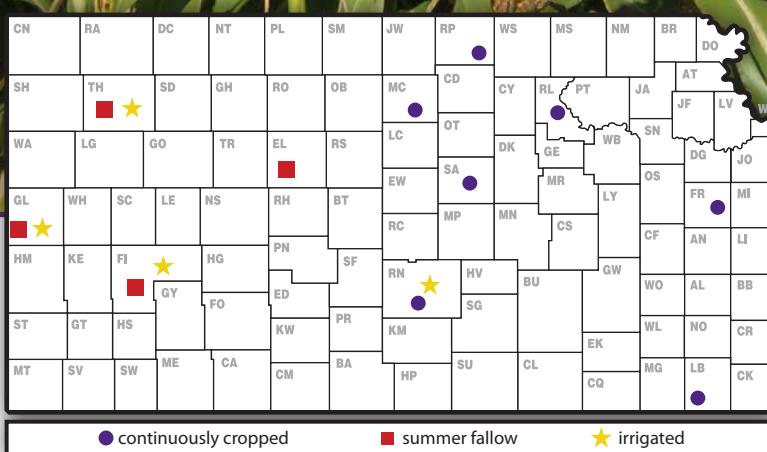
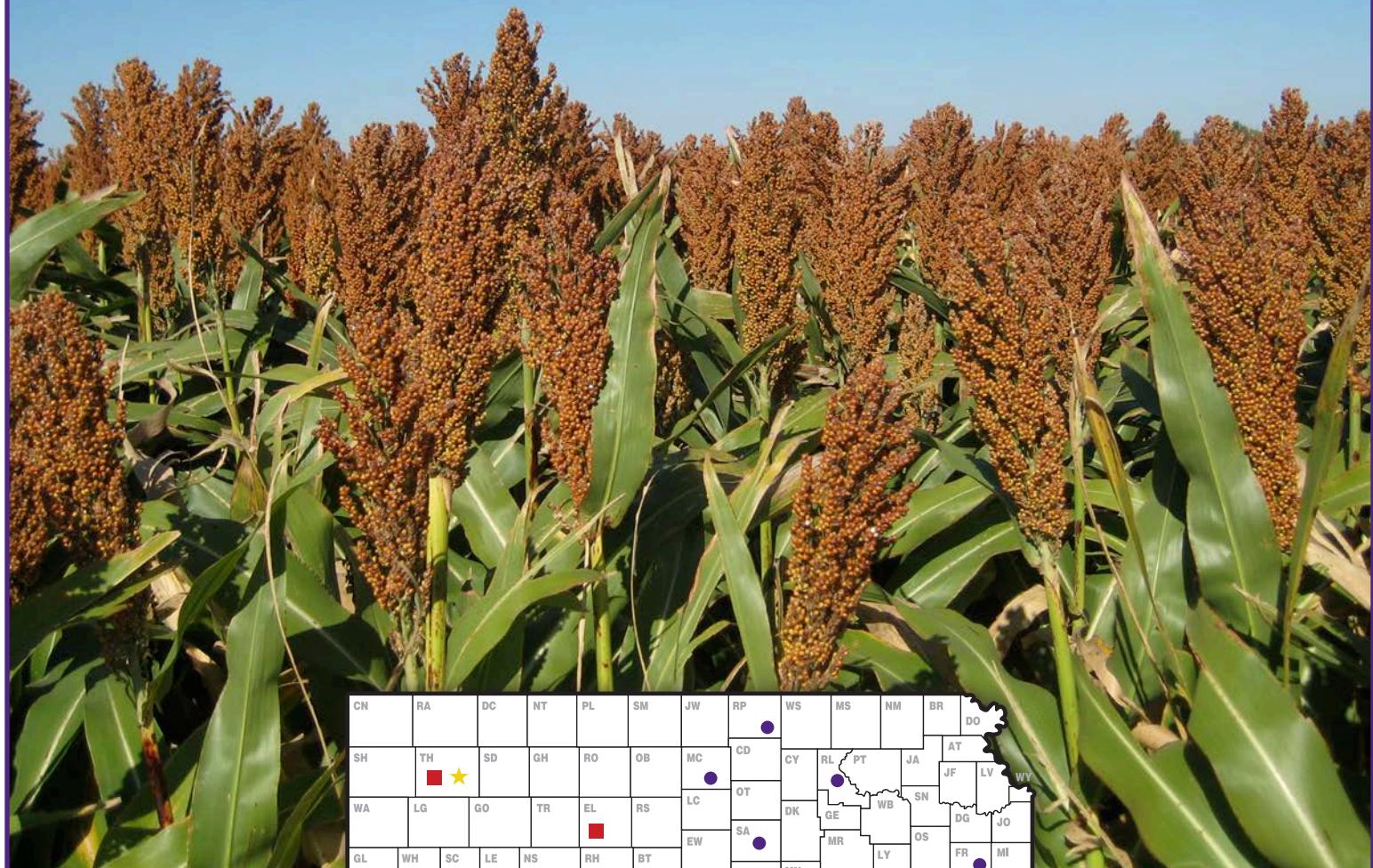


2012 Kansas Performance Tests with Grain Sorghum Hybrids



Report of Progress 1077



Kansas State University Agricultural Experiment Station and Cooperative Extension Service

TABLE OF CONTENTS

2012 Grain Sorghum Crop Review

Statewide Growing Conditions, Diseases, Insects, Harvest Statistics 1

2012 Performance Tests

Objectives and Procedures 2

Entrants in the 2012 Performance Tests Table 1 3

Northeast

Manhattan, Riley County Table 2 4

Belleville, Republic County Table 3 5

2012 Yield Summary Table 4 6

Multi-year Summary Figure 4 7

Southeast

Ottawa, Franklin County Table 5 8

Parsons, Labette County Table 6 9

2012 Yield Summary Table 7 10

West

Garden City, Finney County Table 8 11

Multi-year Summary Figure 5 12

Irrigated

Colby, Thomas County Table 9 13

Garden City, Finney County Table 10 14

Tribune, Greeley County Table 11 15

2012 Yield Summary Table 12 16

Multi-year Summary Figure 6 17

Entries in the 2012 Kansas Grain Sorghum Performance Tests

Table 13 18

Electronic Access, University Research Policy, and Duplication Policy back cover

2012 GRAIN SORGHUM CROP REVIEW

Statewide Growing Conditions

The 2012 Kansas grain sorghum growing season was extremely challenging for most of the state for the second year in a row. Although grain sorghum is well suited for hot, arid growing conditions, the 2012 crop was stressed beyond its limit of endurance in many regions of the state with extended periods of high heat and very limited rainfall. (Figure 1). Heat stress was a statewide problem that affected pollination and grain-filling, either forcing the sorghum to develop at an accelerated pace or causing the plants to stop growth altogether. Many fields failed to make a crop. The dryland grain sorghum performance tests at Beloit, Assaria, Hutchinson, Hays, Tribune, and Colby were abandoned because of acute drought conditions. The irrigated test at Hutchinson was lost to bird feeding.

The quality of the grain sorghum crop was directly affected by the adverse conditions; less than 10% of the crop was rated in good or excellent condition by the end of the growing season (Figure 2).

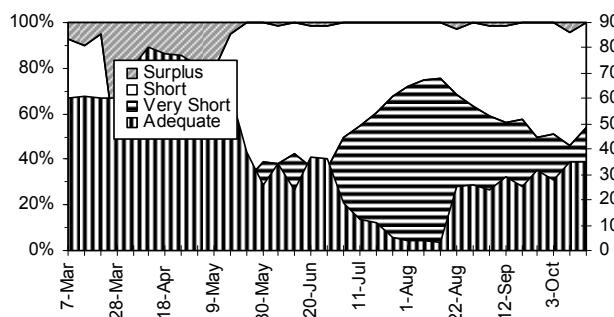


Figure 1. Statewide status of topsoil moisture

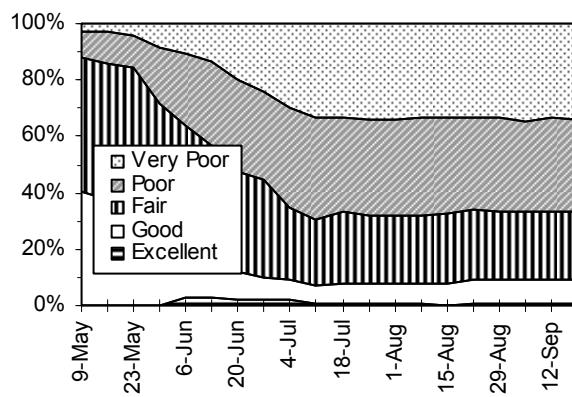


Figure 2. Condition of 2012 Kansas sorghum crop

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

Diseases

As was the case in 2011, disease pressure in 2012 was very low. Early planted sorghum that received some rain before the drought suffered significantly from Fusarium seedling blight. Sooty stripe, the most common foliar disease of sorghum in Kansas, was very difficult to find except in a few irrigated fields.

