



GRAIN SORGHUM PERFORMANCE TRIALS IN OKLAHOMA, 2005

PRODUCTION TECHNOLOGY CROPS

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TRIAL OBJECTIVES AND PROCEDURES

Each year, performance trials for hybrid grain sorghums are conducted by the Oklahoma Cooperative Extension Service to provide producers, extension educators, industry representatives, and researchers with information for hybrid grain sorghums marketed in Oklahoma.

Performance trials are conducted at eight locations in Oklahoma: Altus, Blackwell, Cherokee, Enid, Goodwell, Homestead, Keyes, and Tipton. Dry-land trials are conducted at all locations, with an additional irrigated trial at Goodwell. The Cherokee and Homestead locations are unique trials to evaluate certain hybrids (generally early and medium maturity) for planting in late April. In 2004 a trial was established at Enid to evaluate hybrids for use as a double crop. **All trial locations also have DK-44 and KS 585 planted with and without (WO) seed applied insecticide to determine the affect of these treatments.**

Grain sorghum hybrids entered (Table 1) were assigned by companies to their respective maturity groups (early, medium, and late) and trial locations,

therefore, all hybrids are not in all locations. Hybrids tested at the Cherokee, Homestead, and Enid locations were determined by Oklahoma State University. Companies submitted all hybrid characteristics presented in Table 1. This information was not determined or verified by Oklahoma State University. Company participation was voluntary; therefore some hybrids marketed in Oklahoma were not included in the test. Each

maturity group was tested in a randomized complete block design with four replications. Plots were 2 30-inch rows by 25 feet. Plots were trimmed to 20 feet prior to harvest.

Target populations, cooperating producers, fertilization, cultural practices, soil series, and herbicide use on all trials are listed with the results tables. Rainfall data from the nearest Mesonet site is also listed. Some trials are long distances from the nearest Mesonet site, therefore rainfall could be greater or less than reported. In 2005 only in-season rainfall is reported instead of yearly as in the past. Tractor powered cone planters were used to plant all trials with seeding rates adjusted for trial location. Trials were harvested with a (Massey-Ferguson 8) plot

Highlights

The highest dryland grain yields in the last 8 years of trials were harvested in 2005. The highest yielding hybrids at Cherokee and Keyes were 136.6 and 135.3 bu/ac respectively. The high yields were due to timely rainfall at critical periods of plant development and sufficient nitrogen fertilizer. The trial at Cherokee averaged 111.0 bu/ac while the medium/full season maturities at Keyes averaged 108.2 bu/ac.

The trial at Homestead was dusted in, and when adequate rainfall occurred for emergence the stand was inadequate so the trial was abandoned.

combine.

GROWING CONDITIONS

Moisture

Soil moisture conditions were poor for early-planted sorghum (mid April to early May) for most of the

state except the panhandle region. At the Blackwell, Cherokee, and Homestead locations emergence was delayed up to 3 weeks. In the panhandle, moisture was excellent for most of the planting season. As the season progressed rainfall was adequate during the vegetative stage of growth (approximately the first 40 days) for most of the state. Most drought stress occurred at or after flowering across the state. North central Oklahoma again had the highest dryland yield, with yields of 130 bu/ac reported for early-planted grain sorghum. Double crop yields were also near 100 bu/ac again at the Enid trial. The panhandle yields were above average even though plants exhibited drought stress during late July and early August. The Tipton and Altus locations were affected by drought stress during grain fill, which explains the low test weights observed at these trials.

RESULTS

All trial locations were harvested in 2005 for the first time in several years except for Homestead, which had inadequate stands and varying emergence. Yields were average or better for all locations in 2005. Harvest for the Altus and Tipton locations was delayed due to rainfall in August, but no other major delays were experienced at trial locations or for producers around the state.

Grain yields are reported both as pounds per acre and bushel per acre threshed grain, adjusted to a moisture content of 14.0% (Tables 2-7). Test weight, plant population, and the number of heads per acre at harvest are reported. Bird damage and lodging are also reported when present at a location.

Different plant populations at each location precluded comparison between locations. Comparisons across maturity groups were not conducted. Producers should note that late maturing hybrids will generally yield more than early and medium maturity hybrids. However, the availability of moisture at critical crop

development periods often influences yield more than the yield differences associated with maturity groups.

