds.	
				2-yr.		3-yr.	AVERAGE			to	Moist.	to	Moist.	Wt.	Ht.	Ldg	1000	per		
BRAND	NAME	2011	2010	2009	avg.	avg.	2011	2010	2009	Blm	%	Blm	%	lb/bu	in.	%	ppa	PInt		
PIONEER	87P06	54	--	--	--	--	66	--	--	--	--	56	15	56	48	1	69.9	1.1		
MATURITY CHECK	EARLY	75	148	152	112	125	92	81	86	55	12	60	12	56	44	0	61.9	1.1		
PIONEER	86G08	74	--	--	--	--	90	--	--	--	--	60	14	56	51	0	62.3	1.2		
MATURITY CHECK	MEDIUM	70	200	176	135	149	86	109	100	64	14	63	13	57	53	0	62.9	1.1		
PIONEER	85Y40	87	195	177	141	153	105	106	100	63	16	64	17	58	54	3	65.2	1.1		
MATURITY CHECK	LATE	70	187	178	129	145	86	101	101	66	15	66	15	56	53	0	70.3	1.0		
DEKALB	DKS49-45	73	190	--	132	--	89	103	--	65	15	67	15	55	58	1	70.3	1.0		
PIONEER	85G03	103	194	--	149	--	126	106	--	67	17	68	17	57	55	1	63.7	1.1		
DEKALB	DKS54-03	85	193	181	139	153	103	105	103	67	15	69	13	55	56	1	63.7	1.0		
DEKALB	DKS54-00	78	199	182	139	153	95	108	103	67	15	69	14	55	55	1	61.2	1.1		
DEKALB	DKS53-67	95	207	187	151	163	115	112	106	68	16	69	15	57	53	0	64.3	1.1		
PIONEER	84G62	110	211	192	161	171	134	115	109	68	16	70	15	59	53	1	65.3	1.1		
PIONEER	84P80	94	--	--	--	--	114	--	--	--	--	70	15	57	55	1	68.2	1.0		
AVERAGES		82	184	177	133	148	82	184	177	65	15	65	15	56	53	1	65.3	1.1		
CV (%)		8	7	7	--	--	8	7	7	--	--	1	11	2	2	--	5	6		
LSD (0.05)		10	17	17	--	--	12	9	10	--	--	1	2	2	2	1	5	0		

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

WESTERN KANSAS IRRIGATED GRAIN SORGHUM TEST

Southwest Research-Extension Center, Garden City; Monty Spangler, technician

Keith silt loam; Fallow in 2010

50 - 0 - 0 lb/a N, P, K

Planted on 6/1/2011; Harvested on 10/21/2011

Target stand of 70,000 plants/acre; 3.0 in. spacing

Growing season was extremely hot and dry.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	0.7	2.4	35	29	0	0
April	1.7	1.6	53	50	599	472
May	0.9	2.9	61	61	793	831
June	1.5	3.0	76	72	1167	1115
July	0.4	2.5	84	78	1254	1321
August	2.1	2.2	81	75	1217	1260
Sept.	0.3	1.6	66	68	1048	973
Oct.	0.5	0.9	56	50	684	356
Totals:	8.1	17.1	54	50	6,761	6,328