The most significant disease present in 2012 was stalk rot. Both Fusarium stalk rot and charcoal rot were present at above normal levels, resulting in occasional lodging. Even where lodging did not occur, the heads on stalk rot-infected plants generally are smaller and result in reduced yields.

No other diseases were a significant issue in 2012. Other diseases observed included Fusarium neck rot, rough spot, head smut, crazy top downy mildew, and bacterial streak. (Doug Jardine, Kansas State University Department of Plant Pathology)

Insects

Seedling plants struggled throughout much of the state due to the hot, dry weather. Because the plants were already subjected to enormous stress, chinch bug feeding heavily impacted many fields. Even those fields with what would usually be considered non-economic infestation levels were negatively impacted because of the stress already created by the weather, and either eventually died or seemed to be in a state of suspended growth, neither dying nor producing any grain.

Many fields that did produce grain did have sorghum headworm infestations, but those were not as common as in previous years. (Jeff Whitworth, Kansas State University Department of Entomology)

Harvest Statistics

The Kansas Agricultural Statistics Service predicted a 82.5 million-bushel crop in the October 11 Crops Report, down 24% from last year (Figure 3). The number of acres harvested was down 100,000 acres from last year, at 2.1 million. The average yield estimate of 40 bushels per acre is 15 bushels lower than last year's yield. Kansas leads the nation in sorghum acreage planted and harvested but is second behind Texas in production. (Kansas Agricultural Statistics Service, Topeka)

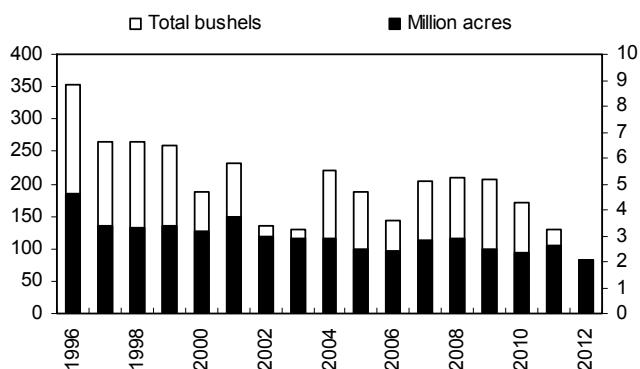


Figure 3. Historical Kansas grain sorghum production

2012 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 2012 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 12 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 6 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 also must 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 both in terms of 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 2012 Kansas Grain Sorghum Performance Tests

Asgrow/DeKalb
Monsanto Seed
St. Louis, MO
800-335-2676
www.asgrow.com

Gayland Ward Seed
Hereford, TX
806-258-7394
gaylandwardseed.com

Hoegemeyer
Hooper, NE
402-654-3399
hoegemeyer.com

Star Seed, Inc.
Osborne, KS
800-782-7311
gostarseed.com

Channel Bio
Lincoln, NE
800-279-7999
channelbio.com

Golden Acres Genetics
Waco, TX
254-761-9838
gaseed.com

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
drusselseedandsupply.com

NORTHEAST KANSAS DRYLAND GRAIN SORGHUM TEST

Agronomy North Farm, Manhattan; Jane Lingenfelter, agronomist

Reading silt loam; Soybean in 2011

150 - 0 - 0 lb/a N, P, K

Planted on 4/27/2012; Harvested on 8/23/2012

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

Good planting conditions; extremely hot during summer months.

Month	Precipitation		Average Temp.		GDU	
	2012	Norm.	2012	Norm.	2012	Norm.
Nov.-Mar.	11.5	5.1	42	30	0	0
April	2.0	2.6	60	53	806	575
May	1.1	4.5	71	64	1090	918
June	3.3	5.1	77	73	1186	1158
July	0.6	4.0	86	79	1366	1369
August	4.2	3.5	77	78	1199	1317
Sept.	1.6	3.8	68	70	974	1035
Oct.	0.6	2.3	56	53	767	387
Totals:	24.8	30.9	59	52	7,388	6,759

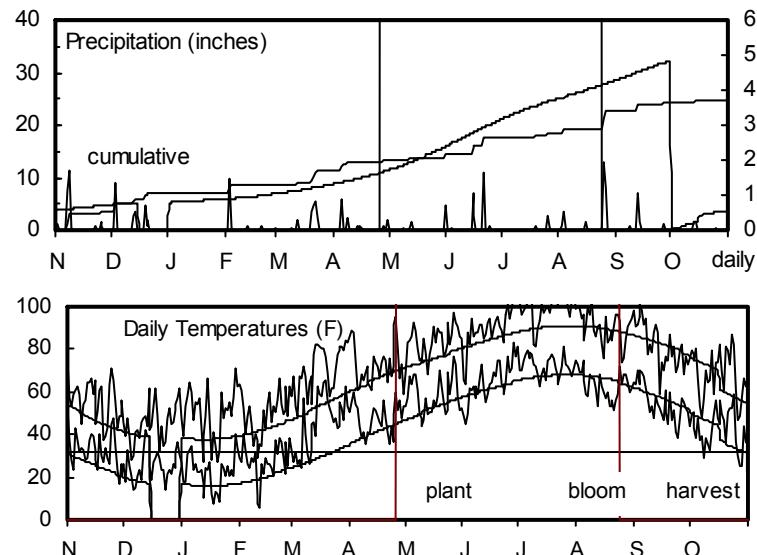


Table 2. Riley County Dryland Grain Sorghum Performance Test, 2010-2012

BRAND	NAME	ACRE YIELD, BUSHELS						YIELD AS % 2011-2012										
		2012	2011	2010	AVG	3-Yr AVG	OF TEST AVERAGE			Days to Blm	Grain Moist %	Days to Blm	Grain Moist %	Test Wt lb/bu	Plnt Ht in	Pop Ldg %	1000 ppa	Hds per Plnt
							2012	2011	2010	Blm	Blm	Blm	Wt lb/bu	Ht in	Ldg %			
DEKALB	DKS36-06	90	96	94	93	93	90	98	94	68	15	66	16	60	54	20	45	1
DEKALB	DKS44-20	97	103	105	100	102	98	105	106	69	17	66	20	60	50	13	46	1
DEKALB	DKS49-45	89	97	100	93	95	90	99	100	69	16	67	18	60	55	14	49	1
GOLDEN ACRES	GA 5556	101	--	--	--	--	102	--	--	--	--	67	16	60	48	15	44	1
GOLDEN ACRES	GA 3545	99	--	--	--	--	100	--	--	--	--	67	17	60	50	8	47	1
MATURITY CHECK	MEDIUM	97	92	116	94	102	98	94	116	69	16	67	19	61	52	7	39	2
MATURITY CHECK	EARLY	83	73	86	78	81	84	75	86	68	14	67	16	61	49	9	47	1
PIONEER	84G62	117	108	118	113	114	119	11	118	70	19	67	23	58	53	19	49	1
PIONEER	84P80	110	112	--	111	--	111	114	--	70	19	67	23	58	55	15	42	1
PIONEER	85G03	105	98	113	102	105	106	100	114	69	16	67	18	58	52	14	44	1
DEKALB	DKS51-01	100	--	--	--	--	101	--	--	--	--	68	19	60	53	14	41	1
GOLDEN ACRES	GA 5745	81	--	--	--	--	82	--	--	--	--	68	17	59	46	16	46	1
DEKALB	DKS53-67	106	106	105	106	106	107	108	105	70	18	68	22	59	48	10	50	1
MATURITY CHECK	LATE	95	103	94	99	97	96	105	95	70	17	69	20	59	53	15	48	1
PIONEER	85Y40	114	104	118	109	112	116	106	118	70	17	69	21	59	52	6	46	1
Average		99	98	100	98	99	100	98	100	69	17	67	19	59	51	13	46	1
CV (%)		10	6	10	--	--	10	6	10	--	--	1	8	1	2	--	8	9
LSD (0.05)		14	9	13	--	--	14	9	13	--	--	1	2	1	1	12	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.