When choosing a maturity group, the type of cropping system, planting date, planting rate and potential moisture should be taken into consideration. For more information consult Fact Sheet No. **2034** Grain Sorghum Planting Rates and Dates, and Fact Sheet No. **2113** Grain Sorghum Production Calendar.

Small differences in yield or other characteristics among hybrids should not be overemphasized. Least Significant Difference (L.S.D.) is a statistical test of yield differences and are shown at the bottom of each table. Unless two hybrids differ by at least the L.S.D. shown, little confidence can be placed in one hybrid being superior to another and the difference is probably not real.

The coefficient of variation (C.V.) is provided as an estimate of the precision of the data with respect to the mean for that location and maturity group. To provide some indication of yield stability, 2-year means for yield and test weight are provided where trials have been conducted for more than one year with more than three entries per maturity group. Producers interested in comparing hybrids for consistency of yield in a specific area should consult these tables.

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Table 1. Seed source and hybrid characteristics of grain sorghum in the Oklahoma Grain Sorghum Performance Trials, 2005. All hybrids are susceptible to birds and are single cross.

Company Brand Name	Hybrid	Seed Color	Endo-sperm	Days to Mid-bloom	Greenbug Resistance
Early Maturity					
Asgrow Seed	Reward	Bz	Hy	56	none
Frontier Hybrids, Inc	F-303C	C	Y	59	E
Walter Moss Seed Co. LTD	M-927-ER	R	NA	56	NA
Triumph Seed Co., Inc.	TR 434	R	W	58	C, E
Dekalb Genetics Corp.	DKS 36-00	Bz	HY	59	C,E,I
Asgrow Seed	Pulsar	Bz	HY	60	C,E,I
Dekalb Genetics Corp.	DKS 37-07	Bz	HY	60	C,E,I
Dekalb Genetics Corp.	DKS 29-28	Bz	HY	56	C,E
Frontier Hybrids, Inc	F-222E	R	Y	50	E
Medium Maturity					
Frontier Hybrids, Inc	F-457E	R	Y	64	E
Sorghum Partners Inc	KS 585	Bz	HY	67	C, E
Garst Seed Company	5401	R	HY	68	E
Garst Seed Company	5515	Bz	HY	67	NA
NC+ Hybrids	6B50	Bz	HY	62	None
NC+ Hybrids	7C22	C	HY	68	None
NC+ Hybrids	5B89	Bz	HY	61	C
Dekalb Genetics Corp.	DKS 42-20	Bz	Hy	62	C, E
Dekalb Genetics Corp.	DK 44	Bz	HY	67	C, E
Seed Resource	SR 421	Bz	HY	64	None
Seed Resource	SR 424	R	HY	64	C, E
Late Maturity					
Asgrow Seed	A567	Bz	HY	71	None
Dekalb Genetics Corp.	DKS 54-00	Bz	HY	72	C,E,I
Walter Moss Seed Co. LTD	M -929-MB	Bz	NA	80	NA
Walter Moss Seed Co. LTD	M-1024-DPW	W	NA	75	NA
Asgrow Seed	A571	Bz	HY	72	NONE
Sorghum Partners Inc	NK 6673	Bz	HY	70	C
Sorghum Partners Inc	NK 8831	Bz	HY	74	NONE
Dekalb Genetics Corp.	DKS 53-11	Bz	HY	71	C,E,I

Seed Color: Br – Brown; W – White; Y – Yellow; Bz – Bronze; R – Red; C – Cream

Endosperm: HW – heterowaxy; W – waxy; HY – Heteroyellow; Y – Yellow; N – Non-waxy

Maturity group: Early (less than 60 days to mid-bloom); Medium (60 – 70 days to mid-bloom); Late – (70+ days to mid-bloom)

Greenbug Resistance: Biotype hybrid is resistance too

Table 2. Results from Altus grain sorghum performance trial, 2005.

