

2000

KANSAS PERFORMANCE TESTS WITH

GRAIN SORGHUM HYBRIDS

REPORT OF PROGRESS 865

Kansas State University
Agricultural Experiment Station
and Cooperative Extension Service

■ summer fallow

● continuously cropped land

★ irrigated

TABLE OF CONTENTS

INTRODUCTION

Test objectives and procedures	1
2000 Statewide growing conditions	2
Weather Summary	2
Insect and Disease Summaries	4

RESULTS: GRAIN SORGHUM PERFORMANCE TESTS

NORTHEAST

Brown County	Powhattan	Table 1	5
Riley County	Manhattan	Table 2	7
Republic County	Belleville	Abandoned, drought	
Yield Summary		Table 3	9
		Figure 6	10

SOUTHEAST

Franklin County	Ottawa	Table 4	11
Chase County	Strong City	Table 5	14
Labette County	Parsons	Table 6	16
Yield Summary		Table 7	19
		Figure 7	20

SOUTH CENTRAL

Harvey County	Hesston	Table 8	21
Reno County	Hutchinson	Table 9	24
Stafford County	St. John	Abandoned, drought	
Sumner County	Argonia	Table 10	27
Yield Summary		Table 11	28
		Figure 8	29

WEST

Ellis County	Hays	Table 12	30
Thomas County	Colby	Table 13	33
Greeley County	Tribune	Abandoned; drought, iron chlorosis	
Finney County	Garden City	Table 14	36
Yield Summary		Table 15	39
		Figure 9	40

IRRIGATED

Republic County	Scandia	Table 16	41
Stafford County	St. John	Table 17	43
Thomas County	Colby	Table 18	45
Greeley County	Tribune	Table 19	47
Finney County	Garden City	Table 20	49
Yield Summary		Table 21	51
		Figure 10	52

TAN-PLANT

Summary		Table 22	53
Ottawa & Hesston		Table 23	54

APPENDIX

1: Entrants in the 2000 Kansas Sorghum Performance Tests	55
2: Entries in the 2000 Kansas Grain Sorghum Performance Tests	56
Electronic Access, University Research Policy, and Duplication Policy	back cover

2000 KANSAS GRAIN SORGHUM PERFORMANCE TESTS

INTRODUCTION

TEST OBJECTIVES AND PROCEDURES

Sorghum Performance Tests, conducted annually by the Kansas Agricultural Experiment Station, provide farmers, extension workers, and private research and sales personnel with unbiased agronomic information on many of the sorghum hybrids marketed in the state. Entry fees from private seed companies help finance the tests. Seed companies receive test announcements and entry forms in late January each year; deadlines for receipt of completed entry forms and seed are in early March. Because entry selection and location are voluntary, not all hybrids grown in the state are included in tests, and hybrids are not grown uniformly at all test locations.

Individual test discussions include summaries of growing-season weather data for each location. 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 2000 and the 30-year normal in addition to the daily rainfall amounts since last fall. Temperature graphs include daily maximum and minimum temperatures compared with normal. Growing degree graphs include cumulative lines for 2000 and normal. All graphs indicate planting, heading, and harvest dates, if available. The graphs reveal general trends in precipitation and temperature compared to normal. For more detailed information, a table is included with monthly totals and averages for the growing season. Comparisons of the current year's weather with long-time averages often help explain unusual plant development patterns and inconsistent performance of individual hybrids over years.

Beginning in 1999, seed-applied insecticide was requested for each entry. Check hybrids were included at each location with and without seed-applied insecticide to estimate the potential advantage of the insecticide. The insecticide

tended to confer a slight yield benefit at most locations, especially in the presence of early-season insect pests. Check the "INSECTICIDE EFFECT" summary in the descriptive information for each test.

Explanatory information is given preceding data summaries for each test. Tables 1-21 contain results from the grain sorghum performance test locations. Hybrids are listed in order of increasing days to half bloom and increasing grain moisture for the current year, so hybrids of similar maturity appear together. Yield summaries following each group of tests (Tables 3, 7, 11, 15, 21) present current-year yield as a percent of the average for each location. The 2000 entrants, entries, and some additional descriptive information provided by the entrants are listed in the Appendices. Included in the descriptive information for each hybrid is a rating indicating relative chlorosis of the hybrids on a high pH site at Colby.

Grain from tan-plant hybrids is desirable for human food consumption and poultry feed. Tan-plant sorghums have been tested at several locations in past years. This year, three locations of a regional study were planted in Kansas. Results from the two locations that survived the growing season are shown in Tables 22 and 23.

Figures 6-10 graphically summarize yield and maturity information over the past 3 years for each region. Hybrid performance is standardized using the average of three check hybrids present in every test (C305, RS610, and TX2752xTX430). The number beside each bar shows the number of tests where a given hybrid was compared with the check hybrids. In general, the greater the number of comparisons, the greater confidence one can place in the stated performance of that hybrid. Symbols beside the bar indicate if a hybrid was significantly greater (+) or lower (-) than the average of the check hybrids. No symbol means no difference. As with individual test results, small differences should not be overemphasized. Relative ranking and large differences are better indicators of hybrid performance.

Most tests are planted at a rate 30% to 40% above the desired population and only minimally thinned. Planting to stand includes hybrid differences in stand establishment and early-season vigor in the overall performance evaluation. These differences may or may not be genetically controlled but contribute to marketed product performance in either case. Therefore, they are included in performance comparisons.

Tractor-powered, modified, air-planters were used for nearly all tests. Three or four plots (replications) of each hybrid were grown at each location in a randomized complete block design. Each harvested plot consisted of two rows trimmed to a specific length ranging from 20 to 30 feet at the different locations. Agronomists used specialized plot combines equipped with automatic weighing and sampling devices to harvest most tests.

Results for each grain sorghum test include *GRAIN YIELDS* reported as bushels per acre of shelled grain (56 lbs/bu) adjusted to a moisture content of 12.5%. *BUSHEL YIELDS* also are converted to *YIELDS AS PERCENTAGES OF THE TEST AVERAGE* to speed recognition of highest-yielding hybrids (more than 100%, the test average). The actual test average in bushels per acre is listed as the test average in the *YIELD AS % OF TEST AVERAGE* columns as a guide to actual yields. Hybrids yielding more than 100% of the test average year after year merit consideration, but adaptation to individual farms for appropriate maturity, stalk strength, and other factors also must be considered.

When appropriate, tables include the number of *LODGED* stalks. Both broken stalks and stalks leaning more than 45 degrees from vertical were considered *LODGED*, although most were harvestable with modern machinery.

Two characteristics contributed to estimations of relative maturity at most locations. *DAYS FROM PLANTING TO HALF BLOOM* is the number of days between planting and the date when half of the heads of a given hybrid have roughly half of the florets in bloom. *GRAIN MOISTURE* at harvest also may help categorize hybrids for relative maturity, when harvest is early enough to provide a range in moisture contents among entries. Entries are listed in order of increasing maturity based on days to half bloom and harvest

moisture in the current year to facilitate comparison of hybrids of like maturity. Maturity can be critical when considering a sorghum hybrid for a specific cropping system.

The *GROWTH UNIT* or *GROWING DEGREE DAY* concept was developed to measure the amount of heat available for growth and maturation. The formula used to generate the monthly totals in individual test discussions follows. Take the maximum temperature plus the minimum temperature for each day, divide by 2, and then subtract a base temperature of about 34 (actually 1° C was used in the calculations). The purpose is to describe temperatures for the season for comparison with previous years and other locations in explaining relative rates of plant development. Research by Dr. Richard Vanderlip and his students at Kansas State University has indicated an excellent relationship between the growth units generated by these calculations and the actual rate of plant development from blooming to physiological maturity. Growth unit accumulations for the current year are compared with the long-term 'normal' for each test.

Small differences in yield or other characteristics should not be overemphasized. Least significant differences (LSD's) 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 in that character. The coefficient of variability (CV) can be used to estimate the degree of confidence one may have in published data from replicated tests. For yield estimates in this testing program, CV's below 10% generally indicate reliable, uniform data, whereas CV's of 10 to 15% are not uncommon and usually indicate that data are acceptable for the rough performance comparisons desired from these tests. Tests with CV's over 15% still may be useful, but hybrid comparisons lack precision.