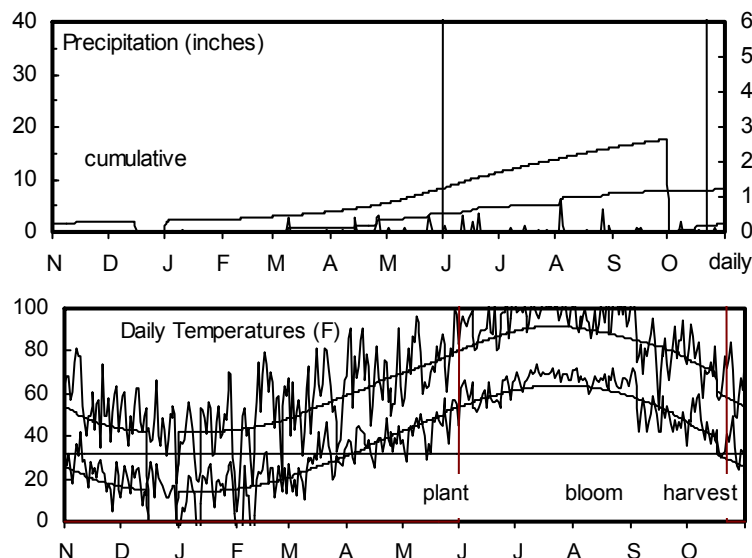


Table 14. Finney County Irrigated Grain Sorghum Performance Test, 2009-2011

		ACRE YIELD, BUSHEL						YIELD AS %			2010-2011		OF TEST			Days Grain			Test	Plnt	Pop.		Hds.
BRAND	NAME	2011	2010	2009	2-yr.		avg.	AVERAGE			Blm	Moist.	Blm	Moist.	lb/bu	in.	Ldg	1000	ppa	Pint			
					avg.	avg.		2011	2010	2009													
ADVANTA	AG2103	103	--	--	--	--	95	--	--	--	--	--	--	15	60	--	2	--	--				
ADVANTA	AG3101	108	--	--	--	--	100	--	--	--	--	--	--	17	60	--	2	--	--				
DEKALB	DKS49-45	104	156	--	130	--	96	111	--	--	13	--	13	56	--	1	--	--					
DEKALB	DKS53-67	112	160	152	136	141	103	114	113	--	17	--	18	61	--	2	--	--					
DEKALB	DKS54-00	115	144	137	130	132	106	103	102	--	15	--	16	59	--	3	--	--					
DEKALB	DKS54-03	116	148	149	132	138	107	105	111	--	14	--	14	59	--	0	--	--					
GOLDEN ACRES	3545	116	--	--	--	--	107	--	--	--	--	--	14	59	--	1	--	--					
GOLDEN ACRES	3696	125	--	--	--	--	115	--	--	--	--	--	15	60	--	1	--	--					
GOLDEN ACRES	H-390W	85	--	--	--	--	79	--	--	--	--	--	14	58	--	0	--	--					
MATURITY CHECK	EARLY	79	115	96	97	97	73	82	71	--	12	--	13	58	--	3	--	--					
MATURITY CHECK	LATE	120	158	150	139	143	111	112	112	--	13	--	13	55	--	1	--	--					
MATURITY CHECK	MEDIUM	97	157	126	127	127	89	112	93	--	14	--	13	59	--	3	--	--					
PIONEER	84G62	127	168	147	147	147	117	119	109	--	15	--	16	61	--	4	--	--					
PIONEER	84P80	129	--	--	--	--	119	--	--	--	--	--	17	61	--	2	--	--					
PIONEER	85G03	121	--	--	--	--	112	--	--	--	--	--	16	59	--	2	--	--					
PIONEER	85Y40	103	149	142	126	131	95	106	106	--	15	--	16	61	--	2	--	--					
TRIUMPH	TRX05361	105	154	--	129	--	97	110	--	--	14	--	15	58	--	2	--	--					
TRIUMPH	TRX85131	109	--	--	--	--	100	--	--	--	--	--	18	59	--	2	--	--					
TRIUMPH	TRX95005	112	159	--	136	--	104	113	--	--	14	--	14	60	--	4	--	--					
AVERAGES		108	140	134	124	127	108	140	134	--	14	--	15	58	--	2	--	--					
CV (%)		12	8	5	--	--	12	8	5	--	--	--	10	8	--	--	--	--					
LSD (0.05)		19	15	10	--	--	18	11	8	--	--	--	2	6	--	3	--	--					

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

WESTERN KANSAS IRRIGATED GRAIN SORGHUM TEST

Southwest Research-Extension Center, Tribune; Alan Schlegel, agronomist; Dewayne Bond, technician

Ulysses silt loam; Fallow in 2010

120 - 25 - 0 lb/a N, P, K

Planted on 5/31/2011; Harvested on 10/31/2011

Target stand of 70,000 plants/acre; 3.0 in. spacing

Dry early, then wetter than normal.