Company Brand Name	Entry Designation	Grain Yield bu/ac 2005	Test weight Lb/bu 2005	Plant Population plants/ac	Head Population heads/plant
Early					
Triumph Seed Co., Inc.	TR 434	44.2	49.0	23,400	2.20
Frontier Hybrids, Inc	F-222E	43.5	49.4	22,200	2.00
Walter Moss Seed Co. LTD	M-927-ER	40.5	49.5	21,400	2.57
Frontier Hybrids, Inc	F-303C	32.8	48.0	21,200	2.17
	Mean	40.3	49.0	22,100	2.23
	C.V.%	11.8	4.7	2.7	6.4
	L.S.D.	7.6	NS	1,700	0.23

Company Brand Name	Entry Designation	Grain Yield bu/ac		Test weight lb/bu		Plant Population plants/ac	Head Population heads/plant
		2005	Two-year	2005	Two-year		
Medium							
Sorghum Partners Inc.	KS 585 WO	63.3	64.2	52.7	55.9	23,700	2.75
Sorghum Partners Inc	KS 585	67.8	64.1	51.0	54.8	24,400	2.64
Dekalb Genetics Corp.	DK 44	50.2	62.3	50.5	54.1	24,100	2.10
Dekalb Genetics Corp.	DK 44 WO	41.6	56.1	47.3	52.5	21,300	2.36
Frontier Hybrids, Inc	F-457E	44.7	53.2	50.5	53.9	22,300	2.85
NC+ Hybrids	6B50	64.7	----	51.2	----	23,200	2.64
Garst Seed Company	5515	44.9	----	47.2	----	22,000	2.51
Seed Resource	SR 424	38.8	----	48.1	----	21,200	2.55
NC+ Hybrids	7C22	36.6	----	47.6	----	22,600	2.46
Seed Resource	SR 421	35.8	----	48.3	----	19,100	2.39
Garst Seed Company	5401	32.2	----	50.9	----	20,800	3.22
	Mean	47.3	60.0	49.6	54.2	22,200	2.59
	C.V.%	13.2	17.4	4.7	3.2	8.9	12.3
	L.S.D.	9.0	10.7	3.3	1.8	2,900	0.46

Table 2. Continued

Company Brand Name	Entry Designation	Grain Yield bu/ac	Test weight Lb/bu	Plant Population plants/ac	Head Population heads/plant
Late					
Walter Moss Seed Co. LTD	M -929-MB	51.5	50.7	22,400	2.93
Sorghum Partners Inc	NK 6673	46.9	47.7	22,400	3.00
Walter Moss Seed Co. LTD	M-1024-DPW	40.4	52.3	19,400	2.68
Sorghum Partners Inc	NK 8831	30.5	46.6	20,200	2.67
	Mean	42.3	49.3	21,100	2.82
	C.V.%	17.6	2.6	12.6	12.0
	L.S.D.	11.9	2.1	NS	NS

Cooperator: Southwest Research and Extension Center

Soil Series: Tillman Hollister Clay Loam

Conventional tillage Practices: Fallowed following wheat in 2004

Soil Test: N: 28 lbs/ac P: 67 lbs/ac K: 1014 lbs/ac pH: 5.8

Fertilizer: N: 92 lb N/ac P: 22 lbs/ac K: none

Herbicide: 2 qt/ac Cinch ATZ Lite (Preemergence)

Planting Date: April 23, 2005 Target Population: 45,000 plants/ac

Harvest Date: September 3, 2005

Monthly Rainfall (in.)

	Apr.	May	June	July	Aug.	Total
2005:	1.07	4.31	1.98	2.39	3.26	13.01
Long term mean:	1.92	4.23	3.51	1.76	2.45	13.87

Table 3. Results from Blackwell grain sorghum performance trial, 2005.

Company Brand Name	Entry Designation	Grain Yield bu/ac 2005	Test weight Lb/bu 2005	Plant Population plants/ac	Head Population heads/plant
Early					
Frontier Hybrids, Inc	F-222E	69.7	53.1	31,100	1.24
Dekalb Genetics Corp.	DKS 37-07	66.0	53.5	30,200	1.42
Frontier Hybrids, Inc	F-303C	63.3	52.3	36,300	1.34
Dekalb Genetics Corp.	DKS 36-00	62.5	55.3	30,500	1.41
Dekalb Genetics Corp.	DKS 29-28	60.8	55.1	34,500	1.39
Triumph Seed Co., Inc.	TR 434	59.3	52.3	29,200	1.34
Asgrow Seed	Reward	58.0	52.8	30,300	1.48
Walter Moss Seed Co. LTD	M-927-ER	55.8	51.6	27,000	2.09
Asgrow Seed	Pulsar	53.0	55.8	29,800	1.47
	Mean	60.9	53.5	31,000	1.46
	C.V.%	15.8	5.3	8.5	15.3
	L.S.D.	NS	NS	4,600	0.39