2000 STATEWIDE GROWING CONDITIONS

Weather Summary

The two most important weather factors affecting sorghum production, soil moisture and temperature, are graphed for the season in Figures 1 and 2. Figures 3 and 4 illustrate the sorghum crop's condition and progress during the season and reflect the impacts of temperature and soil-moisture extremes.

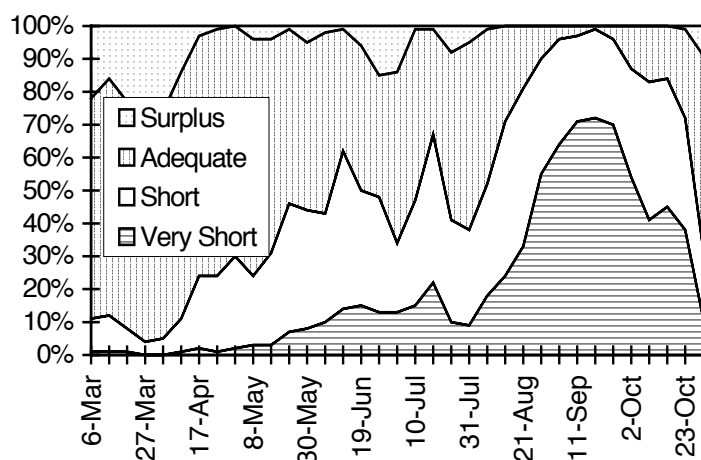


Figure 1. Statewide status of topsoil moisture.

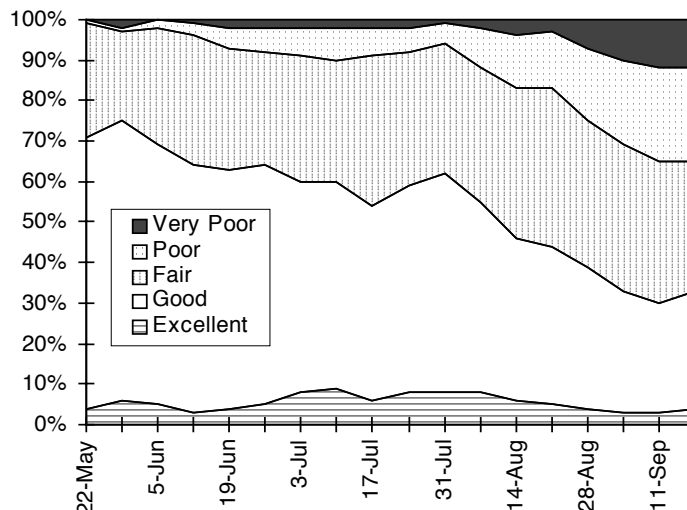


Figure 3. Condition of 2000 sorghum crop.

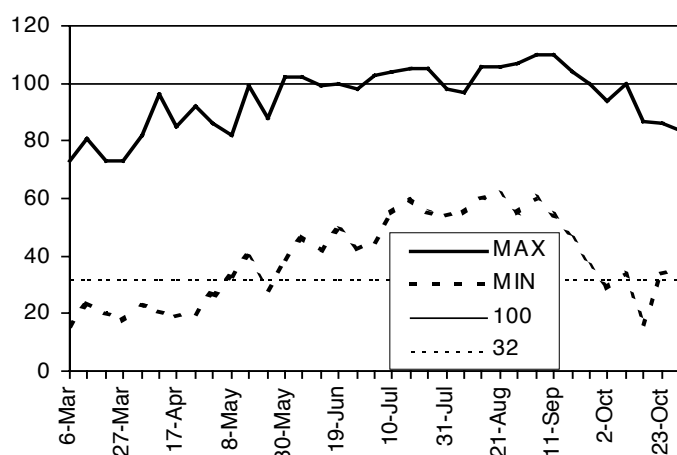


Figure 2. 2000 Kansas weekly maximum and minimum temperatures.

Relatively dry soil conditions (Figure 1) accompanied by warm temperatures (Figure 2) in April allowed producers to begin planting well ahead of normal. The crop continued to develop

ahead of previous years through heading and coloring (Figure 4). Very warm, dry conditions in August and early September accelerated dry-down, allowing harvest to proceed at a pace that was nearly a month ahead of normal. At least one reporting station in Kansas recorded weekly high temperatures above 100° F for a period of 7 weeks from early August until mid-September (Figure 2). In two of those weeks, the highs were 110° F. During that same period, the percentage of crop acreage characterized as short or very short of topsoil moisture increased from roughly 40% to 99% (Figure 1). A hard freeze in late September (Figure 2) helped dry-down of some of the later maturing sorghum in western Kansas.

The condition of the crop generally declined throughout the season (Figure 3). Over 70% of the crop was in good or excellent condition in late

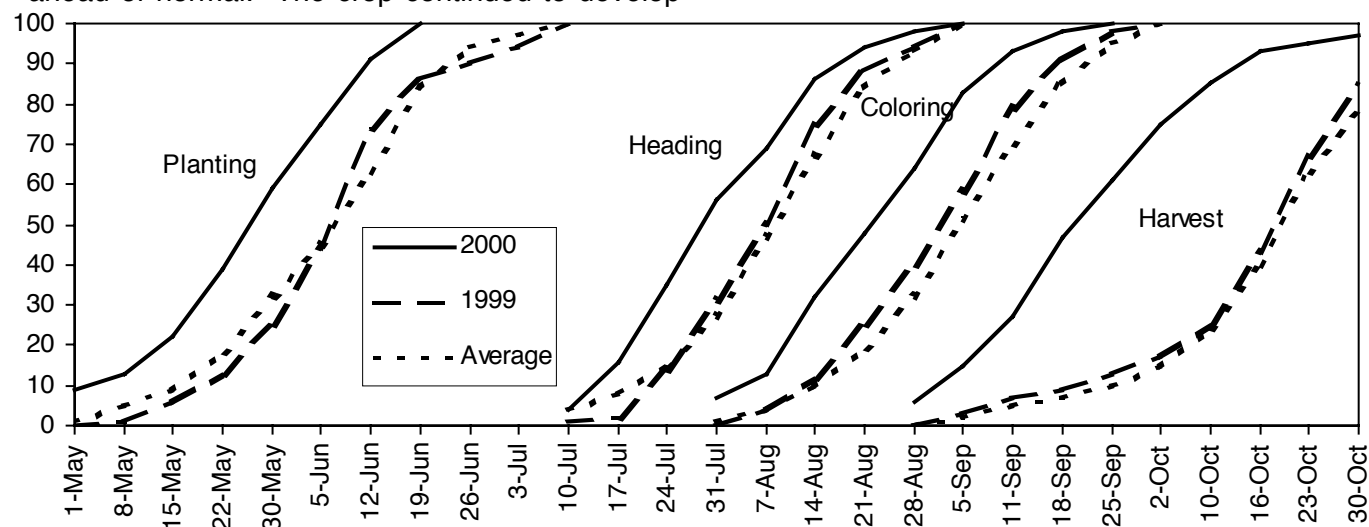


Figure 4. Progress of 2000 Kansas grain sorghum crop.

May, but less than 40% was in those categories by mid-September. A slight improvement in condition of the crop occurred in late July when some areas received significant precipitation, but the overall trend resumed in early August. (From Crop-Weather reports, Kansas Agricultural Statistics, Topeka)

Insect Summary

Some less common insect pests of grain sorghum appeared in 2000 in addition to the usual array encountered in most years. Entomologists noted some light infestations of greenbugs early in the growing season, but this pest caused less concern than normal. Conditions favored the development of chinch bug populations in late May and June. Chinch bugs were active in eastern and central Kansas, but the overall level of damage tended to be lower than expected. An unusual instance of chinch bug damage occurred in Finney County in mid-July. The yellow sugarcane aphid caused minor damage in the eastern half of the state. This pest is usually not a problem in Kansas and appeared to decline fairly rapidly. Another insect that usually doesn't cause problems in sorghum, the flea beetle, was found in fields in eastern Kansas, but damage appeared minimal. Although not generally considered a major problem in sorghum, southwestern corn borer infestations reached high levels this year. The heaviest infestations appeared to build up in fields that were planted to corn last year. Billbugs damaged sorghum in fields with heavy infestations of nutsedge. Two insects that have caused problems in the past, corn earworm and sorghum midge, seldom

reached economic treatment levels in 2000.