Month	Precipitation		Average Temp.		GDU	
	2011	Norm.	2011	Norm.	2011	Norm.
Nov.-Mar.	0.2	1.8	35	30	0	0
April	1.2	1.3	51	49	456	430
May	0.7	2.3	59	59	788	772
June	4.1	2.5	74	70	1103	1063
July	4.3	2.6	80	76	1326	1287
August	2.8	2.3	78	74	1145	1209
Sept.	0.8	1.3	64	66	848	934
Oct.	2.2	0.6	54	49	473	340
Totals:	16.2	14.7	53	49	6,139	6,035

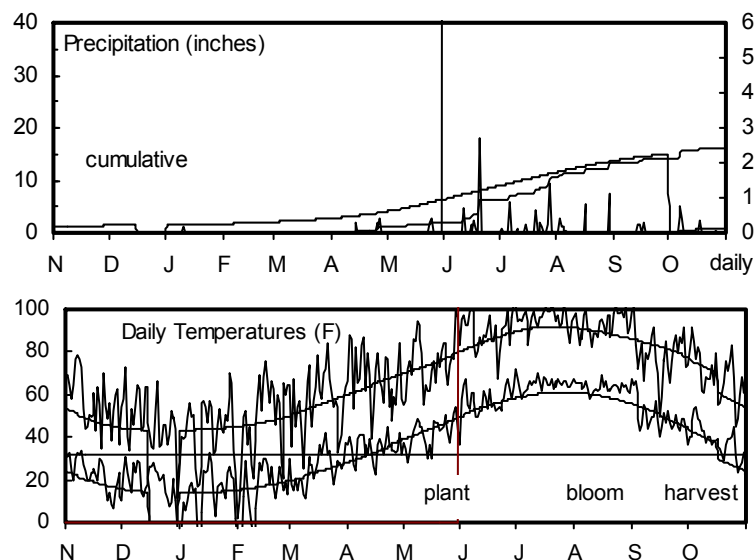


Table 15. Greeley County Irrigated Grain Sorghum Performance Test, 2009-2011

		YIELD AS %										2010-2011								
		ACRE YIELD, BUSHELS					OF TEST			Days	Grain	Days	Grain	Test	Plnt		Pop.	Hds.		
					2-yr.	3-yr.	AVERAGE			to	Moist.	to	Moist.	Wt.	Ht.	Ldg	1000	per		
BRAND	NAME	2011	2010	2009	avg.	avg.	2011	2010	2009	Blm	%	Blm	%	lb/bu	in.	%	ppa	Pint		
MATURITY CHECK	EARLY	125	--	--	--	--	67	--	--	--	--	62	12	53	45	--	54.9	1.5		
MATURITY CHECK	MEDIUM	179	--	--	--	--	97	--	--	--	--	68	13	56	57	--	62.0	1.2		
PIONEER	85G03	201	--	--	--	--	108	--	--	--	--	68	14	59	61	--	60.3	1.3		
MATURITY CHECK	LATE	183	--	--	--	--	99	--	--	--	--	69	13	54	57	--	62.4	1.2		
PIONEER	85Y40	180	--	--	--	--	97	--	--	--	--	69	14	58	57	--	54.9	1.2		
DEKALB	DKS49-45	204	--	--	--	--	110	--	--	--	--	71	13	55	63	--	60.8	1.3		
DEKALB	DKS54-03	198	--	--	--	--	107	--	--	--	--	71	13	54	61	--	51.5	1.4		
DEKALB	DKS53-67	199	--	--	--	--	107	--	--	--	--	72	14	57	60	--	63.9	1.2		
DEKALB	DKS54-00	187	--	--	--	--	101	--	--	--	--	73	13	54	60	--	56.8	1.2		
PIONEER	84P80	199	--	--	--	--	108	--	--	--	--	73	14	58	59	--	60.0	1.1		
PIONEER	84G62	185	--	--	--	--	100	--	--	--	--	74	13	57	56	--	62.0	1.0		
	AVERAGES	185	--	--	--	--	185	--	--	--	--	70	13	56	58	--	59.0	1.2		
	CV (%)	6	--	--	--	--	6	--	--	--	--	1	4	2	4	--	7	10		
	LSD (0.05)	16	--	--	--	--	9	--	--	--	--	1	1	2	3	--	6	0		

*Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

Top LSD group in bold.