Company Brand Name	Entry Designation	Grain Yield bu/ac	Test weight Lb/bu	Plant Population plants/ac	Head Population heads/plant	Lodging %
Medium						
Seed Resource	SR 421	78.1	53.4	28,900	1.45	17
Garst Seed Company	5401	71.1	56.1	27,900	1.79	23
NC+ Hybrids	6B50	70.7	53.5	31,000	1.43	37
Dekalb Genetics Corp.	DKS 42-20	66.7	55.1	31,200	1.39	47
Dekalb Genetics Corp.	DK 44	65.9	56.3	30,300	1.35	38
Frontier Hybrids, Inc	F-457E	65.3	54.9	24,900	1.67	35
Seed Resource	SR 424	64.0	54.4	29,400	1.45	27
Dekalb Genetics Corp.	DK 44 WO	62.0	56.0	27,800	1.37	35
NC+ Hybrids	7C22	59.3	55.0	28,500	1.45	30
Garst Seed Company	5515	57.5	53.6	28,500	1.33	50
Sorghum Partners Inc	KS 585 WO	54.3	56.2	28,500	1.61	40
Sorghum Partners Inc	KS 585	42.8	55.8	33,000	1.33	35
	Mean	63.1	55.0	29,200	1.47	----
	C.V.%	13.4	1.2	8.0	8.8	----
	L.S.D.	12.1	0.9	3,400	0.19	----

Table 3. Continued

Company Brand Name	Entry Designation	Grain Yield bu/ac	Test weight Lb/bu	Plant Population plants/ac	Head Population heads/plant	Lodging %
Full						
Walter Moss Seed Co. LTD	M -929-MB	66.6	55.6	27,200	1.51	38
Walter Moss Seed Co. LTD	M-1024-DPW	66.1	54.9	22,100	1.67	10
Sorghum Partners Inc	NK 6673	62.1	54.9	32,100	1.39	58
Sorghum Partners Inc	NK 8831	46.8	53.0	32,500	1.16	60
	Mean	60.4	54.6	28,500	1.43	----
	C.V.%	12.1	1.3	11.5	10.4	----
	L.S.D.	11.1	1.2	5,200	0.24	----

Cooperator: Bill and Louise Rigdon

Soil Series: Brewer Silty Clay Loam

No-till Practices: Followed Soybean in 2004

Soil Test: N: NA P: NA K: NA pH: NA

Fertilizer: N: 125 lbs/ac P: 0 K: 0

Herbicide: 2 qt/ac Cinch ATZ Lite (Preemergence)

Planting Date: May 5, 2005 medium and full, early planted June 9, Target Population: 45,000 plants/ac

Harvest Date: October 8, 2005

Monthly Rainfall (in.)

	Apr.	May	June	July	Aug.	Sep.	Total
2005:	0.52	1.47	7.03	3.02	5.12	1.30	18.46
Long term mean:	3.28	5.83	4.05	2.68	3.19	3.59	22.62

Table 4. Results from Cherokee grain sorghum performance trial, 2005.

Company Brand Name	Entry Designation	Days To Midbloom	Grain Yield bu/ac		Test weight lb/bu		Plant Population plants/ac	Head Population heads/plant
			2005	Two-year	2005	Two-year		
Dekalb Genetics Corp.	DKS 42-20	65	119.2	98.0	55.6	57.7	22,200	3.73
Sorghum Partners Inc	KS 585	65	128.0	98.0	57.0	58.6	20,500	3.79
Sorghum Partners Inc	KS 310	57	136.6	94.4	53.5	56.0	27,200	2.51
Dekalb Genetics Corp.	DK 44	62	110.5	91.3	55.2	57.4	23,000	2.53
Sorghum Partners Inc	K 35-Y5	59	110.5	90.0	51.2	55.0	20,600	4.70
Asgrow Seed	Reward	56	127.0	88.8	50.8	54.1	23,600	3.36
Dekalb Genetics Corp.	DKs 37-07	60	101.9	86.0	56.9	58.2	21,600	2.88
Frontier Hybrids, Inc	F-303 C	59	82.7	67.2	53.2	55.8	19,000	3.10
Seed Resource	SR 421	64	123.2	----	54.9	----	21,800	2.65
NC+ Hybrids	6B50	62	110.4	----	52.8	----	22,600	2.77
Garst Seed Company	5515	67	102.9	----	54.3	----	21,900	2.18
Frontier Hybrids, Inc	F-222E	50	98.9	----	54.5	----	20,700	3.11
Triumph Seed Co., Inc.	TR 434	58	91.6	----	54.3	----	19,600	3.24
Note: DK 44 and KS 585 without seed treated insecticide never emerged therefore were not harvested.		Mean	111.0	89.2	54.2	56.6	21,900	3.12
		C.V.%	11.0	17.9	1.4	1.91	18.6	20.0
		L.S.D.	17.6	16.1	1.1	1.1	NS	0.92