NORTHEAST KANSAS DRYLAND GRAIN SORGHUM TEST

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

Crete silt loam; Soybean in 2011

150 - 20 - 0 lb/a N, P, K

Planted on 5/24/2012; Harvested on 10/11/2012

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

Warm, relatively normal precipitation in the spring months. Abnormally hot and dry in the summer.

Month	Precipitation		Average Temp.		GDU	
	2012	Norm.	2012	Norm.	2012	Norm.
Nov.-Mar.	2.5	4.0	39	27	0	0
April	2.9	1.7	58	52	723	534
May	0.5	2.3	70	63	1050	886
June	3.2	3.6	76	73	1159	1149
July	2.9	4.7	82	78	1305	1368
August	2.4	3.4	73	77	1135	1310
Sept.	0.8	3.3	65	68	932	987
Oct.	1.7	2.6	53	51	722	375
Totals:	16.9	25.6	56	50	7,025	6,609

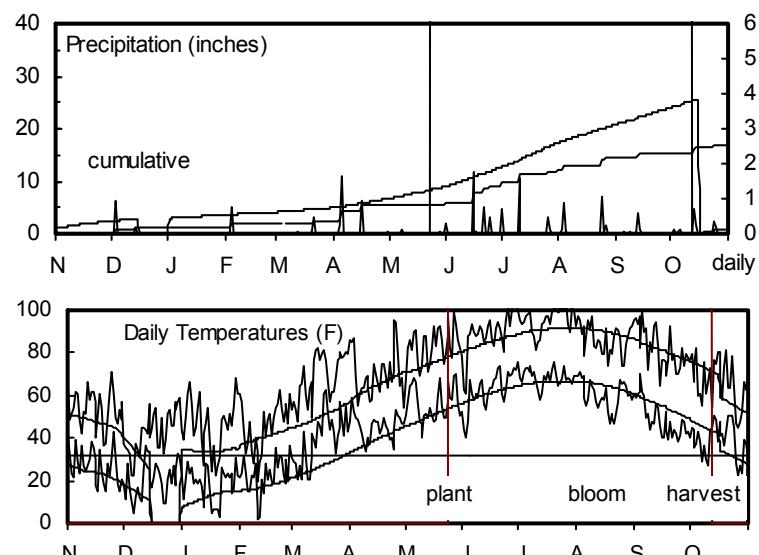


Table 3. Republic County Dryland Grain Sorghum Performance Test, 2010-2012

BRAND	NAME	YIELD AS % 2011-2012															
		ACRE YIELD, BUSHELS				OF TEST			Days	Grain	Days	Test	Plnt	Pop	Hds		
		2012	2011	2010	Avg	2012	2011	2010	Blm	%	Blm	%	Wt	Ht	Ldg	1000	per
GOLDEN ACRES	GA 5745	79	120	--	100	--	74	95	--	64	15	68	17	60	--	--	--
PIONEER	85G03	104	125	141	114	123	98	99	101	64	15	68	16	61	--	--	--
DEKALB	DKS36-06	113	137	140	125	130	106	108	100	65	14	69	15	62	--	--	--
DEKALB	DKS44-20	122	157	154	140	144	115	124	111	65	15	69	15	61	--	--	--
MATURITY CHECK	EARLY	128	95	104	112	109	121	75	75	62	15	69	17	61	--	--	--
MATURITY CHECK	MEDIUM	99	125	149	112	124	93	99	106	66	16	69	18	59	--	--	--
PIONEER	85Y40	98	102	157	100	119	92	80	112	67	15	69	16	60	--	--	--
GOLDEN ACRES	GA 3545	115	146	--	131	--	108	116	--	69	15	71	16	61	--	--	--
GOLDEN ACRES	GA 5556	104	137	--	120	--	98	108	--	68	15	71	16	60	--	--	--
DEKALB	DKS49-45	103	150	155	127	136	97	119	111	70	15	72	16	61	--	--	--
DEKALB	DKS51-01	108	--	--	--	--	101	--	--	--	--	72	15	61	--	--	--
GAYLAND WARD	GW8320	110	--	--	--	--	104	--	--	--	--	72	17	60	--	--	--
GAYLAND WARD	GW9417	109	--	--	--	--	102	--	--	--	--	72	15	61	--	--	--
MATURITY CHECK	LATE	88	149	149	118	129	83	118	107	69	16	75	17	60	--	--	--
PIONEER	84G62	126	153	161	140	147	118	121	115	70	16	75	18	59	--	--	--
PIONEER	84P80	114	118	--	116	--	107	93	--	71	15	76	16	60	--	--	--
DEKALB	DKS53-67	89	154	160	122	134	84	122	115	73	15	78	15	61	--	--	--
Average		107	126	140	116	124	107	126	140	67	15	72	16	60	--	--	--
CV (%)		10	8	8	--	--	10	8	8	--	--	2	9	1	--	--	--
LSD (0.05)		19	16	19	--	--	17	13	14	--	--	2	2	1	--	--	--

*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.

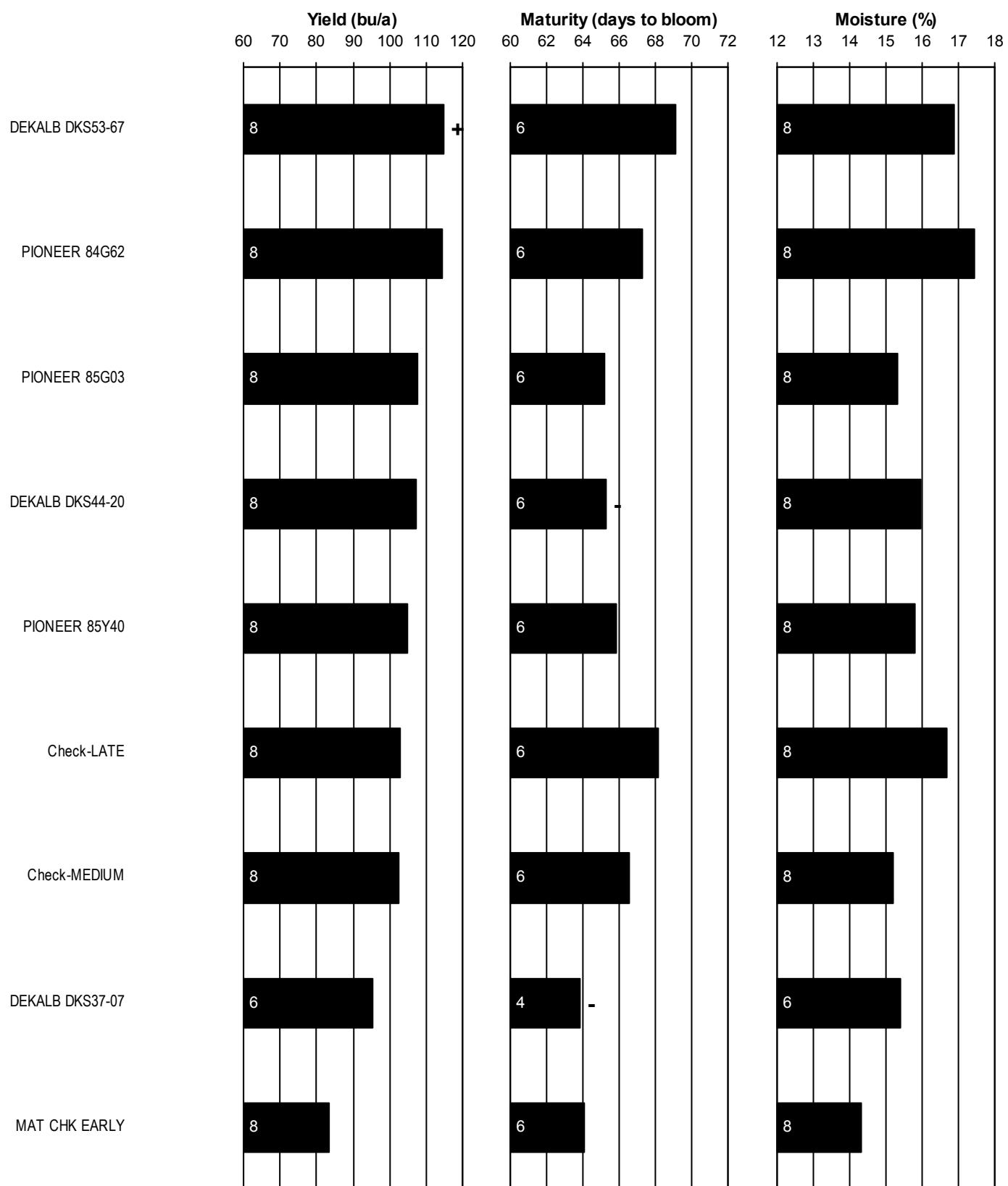
Table 4. NORTHEAST Kansas Grain Sorghum Hybrid Yield Summary (% of test avg.), 2012