Table 16. Kansas IRRIGATED Grain Sorghum Hybrid Yield Summary (% of test avg.), 2011

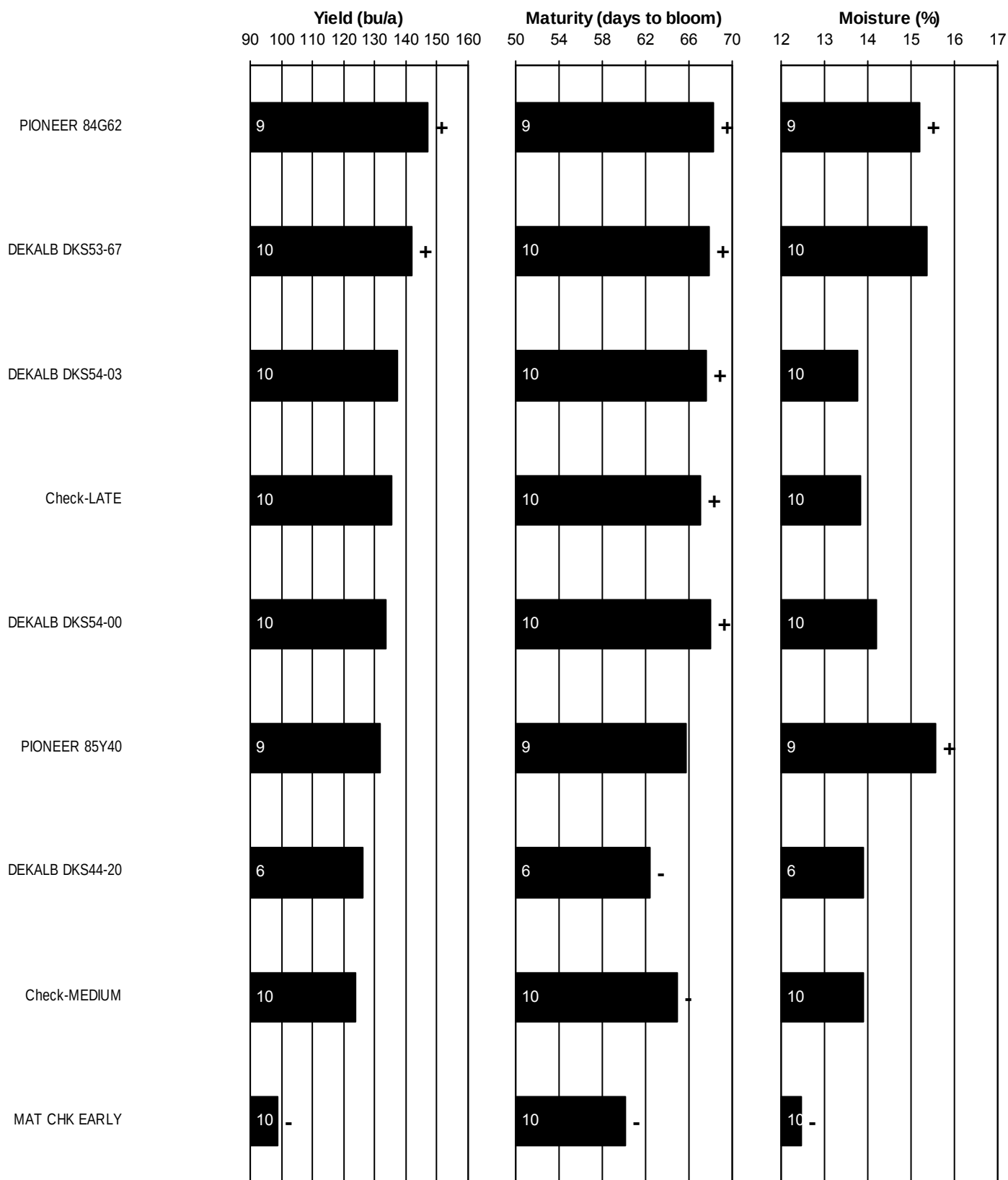
BRAND/NAME	RNI	THI	GRI	FNI	AVG.
ADVANTA					
AG2103	--	--	--	95	--
AG3101	--	--	--	100	--
DEKALB					
DKS49-45	109	89	110	96	101
DKS53-67	107	115	107	103	108
DKS54-00	101	95	101	106	101
DKS54-03	101	103	107	107	104
GOLDEN ACRES					
3545	107	--	--	107	--
3552	94	--	--	--	--
3696	100	--	--	115	--
H-390W	--	--	--	79	--
PIONEER					
84G62	116	134	100	117	117
84P80	122	114	108	119	115
85G03	95	126	108	112	110
85Y40	106	105	97	95	101
86G08	--	90	--	--	--
87P06	--	66	--	--	--
TRIUMPH					
TRX05361	92	--	--	97	--
TRX85131	89	--	--	100	--
TRX95005	101	--	--	104	--
MATURITY CHECK					
EARLY	65	92	67	73	74
LATE	105	86	99	111	100
MEDIUM	92	86	97	89	91
AVERAGES (bu/a)	108	82	185	108	121
CV (%)	9	8	6	12	--
LSD (0.05)	13	12	9	18	--