Cooperator: Doug McMurtrey

Soil Series: Dale Silt Loam

No-till Practices: Soybeans in 2004

Soil Test: NA

Fertilizer: N: 125 lbs N/ac P: none K: none

Herbicide 2 qt/ac Cinch ATZ Lite Preemergence

Planting Date: April 21, 2005 Target Population: 45,000 plants/ac

Harvest Date: September 4, 2005

Monthly Rainfall (in.)

	Apr.	May	June	July	Aug.	Total
2005:	0.45	0.92	6.38	3.39	5.74	16.88
Long term mean:	3.28	5.83	4.05	2.68	3.19	19.03

Table 5. Results from Enid double-crop grain sorghum performance trial, 2005.

Company Brand Name	Entry Designation	Grain Yield bu/ac		Test weight lb/bu		Plant Population plants/ac	Head Population heads/plant
		2005	Two-year	2005	Two-year		
Sorghum Partners Inc	KS 585	92.3	88.1	61.9	58.0	37,200	1.35
Dekalb Genetics Corp.	DK 44	95.7	87.6	61.0	57.0	35,000	1.17
Dekalb Genetics Corp.	DKs 37-07	99.5	83.7	62.4	58.3	35,500	1.21
Frontier Hybrids, Inc	F-303 C	80.8	75.5	59.7	55.6	39,200	1.18
Asgrow Seed	Seneca	76.5	73.5	59.1	56.5	43,400	1.29
Sorghum Partners Inc	K 35-Y5	75.6	69.9	59.5	55.2	35,500	1.49
Dekalb Genetics Corp.	DKS 29-28C	65.9	67.1	56.8	54.8	39,300	1.31
Sorghum Partners Inc	KS 310	69.7	66.0	57.6	55.6	39,900	1.42
Seed Resource	SR 421	91.8		60.4		37,300	1.24
Walter Moss Seed	M-927-ER	84.8		59.1		36,100	1.43
	Mean	83.3	76.4	59.7	56.4	37,800	1.31
	C.V.%	7.2	11.1	1.0	2.5	8.2	10.1
	L.S.D.	8.7	8.5	0.9	1.4	4,500	0.19

Cooperator: Ed Regier

Soil Series: Grant Silt Loam

No-till Practices: Double crop following wheat harvest in 2004

Soil Test: NA

Fertilizer: N: 125 lbs N/ac P: none K: none

Herbicide: Cinch ATZ Lite 1.5qts/ac (Preemergence)

Planting Date: June 9, 2005 Target Population: 45,000 plants/ac

Harvest Date: November 5, 2005

Monthly Rainfall during growing season (in.)

	----- 2004 -----					
	June	July	Aug.	Sep.	Oct.	Total
	4.61	3.27	4.03	0.34	3.89	16.14
Long term mean:	4.26	2.89	3.35	3.39	3.17	17.06

Table 6. Results from Goodwell dryland grain sorghum performance trial, 2005.