BRAND/NAME	RLD	RPD	MTD	AVG.
DEKALB				
DKS36-06	90	106	--	98
DKS44-20	98	115	--	106
DKS49-45	90	97	--	93
DKS51-01	101	101	--	101
DKS53-67	107	84	--	96
GAYLAND WARD				
GW8320	--	104	--	--
GW9417	--	102	--	--
GOLDEN ACRES				
GA 3545	100	108	--	104
GA 5556	102	98	--	100
GA 5745	82	74	--	78
PIONEER				
84G62	119	118	--	118
84P80	111	107	--	109
85G03	106	98	--	102
85Y40	116	92	--	104
MATURITY CHECK				
EARLY	84	121	--	102
LATE	96	83	--	89
MEDIUM	98	93	--	95
AVERAGES (bu/a)	99	107	--	103
CV (%)	10	10	--	--
LSD (0.05)	14	17	--	--

RLD = Riley Co., Manhattan

RPD = Republic Co., Belleville

MTD= Mitchell Co., Beloit abandoned



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, 2010-2012

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 2011

90 - 30 - 10 lb/a N, P, K

Planted on 5/16/2012; Harvested on 9/20/2012

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

June, July and August extremely hot and dry; very poor conditions for pollination and grain fill.

Month	Precipitation		Average Temp.		GDU	
	2012	Norm.	2012	Norm.	2012	Norm.
Nov.-Mar.	14.0	5.6	44	32	0	0
April	1.4	2.9	62	56	808	634
May	2.2	4.1	72	65	1115	953
June	0.5	4.9	77	74	1191	1186
July	1.2	4.0	86	80	1362	1401
August	0.6	3.2	78	79	1221	1362
Sept.	5.2	4.0	70	71	1027	1062
Oct.	1.0	2.1	56	55	788	416
Totals:	26.2	30.8	60	53	7,512	7,014

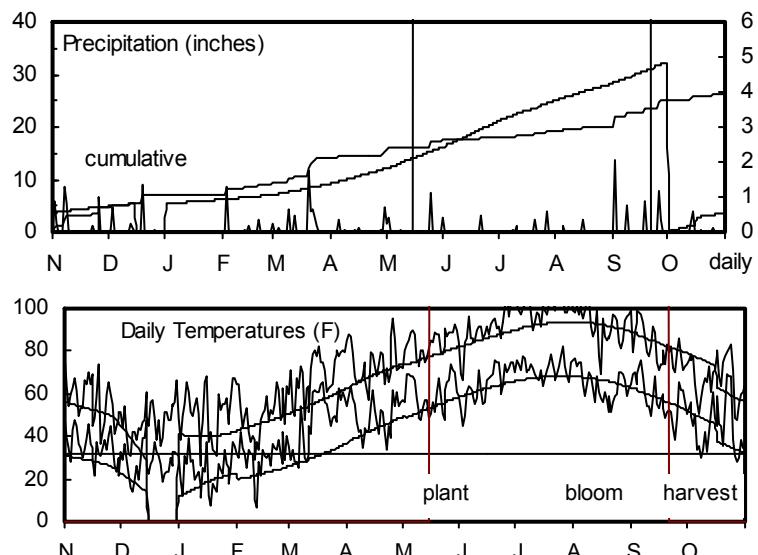


Table 5. Franklin County Dryland Grain Sorghum Performance Test, 2010-2012

BRAND	NAME	YIELD AS % 2011-2012																
		ACRE YIELD, BUSHELS					OF TEST											
		2012	2011	2010	Avg	Avg	2012	2011	2010	Blm	Days to Moist	Test Wt	Pint	Pop 1000	Hds per Plnt			
DEKALB	DKS44-20	56	82	69	69	69	134	114	120	67	14	65	13	55	--	--	--	--
MATURITY CHECK	MEDIUM	64	70	59	67	64	151	97	102	66	14	65	12	56	--	--	--	--
MATURITY CHECK	EARLY	45	62	49	54	52	108	86	84	67	13	67	12	53	--	--	--	--
DEKALB	DKS51-01	55	--	--	--	--	130	--	--	--	--	68	12	52	--	--	--	--
PIONEER	85Y40	49	74	55	61	59	116	102	96	70	15	69	13	55	--	--	--	--
PIONEER	85G03	57	66	54	62	59	136	92	94	71	16	70	12	55	--	--	--	--
MATURITY CHECK	LATE	31	76	62	53	56	73	106	107	73	15	76	13	56	--	--	--	--
PIONEER	84P80	31	82	--	57	--	75	114	--	74	15	77	13	57	--	--	--	--
DEKALB	DKS49-45	27	69	52	48	49	63	96	91	75	16	77	14	55	--	--	--	--
PIONEER	84G62	14	80	55	47	50	33	111	95	74	14	77	13	55	--	--	--	--
DEKALB	DKS53-67	34	82	50	58	55	80	115	86	75	16	79	15	55	--	--	--	--
Average		42	72	58	57	57	42	72	58	71	15	72	13	55	--	--	--	--
CV (%)		11	11	10	--	--	11	11	10	--	--	3	9	3	--	--	--	--
LSD (0.05)		7	11	8	--	--	16	15	14	--	--	3	2	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.

SOUTHEAST KANSAS DRYLAND GRAIN SORGHUM TEST

Southeast Agricultural Research Center, Parsons; Kelly Kusel, technician

Parsons silt loam; Soybean in 2011

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

Planted on 5/10/2012; Harvested on 8/28/2012

Target stand of 45,000 plants/acre; 4.6 in. spacing

Dry at planting: some rows were very late emerging.
Hot, dry summer with poor head emergence. Fast
drydown due to weather.

Month	Precipitation		Average Temp.		GDU	
	2012	Norm.	2012	Norm.	2012	Norm.
Nov.-Mar.	5.0	10.3	45	39	0	0
April	5.4	3.7	62	57	852	668
May	3.9	5.0	71	65	1112	952
June	1.6	4.8	76	74	1179	1178
July	0.7	3.6	86	80	1362	1385
August	3.3	3.8	79	79	1250	1345
Sept.	3.0	4.5	61	71	823	1075
Oct.	0.8	1.9	58	59	817	421
Totals:	23.6	37.5	60	57	7,395	7,022