RNI=Reno Co., Hutchinson

THI=Thomas Co., Colby

FNI=Finney Co., Garden City

GRI=Greeley Co., Tribune



Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically higher or lower than mean of checks.

Figure 8. Kansas IRRIGATED sorghum hybrid standardized performance summary, 2009-2011

Table 17. Entries in the 2011 Kansas Grain Sorghum Performance Tests

BRAND	GC	EC	PC	Mat.	Days	GB	BRAND	GC	EC	PC	Mat.	Days	GB
ADVANTA							TRIUMPH						
AG2103	R	-	P	M	65	-	TR448	-	-	-	-	-	-
XG2105	R	-	P	M	66	-	TRX03473	-	-	-	-	-	-
AG2101	R	-	P	M	67	-	TRX05361	-	-	-	-	-	-
AG3101	R	-	P	L	68	-	TRX84732	-	-	-	-	-	-
ASGROW							TRX85131	-	-	-	-	-	-
PULSAR	B	HY	P	E	68	CEI	TRX95005	-	-	-	-	-	-
DEKALB							TR 452	R	W	P	ME	60	CE
DKS28-05	B	HY	P	E	58	-	TR 481	R	W	P	ML	72	CE
DKS36-06	B	HY	P	E	63	-	MATURITY CHECK						
DKS37-07	B	HY	P	E	67	CEI	EARLY	R	W	P	E	65	E
DKS44-20	B	HY	P	M	67	-	MEDIUM	W	W	P	M	69	-
DKS49-45	B	HY	P	M	70	E,I	LATE	B	W	P	L	73	-
DKS53-67	B	HY	P	L	71	CEI							
DKS54-03	B	HY	P	L	74	-							
DKS54-00	B	HY	P	L	75	CEI							
DRUSSEL SEED													
DSS B64	B	W	P	ME	64	C							
DSS B6506	B	W	P	ME	65	CDE							
GOLDEN ACRES													
5556	R	HY	P	E	62	C,E							
H-307	R	HY	P	E	62	C,E							
H-390W	W	W	P	E	62	C,E							
3552	R	W	P	M	68	C,E							
5745	R	HY	P	M	68	C,E							
3545	B	HY	P	M	70	C,E							
5613	B	HY	P	M	70	C,E,I							
3696	B	HY	P	L	74	C,E							
GOLDEN HARVEST													
H5464	-	-	-	-	-	-							
H5613	-	-	-	-	-	-							
OHLDE													
O-525	B	W	P	E	64	-							
O-530	C	Y	P	ME	67	CE							
O-567	B	W	P	M	70	CEIK							
O-575	R	W	P	M	70	-							
O-587	R	W	P	ML	72	-							
PIONEER													
84P80	-	-	-	-	-	-							
87P06	-	-	-	-	-	-							
86G08	R	W	P	-	65	-							
85G03	R	W	P	M	69	-							
85Y40	W	Y	P	M	70	-							
84G62	B	Y	P	L	72	E							

Information provided by entrants:

GC = grain color: bronze, cream, red, yellow, white

EC = endosperm color: white, yellow, hetero-yellow

PC = plant color: purple, tan

Mat. = relative maturity: early, medium, late

Days = days to half bloom

G-bug = resistance to specific greenbug biotypes: C, E, I, K, etc.

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

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