Company Brand Name	Entry Designation	Grain Yield bu/ac	Test weight Lb/bu	Plant Population plants/ac	Head Population heads/plant
Early					
Dekalb Genetics Corp.	DKS 37-07	63.6	58.6	15,200	2.52
Asgrow Seed	Pulsar	61.5	57.8	16,400	2.56
Dekalb Genetics Corp.	DKS 36-00	59.9	58.2	18,200	2.27
Asgrow Seed	Reward	51.0	56.6	21,200	1.89
Dekalb Genetics Corp.	DKS 29-28	50.2	57.3	19,500	2.11
	Mean	57.2	57.7	18,100	2.27
	C.V.%	7.0	0.9	8.6	10.7
	L.S.D.	6.2	0.8	2,400	0.37

Company Brand Name	Entry Designation	Grain Yield bu/ac 2005	Test weight Lb/bu 2005	Plant Population plants/ac	Head Population heads/ac
Medium/Full					
Dekalb Genetics Corp.	DKS 42-20	67.3	58.3	18,400	1.71
NC+ Hybrids	7C22	61.9	57.5	17,000	1.81
Sorghum Partners Inc	NK 6673	58.5	56.9	20,200	1.93
Seed Resource	SR 421	56.8	55.7	19,500	1.76
Seed Resource	SR 424	56.1	58.1	18,500	1.71
Sorghum Partners Inc	KS 585	53.4	57.7	19,100	1.87
Sorghum Partners Inc	KS 585 WO	51.3	57.5	17,000	1.92
Sorghum Partners Inc	NK 8831	51.2	57.1	18,500	2.27
NC+ Hybrids	5B89	50.0	57.8	17,900	1.70
Dekalb Genetics Corp.	DK 44 WO	49.6	58.4	14,200	2.59
Dekalb Genetics Corp.	DK 44	46.1	58.3	16,200	2.30
	Mean	54.7	57.6	17,900	1.93
	C.V.%	16.9	1.3	9.4	20.00
	L.S.D.	13.4	1.1	2,400	NS

Cooperator: OPREC

No-till Practices: Following wheat 2004

Soil Test: N: 51 P: 28 K: 912 pH: 7.5

Planting Date: June 7, 2005

Target Population: 25,000 plants/ac

Soil Series: Richfield Clay Loam

Herbicide 2 qt/ac Cinch ATZ Lite Preemergence

Fertilizer: N: 50 lbs N/ac P: 40 lb/ac P₂O₅ K: none

Harvest Date: October 18, 2005

Monthly Rainfall (in.)

	May	June	July	Aug.	Sep.	Total
	2.85	2.01	1.40	3.21	0.35	9.82
Long term mean:	3.25	2.86	2.58	2.28	1.77	12.74

Table 7. Results from Goodwell irrigated grain sorghum performance trial, 2005.

Company Brand Name	Entry Designation	Grain Yield bu/ac 2005	Test weight Lb/bu 2005	Plant Population plants/ac	Head Population heads/ac
Early					
Dekalb Genetics Corp.	DKS 37-07	150.3	59.7	47,800	1.53
Asgrow Seed	Pulsar	139.6	59.3	53,900	1.58
Dekalb Genetics Corp.	DKS 36-00	137.7	58.8	57,900	1.49
Asgrow Seed	Reward	122.6	58.0	56,200	1.51
Dekalb Genetics Corp.	DKS 29-28	108.3	58.4	59,000	1.38
	Mean	131.7	58.8	55,000	1.49
	C.V.%	7.8	0.8	14.5	11.4
	L.S.D.	15.9	0.7	NS	NS

Company Brand Name	Entry Designation	Grain Yield bu/ac		Test weight lb/bu		Plant Population plants/ac	Head Population heads/ac
		2005	Two-year	2005	Two-year		
Medium							
Sorghum Partners Inc	KS 585 WO	157.4	156.0	59.6	58.1	56,400	1.36
Sorghum Partners Inc	KS 585	143.0	148.8	59.6	58.2	55,800	1.35
Dekalb Genetics Corp.	DK 44	136.2	142.1	57.5	55.4	54,200	1.29
Dekalb Genetics Corp.	DK 44 WO	132.3	139.6	58.2	56.2	50,800	1.29
NC+ Hybrids	7C22	148.0	----	58.6	----	49,800	1.49
Seed Resource	SR 424	145.6	----	58.8	----	54,600	1.33
Dekalb Genetics Corp.	DKS 42-20	143.9	----	59.5	----	52,800	1.44
Seed Resource	SR 421	137.3	----	57.4	----	54,600	1.16
NC+ Hybrids	5B89	118.9	----	57.5	----	50,100	1.49
	Mean	140.3	146.6	58.5	57.0	53,200	1.35
	C.V.%	8.3	7.2	1.4	1.9	7.5	7.3
	L.S.D.	17.0	11.0	1.2	NS	5,800	0.14