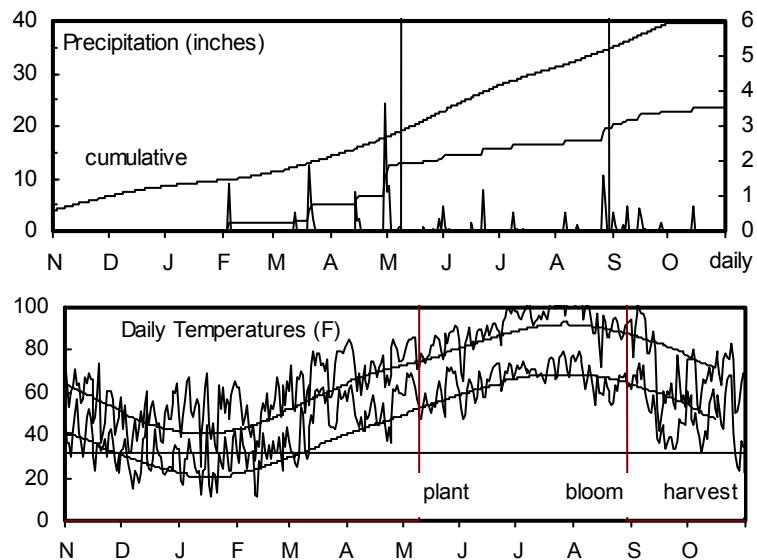


Table 6. Labette County Dryland Grain Sorghum Performance Test, 2010-2012

BRAND	NAME	YIELD AS % 2011-2012																
		ACRE YIELD, BUSHELS				OF TEST			Days to Moist		Days to Moist		Test Wt	Pint Ht	Pop Ldg	Hds per Plnt		
		2012	2011	2010	Avg	2-Yr	3-Yr	AVERAGE	Blm	%	Blm	%	lb/bu	in	%	1000 ppa		
HOEGEMEYER	exp6128	23	--	--	--	90	--	--	--	--	56	13	54	40	37	52	1	
MATURITY CHECK	EARLY	26	--	124	75	--	100	--	88	--	--	57	12	55	43	1	61	1
DRUSSEL SEED	DSS R6611	31	--	--	--	120	--	--	--	--	58	12	56	42	0	50	1	
GOLDEN ACRES	GA 5745	27	--	--	--	104	--	--	--	--	58	12	55	42	0	59	1	
MATURITY CHECK	MEDIUM	36	--	151	94	--	140	--	107	--	--	58	12	55	45	0	54	1
DEKALB	DKS44-20	34	--	150	92	--	130	--	106	--	--	59	12	56	45	0	51	1
PIONEER	85Y40	30	--	--	--	117	--	--	--	--	59	12	56	48	3	56	1	
CHANNEL	6B85	21	--	--	--	80	--	--	--	--	60	12	55	45	0	56	1	
DEKALB	DKS49-45	20	--	142	81	--	79	--	100	--	--	61	12	55	46	0	56	1
DEKALB	DKS51-01	20	--	--	--	79	--	--	--	--	61	13	56	48	0	55	1	
TRIUMPH	TR 457	22	--	--	--	85	--	--	--	--	61	12	55	39	0	42	1	
STAR SEED	SSD1002.6	14	--	--	--	54	--	--	--	--	62	12	56	47	0	57	1	
DEKALB	DKS53-67	35	--	148	92	--	137	--	105	--	--	64	13	56	44	0	58	1
MATURITY CHECK	LATE	24	--	153	89	--	93	--	108	--	--	64	12	54	45	0	48	1
GAYLAND WARD	GW9417	24	--	--	--	91	--	--	--	--	66	13	56	48	0	45	1	
	Average	26	--	141	83	--	26	--	141	--	--	60	12	55	44	3	54	1
	CV (%)	13	--	5	--	--	13	--	5	--	--	2	4	1	3	--	5	12
	LSD (0.05)	5	--	10	--	--	18	--	7	--	--	2	1	1	2	4	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.

Table 7. SOUTHEAST Kansas Grain Sorghum Hybrid Yield Summary (% of test avg.), 2012

BRAND/NAME	FRD	LBD	AVG.	MATURITY CHECK			
CHANNEL				EARLY	108	100	104
6B85	--	80	--	LATE	73	93	83
DEKALB				MEDIUM	151	140	146
DKS44-20	134	130	132	AVERAGES (bu/a)	42	26	34
DKS49-45	63	79	71	CV (%)	11	13	--
DKS51-01	130	79	105	LSD (0.05)	16	18	--
DKS53-67	80	137	109				
DRUSSEL SEED							
DSS R6611	--	120	--				
GAYLAND WARD							
GW9417	--	91	--				
GOLDEN ACRES							
GA 5745	--	104	--				
HOEGEMEYER							
exp6128	--	90	--				
PIONEER							
84G62	33	--	--				
84P80	75	--	--				
85G03	136	--	--				
85Y40	116	117	117				
STAR SEED							
SSD1002.6	--	54	--				
TRIUMPH							
TR 457	--	85	--				

FRD = Franklin Co., Ottawa

LBD = Labette Co., Parsons

WESTERN KANSAS FALLOW GRAIN SORGHUM TEST

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

Keith silt loam; Wheat in 2011

100 - 0 - 0 lb/a N, P, K

Planted on 5/17/2012; Harvested on 10/26/2012

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

Fairly decent stand considering all elements it had to deal with. Dry and hot in the spring and summer.

Month	Precipitation		Average Temp.		GDU	
	2012	Norm.	2012	Norm.	2012	Norm.
Nov.-Mar.	3.9	2.8	38	34	0	0
April	1.5	1.6	56	50	741	472
May	0.3	2.9	67	61	990	831
June	0.9	3.0	77	72	1148	1115
July	2.1	2.5	82	78	1276	1321
August	1.0	2.2	75	75	1170	1260
Sept.	1.1	1.6	67	68	958	973
Oct.	0.9	0.9	52	55	720	356
Totals:	11.7	17.1	56	52	7,003	6,328

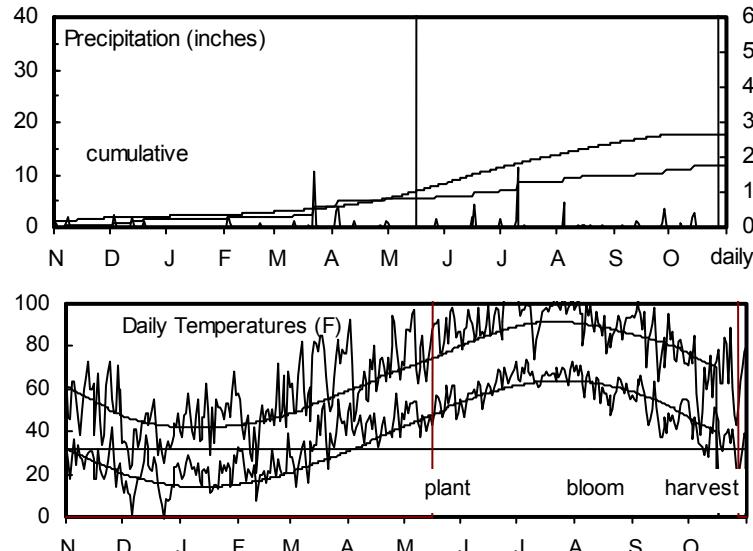
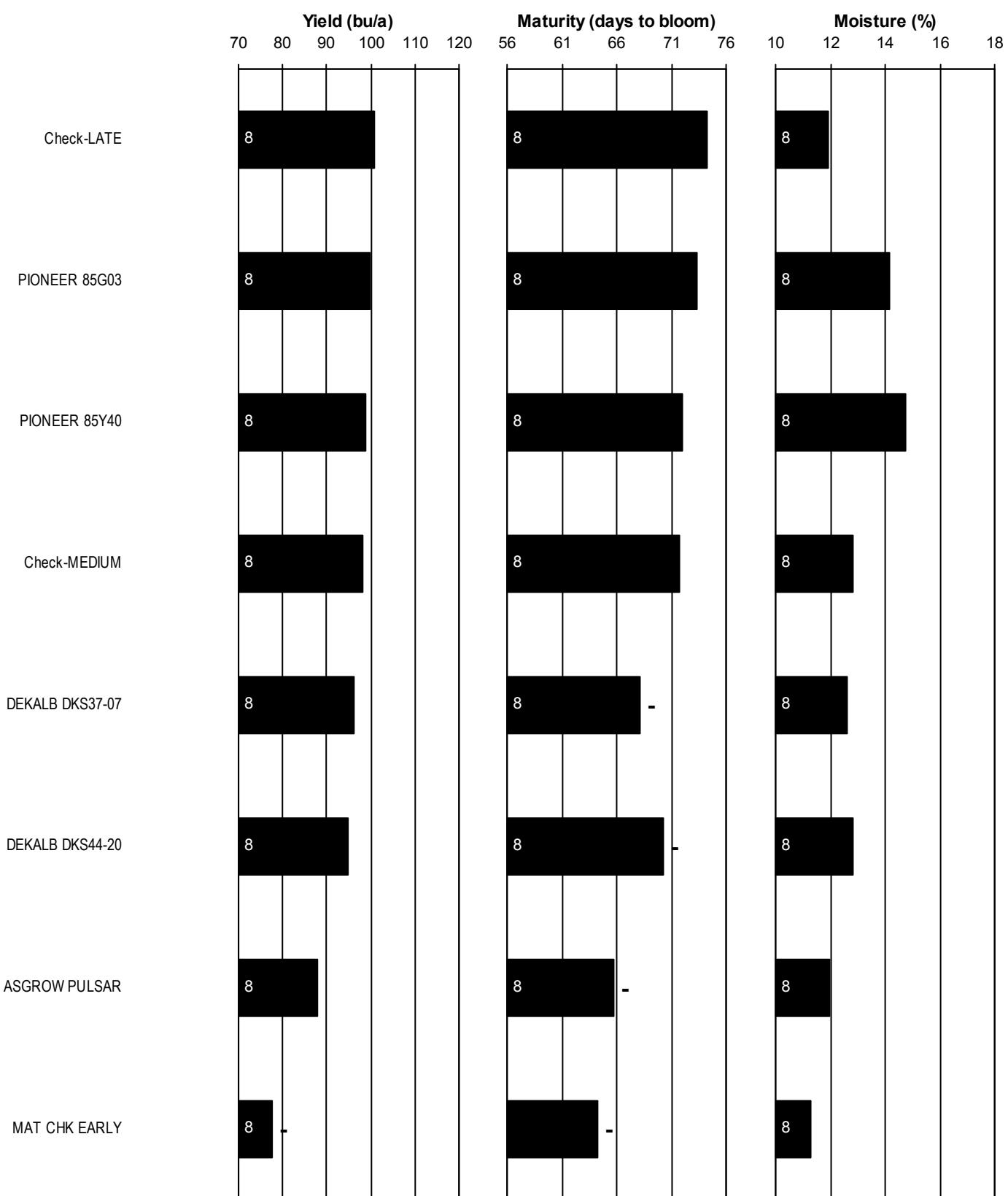