(From Kansas Insect Newsletter, Extension Entomology, Kansas State University and Kansas Cooperative Economic Insect Survey reports, Kansas Department of Agriculture.)

Disease Summary

The main problem observed in the Plant Disease Diagnostic Clinic in 2000 was herbicide injury. No single category of chemical was responsible. Many other reported problems were weather related. Compacted sidewalls in seed slots resulted in poor root development, and plants later suffered from both heat- and drought-related stresses. Seedling blights were less severe than in 1999. Sooty stripe levels were generally down compared to recent years because of the dry weather, but a few heavily infested fields could be found in the central part of the state.

Incidence of sorghum downy mildew was up from recent levels. The reason for this is unknown. By far the most serious problem was stalk rot. The hot, droughty weather was favorable for the development of both *Fusarium* stalk rot and charcoal rot. Significant lodging occurred in some fields, but the early harvest across much of the state kept serious widespread lodging from developing. There were no reports of sorghum ergot in Kansas in 2000.

(From Doug Jardine, Extension Plant Pathologist, Kansas State University Department of Plant Pathology.)

The November 9 Crops Report predicted a crop of 176.7 million bushels, down 32% from 1999. This production is from 3.1 million harvested acres, down by 300,000 acres from last year. Sorghum acres and production were concentrated in central Kansas (Figure 5). Yield levels in southern districts tended to be lower than those in the central and northern districts. The highest yields were recorded in the west central district at 90 bushels per acre. The predicted statewide average yield of 57 bushels per acre is 19 bushels lower than the 1999 yield average.

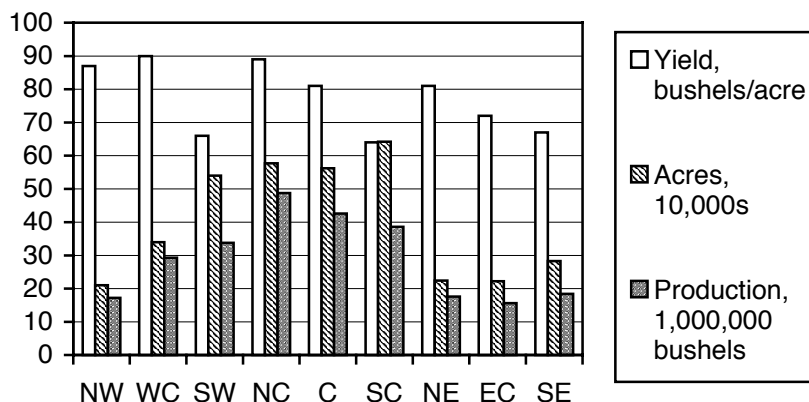


Figure 5. 2000 Kansas grain sorghum crop production by crop reporting district.

NORTHEASTERN KANSAS GRAIN SORGHUM TEST ON SILTY CLAY LOAM SOIL

COUNTY: BROWN

LOCATION: Cornbelt Experiment Field, Powhattan

TEST SITE: Grundy silty clay loam

1999 CROP: Soybean

1998 CROP: Sorghum

FERTILIZER (lbs/acre): 110 N 0 P₂O₅ 0 K₂O

PLANTING DATE: 5/11/00

HARVEST DATE: 9/12/00

COOPERATORS: Larry Maddux, agronomist; Steve Milne and David Zeit, technicians

TARGET POPULATION: 55,000 plants/acre, 3.8 in. spacing

FINAL STAND (% of target): 100

BLOOM DATES: 7/18/00 - 7/31/00

YIELD: Avg. (bu/a) 118 Range (bu/a) 93 - 140

LSD (bu/a) 12

CV (%) 9

INSECTICIDE EFFECT (bu/a): Check 1 Check 2 Avg.

Yield with insecticide 113 122 117

Yield without insecticide 115 122 118

Insecticide advantage -1 ns 0 ns -1 ns

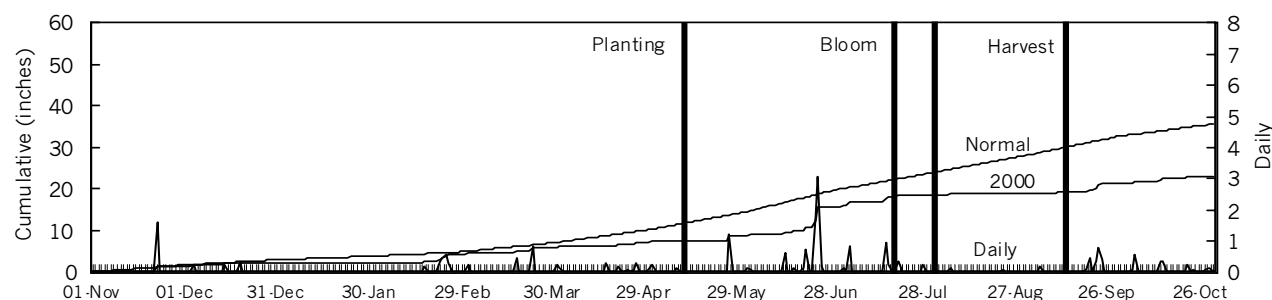
* = significant with 95% confidence

ns = not significant at 95% level

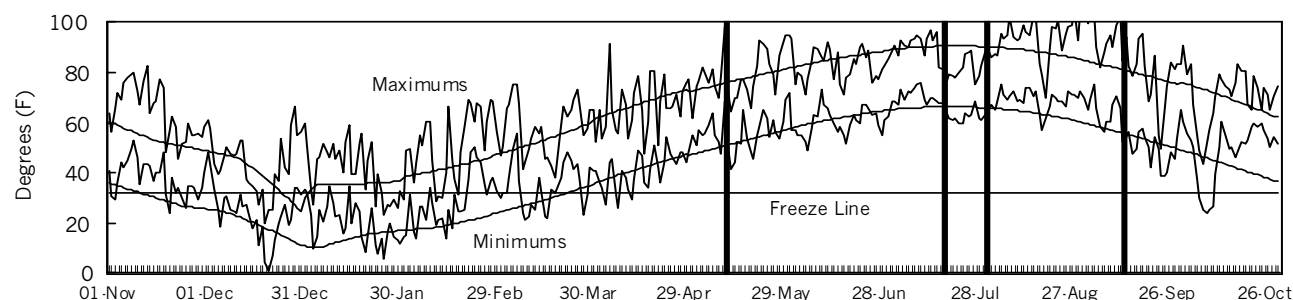
2000 GROWING CONDITIONS

Stands were adequate in most plots. Early planting enabled the plants to bloom before August. Birds removed grain from some heads prior to harvest, but the overall level of damage was low. Yields were better than expected considering the dry conditions during most of the growing season.