Table 7. Continued

Company Brand Name	Entry Designation	Grain Yield bu/ac		Test weight lb/bu		Plant Population plants/ac	Head Population heads/ac
		2005	Two-year	2005	Two-year		
Full							
Asgrow Seed	A567	154.5	153.6	58.2	55.9	53,800	1.25
Dekalb Genetics Corp.	DKS 53-11	149.4	150.2	58.4	56.9	49,900	1.23
Dekalb Genetics Corp.	DKS 54-00	147.2	149.2	56.8	55.3	58,900	1.27
Asgrow Seed	A571	158.7	148.7	57.5	55.6	64,500	1.14
Sorghum Partners Inc	NK 6673	146.7	----	57.6	----	57,500	1.39
Sorghum Partners Inc	NK 8831	139.9	----	57.4	----	60,400	1.22
	Mean	149.4	150.5	57.6	55.9	57,500	1.25
	C.V.%	4.1	9.2	1.3	2.7	7.0	6.2
	L.S.D.	9.3	NS	NS	1.6	6,100	0.11

Cooperator: OPREC

Soil Series: Richfield Clay Loam

Conventional Tillage Practices: Planted on fallow soil following Soybeans in 2003

Soil Test: N: 45 lbs/ac P: 26 K: 1192 pH: 7.2

Fertilizer: N: 200 lbs N/ac P: 40 lbs P₂O₅/ac K: 0

Herbicide: Cinch ATZ Lite 2 qts/ac (Preemergence)

Planting Date: June 20, 2005 Target Population: 70,000 plants/ac

Harvest Date: November 2, 2005

Monthly Rainfall (in.)

	May	June	July	Aug.	Sep.	Total
	2.85	2.01	1.40	3.21	0.35	9.82
Long term mean:	3.25	2.86	2.58	2.28	1.77	12.74

----- Irrigation (in.) -----

May	Jun.	Jul.	Aug.	Sept.
0.0	2.0	3.0	3.0	2.0

Table 8. Results from Keyes dryland grain sorghum performance trial, 2005.

Company Brand Name	Entry Designation	Grain Yield bu/ac		Test weight Lb/bu		Plant Population plants/ac	Head Population heads/ac
		2005	Two year	2005	Two year		
Early							
Dekalb Genetics Corp.	DKS 36-00	92.0	60.7	56.4	54.3	19,100	2.13
Asgrow Seed	Reward	89.1	56.8	55.2	51.7	22,200	2.36
Dekalb Genetics Corp.	DKS 37-07	75.9	54.9	56.1	55.6	18,500	1.89
Asgrow Seed	Pulsar	69.8	48.3	56.9	55.1	21,400	2.31
Dekalb Genetics Corp.	DKS 29-28	84.3	----	56.1	----	21,400	1.95
Mean		82.2	55.2	56.4	54.2	20,500	2.13
C.V.%		9.3	17.4	1.8	3.2	15.7	14.1
L.S.D.		11.8	10.8	NS	1.9	NS	NS

Company Brand Name	Entry Designation	Grain Yield bu/ac 2005	Test weight Lb/bu 2005	Plant Population plants/ac	Head Population heads/ac
Medium/full					
Sorghum Partners Inc	KS 585	135.3	56.7	21,600	2.22
Sorghum Partners Inc	NK 6673	109.4	54.9	20,100	2.17
Sorghum Partners Inc	KS 585	109.0	57.0	20,900	2.39
Dekalb Genetics Corp.	DKS 42-20	108.6	55.4	20,300	2.16
Seed Resource	SR 424	107.3	56.0	20,900	1.91
Seed Resource	SR 421	105.0	55.6	21,500	1.99
Sorghum Partners Inc	NK 8831	104.4	53.0	20,500	1.87
NC+ Hybrids	7C22	103.3	55.7	22,500	1.74
Dekalb Genetics Corp.	DK 44	102.5	54.3	19,900	1.67
NC+ Hybrids	5B89	97.5	55.6	21,100	2.47
Mean		108.2	55.4	20,900	2.06
C.V.%		7.5	2.5	12.1	14.8
L.S.D.		11.7	NS	NS	0.44

Cooperator: J.B. Stewart

No-till Practices: Following wheat 2004

Soil Test: NA

Planting Date: June 7, 2005

Target Population: 25,000 plants/ac

Soil Series: Pond Creek Silt Loam

Herbicide 2 qt/ac Cinch ATZ Lite Preemergence

Fertilizer: N: 150 lbs N/ac P: none K: none

Harvest Date: November 11, 2005

Monthly Rainfall (in.)