Table 8. Finney County Dryland Grain Sorghum Performance Test, 2010-2012

BRAND	NAME	YIELD AS % 2011-2012																	
		ACRE YIELD, BUSHELS				OF TEST			Days to Moist				Days to Moist						
		2012	2011	2010	Avg	2-Yr Avg	3-Yr Avg	2012	2011	2010	BIm	%	Blm	%	Wt lb/bu	Ht in	Ldg %	Pop 1000 ppa	Hds per Plnt
ASGROW	PULSAR	40	--	104	72	--	125	--	93	--	--	--	80	17	54	39	--	--	2
DEKALB	DKS28-05	72	--	102	87	--	228	--	92	--	--	--	80	18	52	40	--	--	2
PIONEER	86G32	48	--	117	82	--	151	--	105	--	--	--	82	19	54	40	--	--	2
STAR SEED	SSD3928.3	48	--	--	--	--	151	--	--	--	--	--	83	18	53	43	--	--	2
TRIUMPH	TR 438	24	--	--	--	--	74	--	--	--	--	--	83	19	54	42	--	--	2
STAR SEED	SSD1085.4	29	--	--	--	--	91	--	--	--	--	--	84	15	52	40	--	--	1
MATURITY CHECK	EARLY	30	--	96	63	--	93	--	86	--	--	--	85	19	50	40	--	--	1
DEKALB	DKS36-06	39	--	117	78	--	123	--	105	--	--	--	86	21	52	41	--	--	1
MATURITY CHECK	MEDIUM	28	--	124	76	--	88	--	111	--	--	--	86	15	52	40	--	--	1
DEKALB	DKS37-07	38	--	117	77	--	120	--	105	--	--	--	87	19	52	41	--	--	1
DRUSSEL SEED	DSS B6506	38	--	117	77	--	120	--	105	--	--	--	87	19	55	42	--	--	1
DRUSSEL SEED	DSS R6611	32	--	--	--	--	103	--	--	--	--	--	88	21	51	39	--	--	1
PIONEER	87P06	38	--	--	--	--	121	--	--	--	--	--	89	9	48	38	--	--	2
PIONEER	85Y40	30	--	124	77	--	96	--	112	--	--	--	89	27	49	41	--	--	1
DEKALB	DKS44-20	31	--	111	71	--	97	--	100	--	--	--	90	21	51	41	--	--	1
PIONEER	85G03	34	--	106	70	--	107	--	96	--	--	--	92	22	51	41	--	--	2
TRIUMPH	TR 448	22	--	102	62	--	69	--	92	--	--	--	92	19	51	40	--	--	1
TRIUMPH	TR 457	29	--	--	--	--	93	--	--	--	--	--	92	20	54	39	--	--	2
MATURITY CHECK	LATE	25	--	127	76	--	80	--	115	--	--	--	93	10	50	41	--	--	1
TRIUMPH	TR 4951	15	--	--	--	--	48	--	--	--	--	--	93	15	52	45	--	--	1
DRUSSEL SEED	DSS B64	25	--	115	70	--	78	--	103	--	--	--	94	19	51	40	--	--	2
TRIUMPH	TR 4941	16	--	--	--	--	50	--	--	--	--	--	97	21	51	41	--	--	2
STAR SEED	SSD1002.61	17	--	--	--	--	55	--	--	--	--	--	97	15	52	41	--	--	1
STAR SEED	SSD1002.6	18	--	--	--	--	57	--	--	--	--	--	100	15	52	42	--	--	1
TRIUMPH	TRX85131	26	--	--	--	--	82	--	--	--	--	--	101	32	48	41	--	--	1
Average		32	--	111	71	--	32	--	111	--	--	--	89	19	52	41	--	--	1
CV (%)		14	--	9	--	--	14	--	9	--	--	--	7	5	1	3	--	--	14
LSD (0.05)		6	--	14	--	--	20	--	12	--	--	--	9	1	1	2	--	--	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.



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

Figure 5. WESTERN Kansas sorghum hybrid standardized performance summary, 2010-2012

WESTERN KANSAS IRRIGATED GRAIN SORGHUM TEST

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

Keith silt loam; Fallow in 2011

80 - 50 - 0 lb/a N, P, K

Planted on 5/22/2012; Harvested on 10/22/2012

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

Pre-irrigation allowed good stand establishment.

Summer was very dry and hot with near record-setting highs in July.

Month	Precipitation		Average Temp.		GDU	
	2012	Norm.	2012	Norm.	2012	Norm.
Nov.-Mar.	1.2	2.3	38	28	0	0
April	2.5	1.4	55	49	725	421
May	0.4	2.9	64	59	937	762
June	0.5	3.4	76	70	1119	1054
July	2.4	3.1	80	76	1244	1285
August	1.0	2.1	74	74	1135	1216
Sept.	0.6	1.6	66	66	933	910
Oct.	0.7	0.4	51	48	701	324
Totals:	9.2	17.2	55	49	6,794	5,972