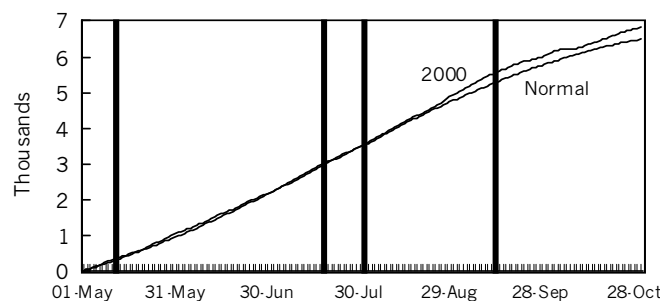
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	1.4	3.1	53	55	0	0
May	1.7	4.2	67	65	1001	925
June	7.0	5.4	72	73	1137	1184
July	2.9	4.1	77	78	1328	1370
August	0.3	4.2	81	76	1467	1305
Sep.	2.4	4.7	71	68	1105	1011
Oct.	1.9	3.0	60	56	802	692
Season Totals	17.4	28.6	69	67	6840	6487

TABLE 1. Brown Co. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plant Ht. in.	Ldg %	Final Stand %	Hds per Plant
					AVG.	AVG.												
MATURITY CHECK	C 305	114	97	101	106	104	97	80	90	67	12	68	10	59	52	5	90	1.5
GARST	5515	115	125	--	120	--	98	102	--	68	12	69	10	60	53	13	91	1.2
MATURITY CHECK	RS 610	98	122	108	110	109	83	100	96	68	12	69	10	58	62	65	83	1.4
PIONEER	8500	117	108	--	113	--	100	88	--	70	12	69	10	61	52	8	105	1.4
DEKALB	DK-35	121	118	104	119	114	103	96	93	69	13	69	11	61	51	10	114	1.3
MATURITY CHECK	TX3042xTX2737	113	118	120	115	117	96	96	108	68	13	69	11	61	61	26	104	1.3
NO GAUCHO*	TX3042xTX2737	115	--	--	--	--	97	--	--	--	--	69	12	61	59	14	106	1.4
NC+	6R30	116	--	--	--	--	98	--	--	--	--	70	10	61	49	1	103	1.5
ASGROW	A459	129	112	116	121	119	109	92	104	69	12	70	11	61	58	11	107	1.1
MIDLAND	X-4834	107	--	--	--	--	90	--	--	--	--	70	11	61	48	5	68	1.3
AGRIPRO	AP 2468	114	--	105	--	--	97	--	94	--	--	71	10	61	51	4	105	1.2
CARGILL	737	133	141	109	137	128	113	115	97	71	12	71	10	60	50	4	106	1.3
MONSANTO	X944	115	--	--	--	--	97	--	--	--	--	71	10	61	54	18	104	1.2
ASGROW	LASER	109	--	--	--	--	93	--	--	--	--	71	11	60	55	18	106	1.3
HOEGEMEYER	6055	123	118	111	120	117	104	96	99	70	13	71	11	60	52	14	107	1.3
HOEGEMEYER	6884	103	97	104	100	101	87	79	93	72	13	71	11	61	52	13	110	1.1
MATURITY CHECK	OK11xTX2741	100	85	93	93	93	85	70	83	70	13	71	11	60	52	9	96	1.2
KAYSTAR	X-060	108	--	--	--	--	92	--	--	--	--	71	12	61	51	65	109	1.1
CARGILL	697	121	--	--	--	--	102	--	--	--	--	72	10	60	55	8	101	1.1
KAYSTAR	X-080	114	--	--	--	--	97	--	--	--	--	72	10	60	58	4	105	1.1
GARST	5440	128	119	--	124	--	109	97	--	71	13	72	11	61	57	14	107	1.1
MATURITY CHECK	TX2752xTX430	122	132	127	127	127	103	108	114	72	13	72	11	60	57	53	99	1.4
MYCOGEN	3694	140	129	122	134	130	119	105	109	71	13	72	11	61	57	12	102	1.4
DEKALB	DK-47	125	142	117	133	128	106	116	105	72	13	72	12	62	57	0	106	1.3
DEKALB	DK-44	114	122	99	118	112	97	99	89	71	12	73	10	61	52	10	105	1.2
NO GAUCHO*	TX2752xTX430	122	--	--	--	--	103	--	--	--	--	73	11	60	57	29	96	1.3
AGRIPRO	AP 2731	123	125	--	124	--	104	102	--	72	13	73	12	60	60	1	107	1.2
ASGROW	A571	129	133	119	131	127	109	109	106	74	12	74	10	60	60	35	107	1.1
MATURITY CHECK	TX2752xTX2783	130	97	130	113	119	110	79	117	73	13	74	11	62	62	24	105	1.2
NC+	7B47	121	132	--	127	--	103	108	--	73	13	74	11	60	52	8	108	1.2
MIDLAND	X-4677	112	--	--	--	--	95	--	--	--	--	74	12	61	58	0	95	1.2
AGRIPRO	AP 2838	101	111	122	106	111	85	91	109	73	13	75	11	60	59	20	94	1.1
DEKALB	DK-54	129	145	129	137	134	109	118	116	72	13	75	11	60	64	19	107	1.1
PIONEER	84G62	134	137	119	135	130	114	112	106	75	13	75	11	61	57	9	110	1.2
HOEGEMEYER	6712	109	116	--	113	--	93	95	--	73	12	76	10	61	54	8	102	1.3
MYCOGEN	3696	121	--	96	--	--	102	--	86	--	--	76	11	60	51	6	98	1.4
DEKALB	DK-53	122	145	125	133	130	103	118	112	75	13	76	12	61	59	1	109	1.1
MONSANTO	X918	126	--	--	--	--	107	--	--	--	--	76	12	61	62	14	99	1.3
ASGROW	MISSILE	129	134	--	132	--	109	110	--	77	13	77	11	61	56	15	97	1.3
PIONEER	82G63	122	124	120	123	122	103	101	108	75	13	78	11	60	59	50	105	1.1
MONSANTO	X914	121	--	--	--	--	102	--	--	--	--	79	14	60	63	50	87	1.2
NC+	7R83	93	136	130	115	120	78	111	116	77	12	81	10	58	56	25	41	2.5
	AVERAGES	118	123	112	120	118	118	123	112	72	13	73	11	60	56	17	100	1.3
	CV(%)	9	8	8	--	--	9	8	8	--	--	3	9	1	3	109	9	6.1
	LSD(0.05)**	12	12	10	--	--	10	10	9	--	--	2	1	1	3	22	10	0.1

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

NORTHEASTERN KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL

COUNTY: RILEY

LOCATION: Agronomy North Farm, Manhattan

TEST SITE: Reading silt loam

1999 CROP: Soybean

1998 CROP: Sorghum

FERTILIZER (lbs/acre): 130 N 30 P₂O₅ 0 K₂O

PLANTING DATE: 5/10/00

HARVEST DATE: 9/15/00

COOPERATORS: Kraig Roozeboom, agronomist; Karl
Mannschreck, superintendent

TARGET POPULATION: 55,000 plants/acre, 3.8 in. spacing

FINAL STAND (% of target): 115

BLOOM DATES: 7/10/00 - 7/24/00

YIELD: Avg. (bu/a) 138 Range (bu/a) 117 - 160

LSD (bu/a) 8 CV (%) 5

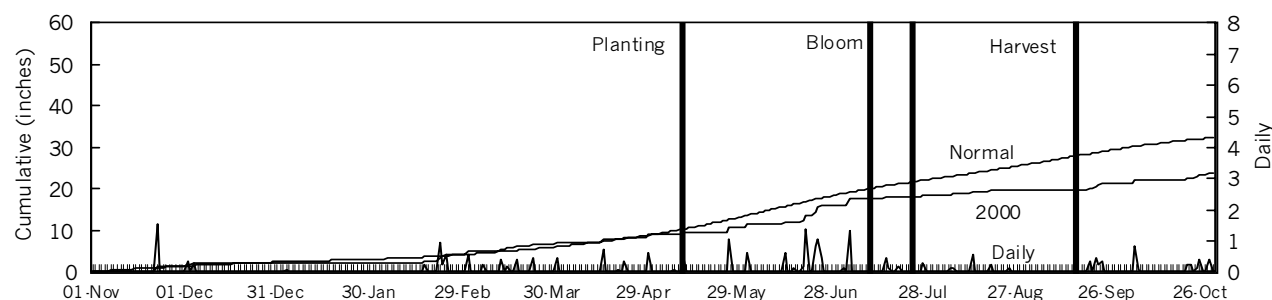
INSECTICIDE EFFECT (bu/a):	Check 1	Check 2	Avg.
Yield with insecticide	133	153	143
Yield without insecticide	133	147	140
Insecticide advantage	0 ns	5 ns	2 ns