	May	June	July	Aug.	Sep.	Oct.	Total
	2.86	2.38	1.34	2.41	0.07	0.70	9.76
Long term mean:	2.76	2.92	2.85	2.55	1.97	0.97	14.02

Note: Rainfall at Keyes was higher than at Mesonet site near Boise City

Table 9. Results from Tipton dryland grain sorghum performance trial, 2005.

Company Brand Name	Entry Designation	Grain Yield bu/ac	Test weight lb/bu	Plant Population plants/ac	Head Population heads/plant
Early					
Walter Moss Seed Co. LTD	M-927-ER	62.9	47.3	23,600	2.60
Triumph Seed Co., Inc.	TR 434	57.7	47.1	24,100	2.26
Frontier Hybrids, Inc	F-222E	39.8	48.2	24,200	2.42
Frontier Hybrids, Inc	F-303C	38.1	42.2	23,100	2.09
	Mean	49.6	46.2	23,800	2.34
	C.V.%	14.9	1.8	8.8	12.9
	L.S.D.	11.9	1.3	NS	NS

Company Brand Name	Entry Designation	Grain Yield bu/ac	Test weight lb/bu	Plant Population plants/ac	Head Population heads/plant
Medium					
Sorghum Partners Inc	KS 585 WO	81.8	52.1	28,600	2.68
Sorghum Partners Inc	KS 585	75.9	51.0	27,600	2.74
NC+ Hybrids	6B50	74.4	48.8	27,900	2.21
Frontier Hybrids, Inc	F-457E	62.6	48.3	26,000	2.14
Seed Resource	SR 424	59.4	46.6	28,700	2.17
Dekalb Genetics Corp.	DK 44	59.2	46.6	28,100	1.97
Dekalb Genetics Corp.	DK 44 WO	57.3	47.7	29,800	1.85
Garst Seed Company	5401	57.1	49.9	24,900	2.84
Seed Resource	SR 421	53.5	46.8	24,900	2.20
Garst Seed Company	5515	52.3	47.7	26,500	1.88
NC+ Hybrids	7C22	39.1	45.5	27,000	2.21
	Mean	61.1	48.3	27,300	2.26
	C.V.%	13.7	5.0	11.6	12.0
	L.S.D.	12.1	3.5	NS	0.39

Table 9. Continued

Company Brand Name	Entry Designation	Grain Yield bu/ac	Test weight lb/bu	Plant Population plants/ac	Head Population heads/plant
Full					
Walter Moss Seed Co. LTD	M -929-MB	66.4	49.9	26,800	2.60
Sorghum Partners Inc	NK 6673	47.6	45.8	25,200	2.58
Walter Moss Seed Co. LTD	M-1024-DPW	38.6	48.3	22,100	2.49
Sorghum Partners Inc	NK 8831	37.0	43.6	27,800	2.07
	Mean	47.4	46.9	25,500	2.43
	C.V. %	9.2	2.5	8.3	8.60
	L.S.D.	6.9	1.9	NS	NS

Cooperator: Southwest Research and Extension Center

Soil Series: Tipton Silt Loam

Conventional Tillage Practices: Sorghum-fallow-sorghum rotation

Soil Test: N: 10 lbs/ac P: 53 K: 639 pH: 6.2

Fertilizer: N: 120 lbs/ac P: 0 K: 0

Herbicide: 2 qt/ac Cinch ATZ Lite Preemergence

Planting Date: April 22 , 2005 Target Population: 45,000 plants/ac

Harvest Date: September 3, 2005

Monthly Rainfall (in.)

	Apr.	May	June	July	Aug.	Total
2005:	0.83	3.42	3.42	2.47	2.70	12.84
Long term mean:	2.30	4.30	3.45	2.08	2.71	14.84