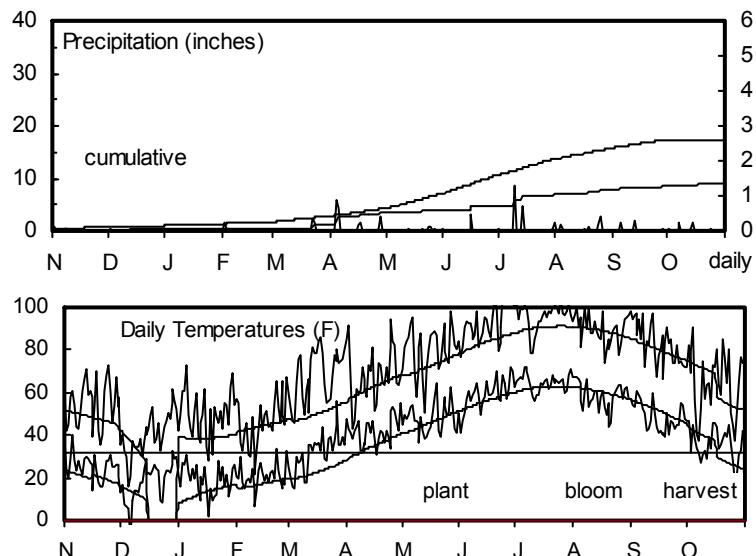


Table 9. Thomas County Irrigated Grain Sorghum Performance Test, 2010-2012

BRAND	NAME	YIELD AS % 2011-2012																	
		ACRE YIELD, BUSHELS				OF TEST			Days	Grain	Days	Grain	Test	Plnt	Pop	Hds			
		2012	2011	2010	Avg	2-Yr	3-Yr	AVERAGE	to Blm	Moist %	to Blm	Moist %	Wt lb/bu	Ht in	Ldg %	1000 ppa	per Plnt		
PIONEER	87P06	115	54	--	84	--	--	77	66	--	59	14	62	13	60	45	--	69	1
PIONEER	86G32	133	--	--	--	--	--	89	--	--	--	--	63	14	61	47	--	76	1
MATURITY CHECK	EARLY	142	75	148	108	122	--	95	92	81	61	13	67	14	61	47	--	81	1
GOLDEN ACRES	GA 3545	137	--	--	--	--	--	92	--	--	--	--	68	14	61	49	--	78	1
MATURITY CHECK	MEDIUM	123	70	200	97	131	--	83	86	109	66	15	68	15	62	50	--	78	1
PIONEER	85Y40	166	87	195	127	149	--	111	105	106	66	16	69	14	62	49	--	80	1
DEKALB	DKS51-01	145	--	--	--	--	--	97	--	--	--	--	70	14	62	53	--	77	1
PIONEER	85G03	175	103	194	139	157	--	117	126	106	69	16	70	14	61	51	--	77	1
DEKALB	DKS49-45	139	73	190	106	134	--	93	89	103	68	15	70	15	61	53	--	76	1
GOLDEN ACRES	GA 3696	172	--	--	--	--	--	115	--	--	--	--	71	15	61	51	--	75	1
MATURITY CHECK	LATE	134	70	187	102	130	--	90	86	101	69	15	71	14	60	52	--	70	1
DEKALB	DKS53-67	165	95	207	130	156	--	110	115	112	71	15	73	14	62	51	--	80	1
DEKALB	DKS54-00	145	78	199	112	141	--	97	95	108	72	14	75	14	60	54	--	59	1
PIONEER	84G62	186	110	211	148	169	--	125	134	115	73	15	75	15	62	49	--	79	1
PIONEER	84P80	165	94	--	129	--	--	110	114	--	73	15	76	15	61	51	--	77	1
Average		150	82	184	116	139	--	150	82	184	68	15	70	14	61	50	--	76	1
CV (%)		8	8	7	--	--	--	8	8	7	--	--	1	4	1	2	--	7	--
LSD (0.05)		18	10	17	--	--	--	12	12	10	--	--	1	1	1	1	--	7	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; Wheat in 2011

100 - 0 - 0 lb/a N, P, K

Planted on 4/17/2012; Harvested on 10/26/2012

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

Hot and dry but good stands throughout season.

Irrigation totaled 27.39 inches.

Month	Precipitation		Average Temp.		GDU	
	2012	Norm.	2012	Norm.	2012	Norm.
Nov.-Mar.	3.9	2.4	38	29	0	0
April	1.5	1.6	56	50	741	472
May	0.3	2.9	67	61	990	831
June	0.9	3.0	77	72	1148	1115
July	2.1	2.5	82	78	1276	1321
August	1.0	2.2	75	75	1170	1260
Sept.	1.1	1.6	67	68	958	973
Oct.	0.9	0.9	52	50	720	356
Totals:	11.7	17.1	56	50	7,003	6,328

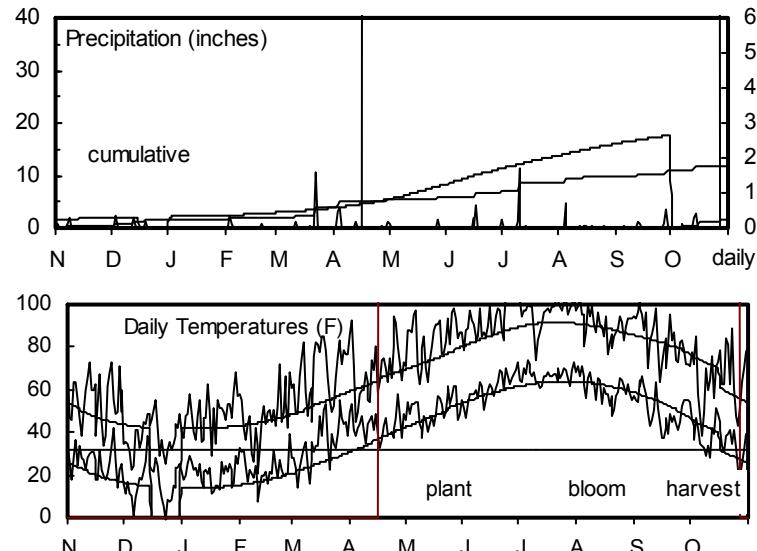


Table 10. Finney County Irrigated Grain Sorghum Performance Test, 2010-2012

BRAND	NAME	YIELD AS % 2011-2012									
		ACRE YIELD, BUSHELS				OF TEST			Days		
		2012	2011	2010	Avg	2012	2011	2010	Blm	%	Blm
STAR SEED	SSD3928.3	139	--	--	--	94	--	--	59	15	57
MATURITY CHECK	EARLY	128	79	115	103	107	86	73	82	--	52
MATURITY CHECK	MEDIUM	149	97	157	123	134	101	89	112	15	46
GOLDEN ACRES	GA 3545	150	116	--	133	--	101	107	--	15	48
PIONEER	85Y40	152	103	149	127	135	102	95	106	16	58
DEKALB	DKS51-01	146	--	--	--	99	--	--	69	16	60
MATURITY CHECK	LATE	162	120	158	141	147	109	111	112	15	42
STAR SEED	SSD1002.6	139	--	--	--	94	--	--	70	16	59
DEKALB	DKS49-45	159	104	156	132	140	108	96	111	15	53
DEKALB	DKS54-00	162	115	144	138	140	109	106	103	16	39
PIONEER	84G62	181	127	168	154	159	123	117	119	16	60
STAR SEED	SSD1002.61	121	--	--	--	82	--	--	73	16	58
PIONEER	84P80	166	129	--	148	--	112	119	--	17	50
TRIUMPH	TR 4951	127	105	154	116	129	86	97	110	16	23
TRIUMPH	TR 4941	134	112	159	123	135	90	104	113	15	26
TRIUMPH	TRX85131	149	109	--	129	--	101	100	--	16	50
PIONEER	85G03	155	121	--	138	--	105	112	--	16	53
DEKALB	DKS53-67	158	112	160	135	143	107	103	114	17	56
GOLDEN ACRES	GA 3696	141	125	--	133	--	95	115	--	16	42
STAR SEED	SSD483.8	140	--	--	--	95	--	--	79	17	57
	Average	148	108	140	128	132	148	108	140	16	46
	CV (%)	6	12	8	--	--	6	12	8	--	8
	LSD (0.05)	13	19	15	--	--	9	18	11	--	7

*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 12. Kansas IRRIGATED Grain Sorghum Hybrid Yield Summary (% of test avg.), 2012