* = significant with 95% confidence
ns = not significant at 95% level

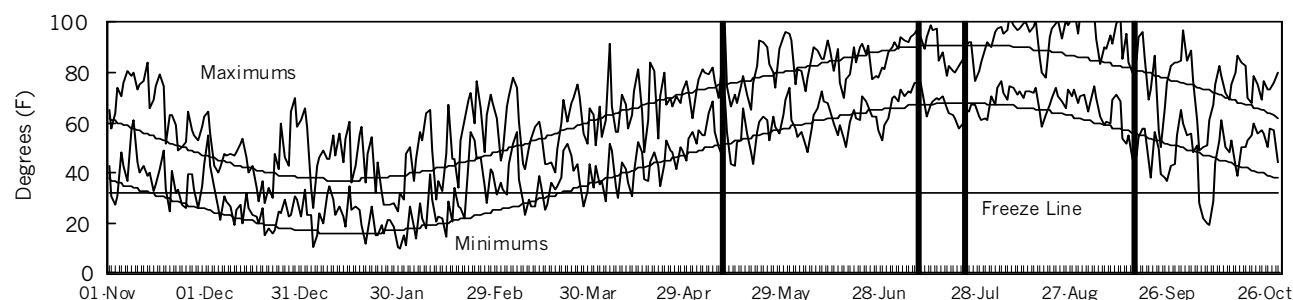
2000 GROWING CONDITIONS

Early planting, good stands, and adequate rainfall early in the season resulted in excellent yields. Little environmental, disease, or insect stress was placed upon the test until the hot, dry conditions of August.

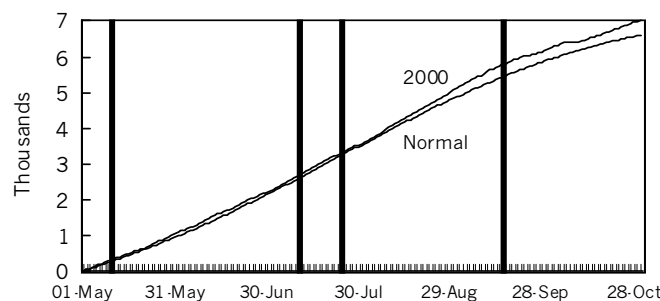
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	1.7	2.7	55	54	0	0
May	2.4	4.6	68	65	1020	924
June	5.3	5.1	73	73	1156	1185
July	2.5	3.9	78	79	1366	1392
August	1.2	3.5	83	77	1520	1340
Sep.	1.5	3.8	71	69	1113	1047
Oct.	2.4	2.8	61	57	840	710
Season Totals	17.0	26.3	70	68	7016	6596

TABLE 2. Riley Co. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plant Ht. in.	Ldg %	Final Stand %	Hds per Plant
					AVG.	AVG.												
MATURITY CHECK	C 305	128	117	86	123	111	93	100	75	61	13	61	11	56	51	--	101	1.4
NO GAUCHO*	TX3042xTX2737	133	--	--	--	--	96	--	--	--	--	62	11	59	55	--	118	1.2
MATURITY CHECK	TX3042xTX2737	133	120	107	127	120	96	102	93	62	13	63	12	58	57	--	125	1.2
DEKALB	DK-35	136	125	103	131	122	98	107	90	63	13	64	11	59	48	--	127	1.2
MATURITY CHECK	OK11xTX2741	120	108	83	114	104	87	92	72	64	12	64	11	59	49	--	104	1.2
PIONEER	8505	132	115	--	123	--	95	98	--	65	13	64	11	60	53	--	125	1.2
ASGROW	LASER	122	--	--	--	--	88	--	--	--	--	64	12	60	51	--	119	1.3
MATURITY CHECK	RS 610	121	118	82	120	107	88	100	71	64	13	64	12	57	59	--	103	1.2
CARGILL	737	145	135	120	140	134	105	115	104	65	12	66	10	59	47	--	118	1.2
GARST	5515	134	118	--	126	--	97	101	--	66	13	66	11	59	50	--	97	1.3
KAYSTAR	X-060	138	--	--	--	--	100	--	--	--	--	66	11	60	49	--	123	1.1
MONSANTO	X944	130	--	--	--	--	94	--	--	--	--	66	11	60	51	--	123	1.1
NC+	6C69	133	104	--	119	--	96	89	--	66	12	66	11	61	44	--	128	1.2
NC+	7B47	139	123	--	131	--	100	104	--	66	13	66	11	60	48	--	126	1.2
MYCOGEN	1506	144	115	127	130	129	104	98	110	69	14	66	12	58	61	--	119	1.2
MYCOGEN	M3838	135	--	--	--	--	97	--	--	--	--	66	12	61	48	--	116	1.2
ASGROW	A459	150	133	92	142	125	108	114	80	65	13	67	11	60	55	--	116	1.1
DEKALB	DK-44	134	107	111	120	117	97	91	96	68	13	67	11	60	50	--	126	1.1
DYNA-GRO	DG-751B	143	108	--	125	--	103	92	--	66	12	67	11	60	58	--	117	1.1
DYNA-GRO	DG-760C	133	122	--	127	--	96	104	--	66	12	67	11	60	56	--	119	1.2
GARST	5440	145	122	--	134	--	105	104	--	66	13	67	11	60	53	--	118	1.3
AGRIPRO	AP 2731	134	--	--	--	--	97	--	--	--	--	67	12	59	56	--	120	1.1
GARST	5522Y	143	--	--	--	--	103	--	--	--	--	67	12	60	58	--	124	1.2
AGRIPRO	AP 2838	138	105	124	121	122	99	89	108	67	14	67	13	57	55	--	117	1.1
KAYSTAR	X-080	135	--	--	--	--	97	--	--	--	--	68	11	60	53	--	120	1.1
MATURITY CHECK	TX2752xTX430	153	112	126	132	130	110	95	110	67	13	68	11	59	54	--	117	1.3
NO GAUCHO*	TX2752xTX430	147	--	--	--	--	106	--	--	--	--	68	11	59	52	--	119	1.2
WILLCROSS	GB7743-TR	127	--	--	--	--	91	--	--	--	--	68	11	59	53	--	92	1.2
CARGILL	697	131	--	--	--	--	95	--	--	--	--	68	12	59	51	--	119	1.1
DEKALB	DK-47	144	127	134	136	135	104	108	117	67	14	68	12	59	52	--	116	1.2
MATURITY CHECK	TX2752xTX2783	143	122	112	133	126	104	104	97	68	14	68	12	61	59	--	122	1.2
ASGROW	A571	148	124	113	136	129	107	106	98	68	12	69	10	60	54	--	119	1.2
WILLCROSS	GB8743-C	128	--	--	--	--	92	--	--	--	--	69	10	59	49	--	107	1.2
PIONEER	84G62	154	130	128	142	137	112	111	111	70	14	69	11	60	55	--	126	1.2
DYNA-GRO	DG-780B	142	--	--	--	--	103	--	--	--	--	69	12	61	58	--	116	1.1
PIONEER	82G63	155	--	--	--	--	112	--	--	--	--	69	12	60	57	--	117	1.2
ASGROW	MISSILE	147	121	--	134	--	106	103	--	71	14	70	11	60	52	--	110	1.2
DEKALB	DK-54	160	124	132	142	138	116	105	114	71	13	70	11	60	60	--	119	1.2
MONSANTO	X918	150	--	--	--	--	109	--	--	--	--	70	11	59	59	--	122	1.2
DEKALB	DK-53	146	135	128	141	137	106	115	111	73	16	71	12	61	55	--	121	1.2
NC+	7R83	117	123	122	120	121	85	105	106	71	13	74	11	58	51	--	25	2.8
MONSANTO	X914	143	--	--	--	--	104	--	--	--	--	74	12	59	58	--	108	1.1
	AVERAGES	138	117	115	128	124	138	117	115	67	13	67	11	59	53	--	115	1.2
	CV(%)	5	10	8	--	--	5	10	8	--	--	1	7	1	4	--	4	5.8
	LSD(0.05)**	8	13	11	--	--	6	11	10	--	--	1	1	1	2	--	6	0.1

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

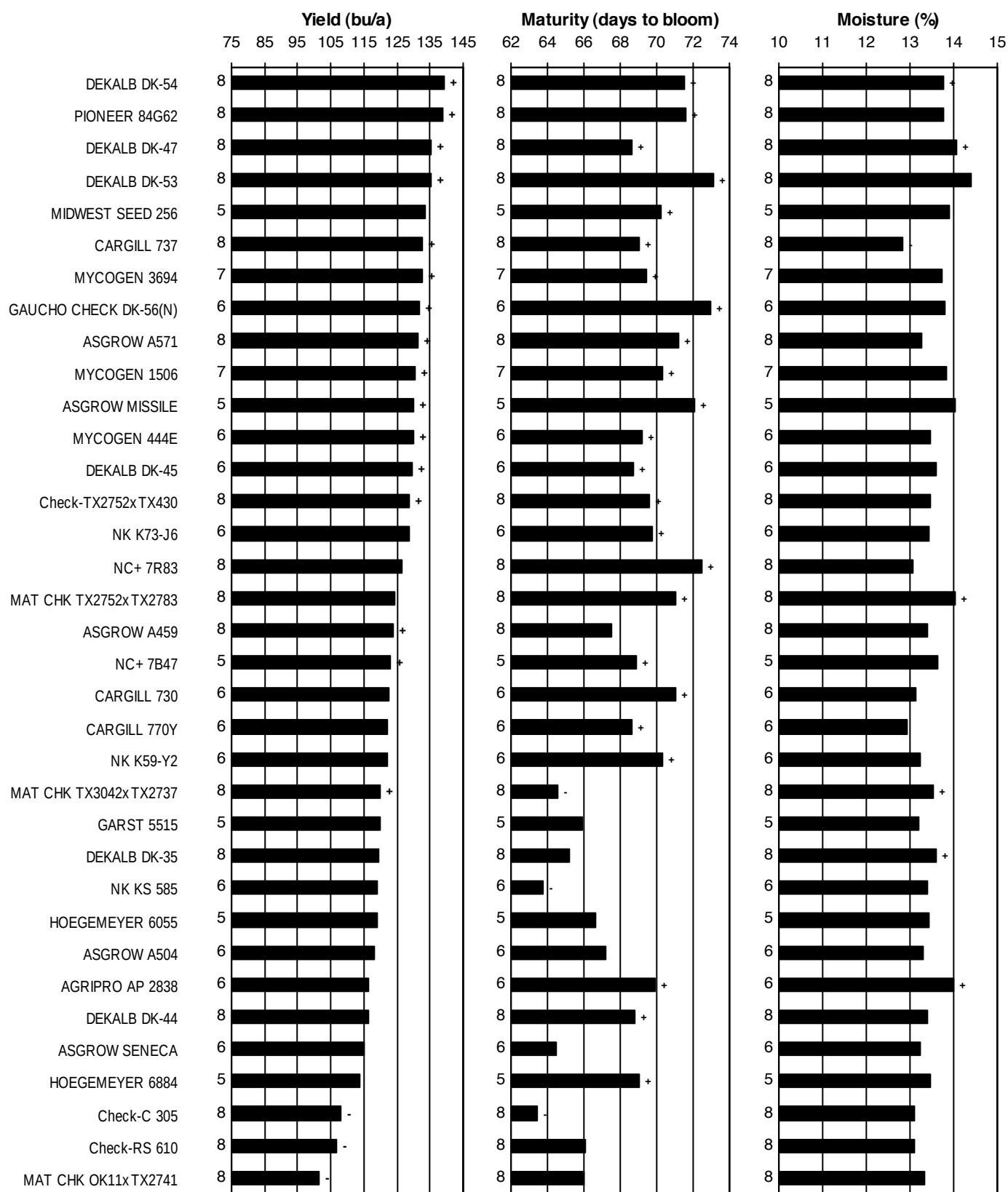
** Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

TABLE 3. NORTHEAST Kansas grain sorghum hybrid yield summary (% of test average), 2000.

BRAND/NAME	BRD ¹	RLD	RPD	AVG.	BRAND/NAME	BRD	RLD	RPD	AVG.
AGRIPRO					MONSANTO				
AP 2468	97	--	--	--	X914	102	104	--	103
AP 2731	104	97	--	100	X918	107	109	--	108
AP 2838	85	99	--	92	X944	97	94	--	96
ASGROW					MYCOGEN				
A459	109	108	--	109	1506	--	104	--	--
A571	109	107	--	108	3694	119	--	--	--
LASER	93	88	--	90	3696	102	--	--	--
MISSILE	109	106	--	108	M3838	--	97	--	--
CARGILL					NC+				
697	102	95	--	98	6C69	--	96	--	--
737	113	105	--	109	6R30	98	--	--	--
DEKALB					7B47	103	100	--	102
DK-35	103	98	--	101	7R83	78	85	--	82
DK-44	97	97	--	97	PIONEER				
DK-47	106	104	--	105	82G63	103	112	--	108
DK-53	103	106	--	104	84G62	114	112	--	113
DK-54	109	116	--	112	8500	100	--	--	--
DYNA-GRO					8505	--	95	--	--
DG-751B	--	103	--	--	WILLCROSS				
DG-760C	--	96	--	--	GB7743-TR	--	91	--	--
DG-780B	--	103	--	--	GB8743-C	--	92	--	--
GARST					MATURITY CHECK				
5440	109	105	--	107	C 305	97	93	--	95
5515	98	97	--	97	OK11xTX2741	85	87	--	86
5522Y	--	103	--	--	RS 610	83	88	--	85
HOEGEMEYER					TX2752xTX2783	110	104	--	107
6055	104	--	--	--	TX2752xTX430	103	110	--	107
6712	93	--	--	--	TX3042xTX2737	96	96	--	96
6884	87	--	--	--	NO GAUCHO*				
KAYSTAR					TX2752xTX430	103	106	--	105
X-060	92	100	--	96	TX3042xTX2737	97	96	--	97
X-080	97	97	--	97	AVERAGES				
MIDLAND						118	138	--	128
X-4677	95	--	--	--	CV(%)	9	5	--	--
X-4834	90	--	--	--	LSD(0.05)**	10	6	--	--

¹ BRD = Brown Co., Powhattan RLD = Riley Co., Manhattan RPD = Republic Co., Belleville

**FIGURE 6. NORTHEAST Kansas sorghum hybrid
standardized performance summary, 1998-2000.**



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

EAST CENTRAL KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL

COUNTY: FRANKLIN

LOCATION: East Central Kansas Experiment Field, Ottawa

TEST SITE: Woodson silt loam

1999 CROP: Soybean

1998 CROP: Sorghum

FERTILIZER (lbs/acre): 80 N 0 P₂O₅ 0 K₂O

PLANTING DATE: 5/12/00

HARVEST DATE: 9/13/00

COOPERATORS: Keith Janssen, agronomist; Jim Kimball, technician

TARGET POPULATION: 55,000 plants/acre, 3.8 in. spacing

FINAL STAND (% of target): 106

BLOOM DATES: 7/13/00 - 7/23/00

YIELD: Avg. (bu/a) 119 Range (bu/a) 94 - 140

LSD (bu/a) 9

CV (%) 7

INSECTICIDE EFFECT (bu/a):

Yield with insecticide

Yield without insecticide

Insecticide advantage

Check 1 Check 2 Avg.