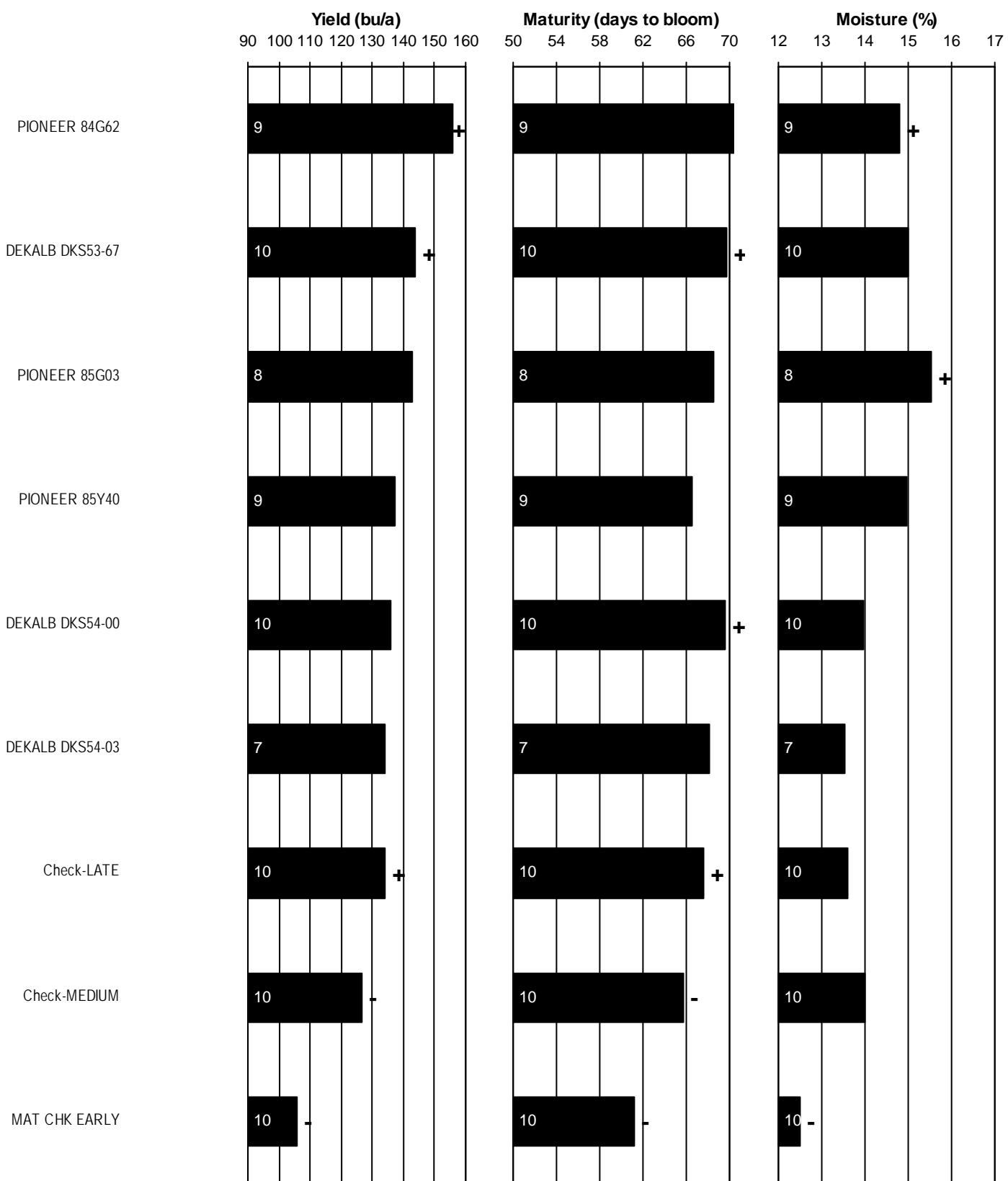
BRAND/NAME	RNI	THI	GRI	FNI	AVG.	RNI	THI	GRI	FNI	AVG.	
CHANNEL											
6B85	--	--	101	--	--	AVERAGES (bu/a)	--	150	168	148	155
7B11	--	--	86	--	--	CV (%)	--	8	8	6	--
7B30	--	--	108	--	--	LSD (0.05)	--	12	11	9	--
DEKALB											
DKS49-45	--	93	100	108	100						
DKS51-01	--	97	100	99	99						
DKS53-67	--	110	109	107	109						
DKS54-00	--	97	108	109	105						
GOLDEN ACRES											
GA 3545	--	92	94	101	96						
GA 3696	--	115	104	95	105						
PIONEER											
84G62	--	125	116	123	121						
84P80	--	110	114	112	112						
85G03	--	117	91	105	104						
85Y40	--	111	105	102	106						
86G32	--	89	--	--	--						
87P06	--	77	--	--	--						
STAR SEED											
SSD1002.6	--	--	--	94	--						
SSD1002.61	--	--	--	82	--						
SSD3928.3	--	--	--	94	--						
SSD483.8	--	--	--	95	--						
TRIUMPH											
TR 4941	--	--	95	90	--						
TR 4951	--	--	97	86	--						
TRX85131	--	--	102	101	--						
MATURITY CHECK											
EARLY	--	95	82	86	88						
LATE	--	90	97	109	99						
MEDIUM	--	83	92	101	92						

RNI=Reno Co., Hutchinson
abandoned

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 6. Kansas IRRIGATED sorghum hybrid standardized performance summary, 2010-2012

Table 13. Entries in the 2012 Kansas Grain Sorghum Performance Tests

BRAND	GC	EC	PC	Mat.	Days	GB	BRAND	GC	EC	PC	Mat.	Days	GB
ASGROW							STAR SEED						
PULSAR	B	HY	P	E	68	CEI	SSD3928.3	R	Y	P	E	64	C,E
CHANNEL							SSD1085.4	W	W	T	ME	67	C,E
7B30	B	-	-	-	-	-	SSD1002.6	W	W	T	M	70	C,E
5B90	B	HY	P	E	61	E	SSD1002.61	W	W	T	M	70	C,E
6B10	B	HY	P	ME	62	-	SSD483.8	W	W	T	ML	74	C,E
6B85	B	-	-	M	66	-	TRIUMPH						
7B11	B	HY	P	M	68	-	TR 457	B	HY	P	M	43	-
DEKALB							TR 448	C	W	T	M	44	-
DKS28-05	B	HY	P	E	58	-	TRX85131	R	W	P	L	47	E
DKS36-06	B	HY	P	E	63	-	TR 4941	B	HY	P	L	48	-
DKS37-07	B	HY	P	E	67	CEI	TR 4951	B	HY	P	L	49	-
DKS44-20	B	HY	P	M	67	-	TR 438	B	W	P	E	60	CE
DKS49-45	B	HY	P	M	70	E,I	MATURITY CHECK						
DKS51-01	B	HY	P	M	70	E,I	EARLY	R	W	P	E	65	E
DKS53-67	B	HY	P	L	71	CEI	MEDIUM	W	W	P	M	69	-
DKS54-00	B	HY	P	L	75	CEI	LATE	B	W	P	L	73	-
DRUSSEL SEED													
DSS B64	B	W	P	ME	64	C							
DSS B6506	B	W	P	ME	65	CDE							
DSS R6611	R	W	PU	M	66	C							
GAYLAND WARD													
GW9417	R	HY	P	M	69	C+E							
GW8320	R	HY	P	ML	73	C+E							
GOLDEN ACRES													
GA 5556	R	HY	P	E	62	C,E							
GA 5745	R	HY	P	M	68	C,E							
GA 3545	B	HY	P	M	70	C,E							
GA 3696	B	HY	P	L	74	C,E							
HOEGEMEYER													
6037	R	-	-	ME	-	-							
exp0428	R	-	-	L	-	-							
exp6128	R	-	-	M	-	-							
PIONEER													
87P06	R	W	P	E	63	-							
86G32	R	W	P	E	65	-							
85G03	R	W	P	M	69	-							
85Y40	W	Y	P	M	70	-							
84P80	R	W	P	L	71	-							
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

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 1077, '2012 Kansas Performance Tests with Grain Sorghum Hybrids,' 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

Jane Lingenfelser, Assistant Agronomist (Senior Author)
Doug Jardine, Extension Plant Pathologist
Jeff Whitworth, Extension Entomologist
Mary Knapp, KSU Weather Data Librarian
Edward O. Quigley, Agricultural Technician

Experiment Fields

Eric Ade, Topeka
William Heer, Hutchinson
James Kimball, Ottawa
Randall Nelson, Scandia

Research Centers

Wayne Aschwege, Hays
Patrick Evans, Colby
Kelly Kusel, Parsons
Alan Schlegel, Tribune
Monty Spangler, Garden City

Cooperators

Scott Chapman, Beloit
Clayton Short, Assaria

Copyright 2012 Kansas State University Agricultural Experiment Station and Cooperative Extension Service. Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, give credit to the author(s), 2012 Kansas Performance Tests with Corn Hybrids, Kansas State University, November 2012. Contribution no. 13-102-S from the Kansas Agricultural Experiment Station.

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Publications from Kansas State University are available at:
www.ksre.ksu.edu

Kansas State University Agricultural Experiment Station and Cooperative Extension Service