123 129 126

109 * 124 116 *

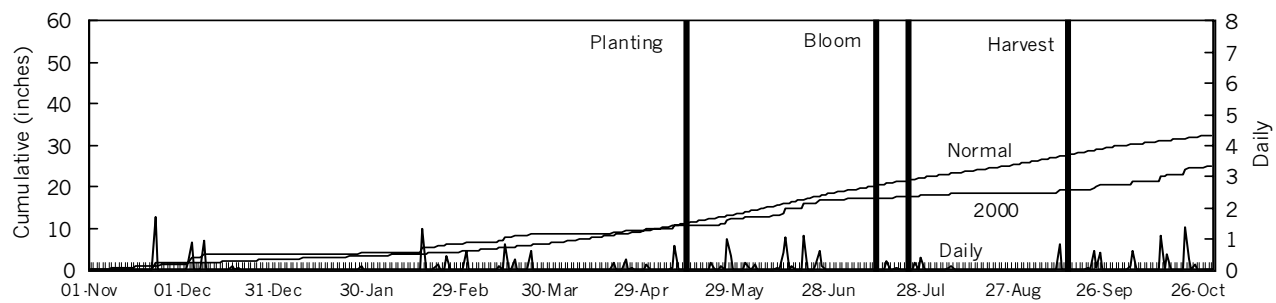
14 5 ns 9 *

* = significant with 95% confidence
ns = not significant at 95% level

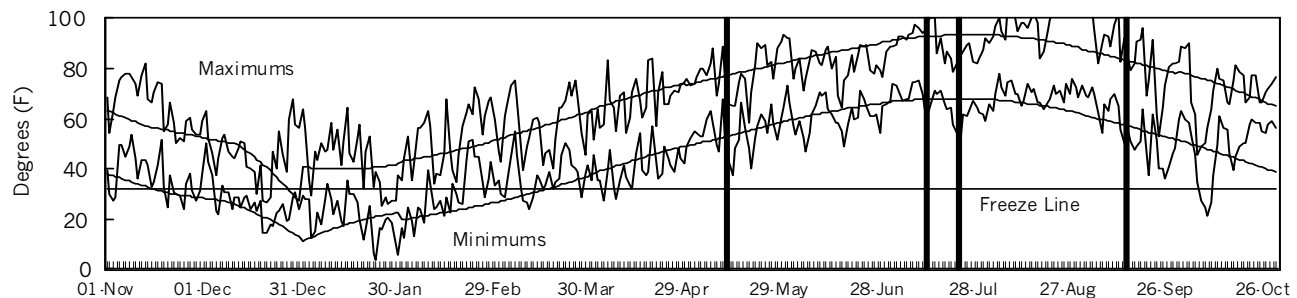
2000 GROWING CONDITIONS

Favorable early season conditions helped the test get off to a good start. Stalk rots induced by temperature and moisture stresses likely caused much of the lodging.

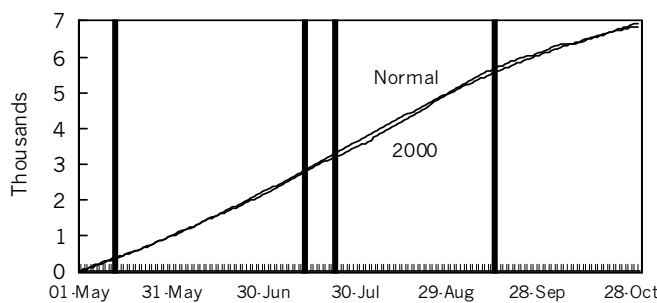
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	0.8	2.9	54	57	0	0
May	2.9	4.2	67	66	980	965
June	4.5	4.9	71	75	1124	1222
July	1.1	4.0	78	80	1363	1431
August	0.2	3.2	84	79	1548	1386
Sep.	2.2	4.1	71	70	1120	1080
Oct.	4.3	2.7	60	59	816	773
Season Totals	16.1	26.0	69	69	6951	6856

TABLE 4. Franklin Co. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
					AVG.	AVG.												
MATURITY CHECK	C 305	104	96	90	100	97	87	89	92	63	13	59	13	58	51	19	92	1.6
ASGROW	LASER	115	--	--	--	--	96	--	--	--	--	62	12	60	54	8	113	1.4
DEKALB	DK-35	124	102	101	113	109	104	94	103	66	13	62	12	61	50	3	114	1.3
MATURITY CHECK	RS 610	106	91	96	99	98	89	84	98	66	13	62	12	58	58	24	96	1.3
MATURITY CHECK	TX3042xTX2737	123	97	110	110	110	103	90	112	65	13	62	13	59	58	24	118	1.2
NO GAUCHO*	TX3042xTX2737	109	--	--	--	--	91	--	--	--	--	62	13	60	57	29	110	1.2
SG	SG-96254	120	--	--	--	--	101	--	--	--	--	63	12	60	49	6	115	1.3
TRIUMPH	TR 438	111	--	--	--	--	93	--	--	--	--	63	12	58	52	3	110	1.3
NK	KS 585	131	111	101	121	114	109	102	103	66	13	63	13	61	50	3	112	1.3
HOEGEMEYER	6055	124	121	102	123	116	104	112	104	67	12	64	11	60	53	6	117	1.2
GARST	5515	123	--	--	--	--	103	--	--	--	--	64	12	60	51	9	93	1.3
HOEGEMEYER	6884	116	109	95	113	107	98	100	97	68	13	64	12	60	51	25	109	1.1
MATURITY CHECK	OK11xTX2741	107	95	81	101	94	90	88	83	67	12	64	12	60	50	3	96	1.2
NC+	6B50	118	--	--	--	--	99	--	--	--	--	64	12	59	52	18	113	1.2
PIONEER	8500	124	102	106	113	111	104	94	108	67	13	64	12	61	52	0	115	1.3
SG	SG-97619	124	--	--	--	--	104	--	--	--	--	64	12	60	49	18	88	1.5
WILLCROSS	GB7743-TR	100	--	--	--	--	83	--	--	--	--	64	12	59	55	45	87	1.0
MIDLAND	X-4834	116	--	--	--	--	97	--	--	--	--	64	13	60	48	15	81	1.4
MYCOGEN	3694	134	--	--	--	--	113	--	--	--	--	65	11	61	54	5	112	1.4
ASGROW	A459	126	112	90	119	109	105	103	92	68	13	65	12	61	56	6	112	1.1
DEKALB	DK-44	125	101	108	113	111	105	93	110	68	13	65	12	61	49	8	114	1.2
DEKALB	DK-47	130	116	98	123	115	109	107	100	68	13	65	12	61	52	6	110	1.2
DELANGE	DSA 115C	114	97	95	106	102	96	89	97	68	13	65	12	62	47	13	118	1.0
DELANGE	DSA 133	115	121	109	118	115	97	112	111	68	12	65	12	60	53	45	102	1.3
DYNA-GRO	DG-751B	118	115	--	117	--	99	107	--	69	13	65	12	60	56	15	109	1.1
GARST	5440	126	114	--	120	--	106	105	--	68	13	65	12	61	52	30	107	1.3
HOEGEMEYER	6766	132	98	105	115	112	111	91	107	69	13	65	12	60	55	1	118	1.1
MONSANTO	X944	123	--	--	--	--	103	--	--	--	--	65	12	61	53	19	111	1.1
MYCOGEN	M3838	110	--	--	--	--	92	--	--	--	--	65	12	62	47	0	110	1.1
NC+	7B47	123	126	111	125	120	103	117	113	68	13	65	12	60	50	4	115	1.2
TRIUMPH	TR 461	119	--	--	--	--	100	--	--	--	--	65	12	60	55	25	104	1.2
DELANGE	DSA 147	120	--	--	--	--	101	--	--	--	--	65	13	60	57	38	111	1.1
SG	SG-91190	120	--	--	--	--	100	--	--	--	--	65	13	60	51	55	105	1.2
SG	SG-94249	120	--	--	--	--	101	--	--	--	--	65	13	60	54	3	111	1.2
MATURITY CHECK	TX2752xTX430	129	121	111	125	120	108	112	113	70	13	66	11	60	55	45	106	1.1
NK	K73-J6	113	102	96	108	104	95	94	98	70	12	66	11	60	54	8	106	1.2
CARGILL	697	126	--	--	--	--	105	--	--	--	--	66	12	60	52	11	112	1.1
DEKALB	DK-54	128	120	111	124	119	107	110	113	69	13	66	12	60	60	1	117	1.1
PIONEER	84G62	140	113	112	126	122	117	104	114	70	13	66	12	60	55	4	117	1.2
AGRIPRO	AP 2838	119	--	--	--	--	100	--	--	--	--	66	13	58	55	50	102	1.1
CARGILL	737	125	116	97	121	113	105	107	99	70	13	66	13	60	48	0	101	1.2

(continued)

TABLE 4. Franklin Co. Grain Sorghum Performance Test, 1998-2000.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
BRAND	NAME	2000	1999	1998	2-Yr.	3-Yr.	2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
					AVG.	AVG.												
MATURITY CHECK	TX2752xTX2783	104	123	83	113	103	87	114	85	69	14	66	13	61	57	39	114	1.1
MIDLAND	X-4677	120	--	--	--	--	100	--	--	--	--	66	13	60	52	3	107	1.1
SG	SG-99547	111	--	--	--	--	93	--	--	--	--	66	13	60	55	58	92	1.2
TRIUMPH	TR 481	118	98	89	108	102	99	90	91	70	14	66	13	61	55	0	107	1.2
NO GAUCHO*	TX2752xTX430	124	--	--	--	--	104	--	--	--	--	67	11	59	54	19	108	1.2
ASGROW	A571	124	108	103	116	111	104	99	105	69	12	67	12	59	56	1	114	1.1
HOEGEMEYER	6712	115	106	--	111	--	96	98	--	70	13	67	12	61	50	3	106	1.2
MONSANTO	X918	124	--	--	--	--	104	--	--	--	--	67	12	59	60	9	108	1.2
SG	SG-97157	125	--	--	--	--	105	--	--	--	--	67	12	62	55	8	114	1.1
WILLCROSS	GB8743-C	100	--	--	--	--	84	--	--	--	--	67	12	59	50	4	100	1.1
DEKALB	DK-53	136	113	106	125	119	114	105	108	70	14	67	13	60	56	8	116	1.0
DYNA-GRO	DG-780B	113	--	--	--	--	95	--	--	--	--	67	14	61	57	53	108	1.1
WILLCROSS	GB9347-TR	111	--	--	--	--	93	--	--	--	--	68	12	58	59	53	102	1.0
ASGROW	MISSILE	123	124	--	124	--	103	114	--	71	14	68	13	59	53	6	99	1.2
MONSANTO	X914	120	--	--	--	--	100	--	--	--	--	68	13	59	57	15	105	1.0
PIONEER	82G63	123	126	116	124	121	103	116	118	71	15	68	14	60	57	53	108	1.1
WILLCROSS	GB9057-W	94	--	--	--	--	79	--	--	--	--	69	12	58	58	13	55	1.5
	AVERAGES	119	108	98	114	108	119	108	98	68	13	65	12	60	53	17	106	1.2
	CV(%)	7	9	10	--	--	7	9	10	--	--	1	7	1	3	92	4	10.2
	LSD(0.05)**	9	11	12	--	--	8	10	12	--	--	1	1	1	2	18	5	0.1

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

SOUTHEAST KANSAS GRAIN SORGHUM TEST ON SILTY CLAY SOIL

COUNTY: CHASE

LOCATION: ImMasche Research Center, Strong City

TEST SITE: Osage silty clay

1999 CROP: Soybean

1998 CROP: Soybean

FERTILIZER (lbs/acre): 120 N 30 P₂O₅ 0 K₂O

PLANTING DATE: 5/5/00

HARVEST DATE: 9/14/00

COOPERATORS: Kraig Roozeboom, agronomist; Gene Eidman, cooperator

TARGET POPULATION: 55,000 plants/acre, 3.8 in. spacing

FINAL STAND (% of target): 110

BLOOM DATES: 7/9/00 - 7/18/00

YIELD: Avg. (bu/a) 107 Range (bu/a) 89 - 125

LSD (bu/a) 10 CV (%) 8

INSECTICIDE EFFECT (bu/a):

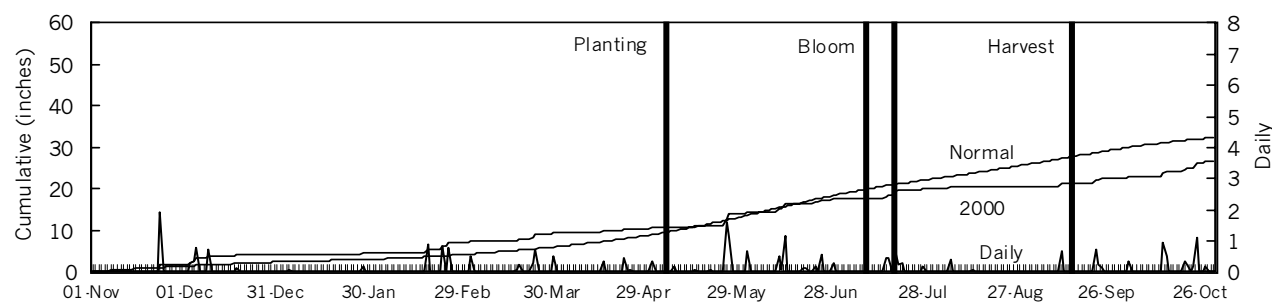
	Check 1	Check 2	Avg.
Yield with insecticide	103	111	107
Yield without insecticide	102	104	103
Insecticide advantage	1 ns	7 ns	4 ns

* = significant with 95% confidence
ns = not significant at 95% level

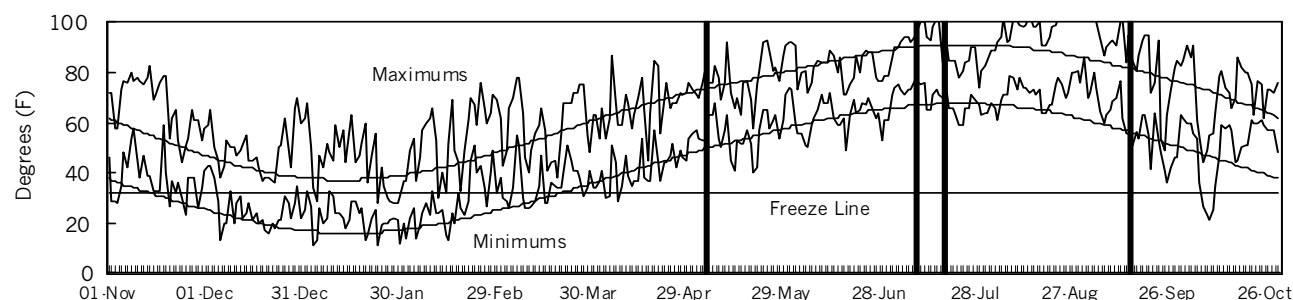
2000 GROWING CONDITIONS

Early planting enabled the plants to bloom during mid-July and begin to fill seed before August. The test received just enough rainfall to produce fairly good yields considering the hot, dry conditions during most of the growing season.

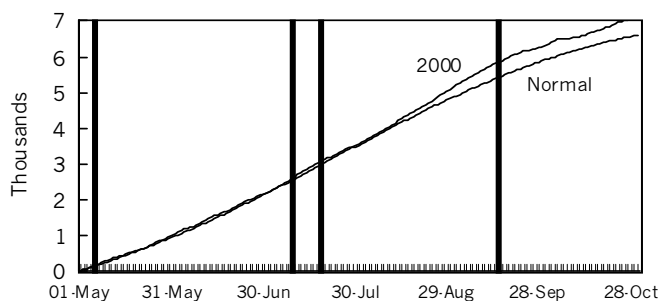
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	0.9	2.7	54	54	0	0
May	3.6	4.6	67	65	980	924
June	3.8	5.1	73	73	1156	1185
July	2.5	3.9	79	79	1400	1392
August	0.5	3.5	85	77	1569	1340
Sep.	1.9	3.8	74	69	1185	1047
Oct.	4.0	2.8	61	57	846	710
Season Totals	17.0	26.3	70	68	7135	6596

TABLE 5. Chase Co. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plant Ht. in.	Ldg %	Final Stand %	Hds per Plant
					AVG.	AVG.												
MATURITY CHECK	C 305	105	113	72	109	97	98	90	76	60	13	65	12	59	46	0	100	1.2
DEKALB	DK-35	103	120	89	111	104	96	95	94	63	12	68	11	61	41	0	118	1.1
MATURITY CHECK	RS 610	103	119	65	111	96	96	94	69	63	13	68	11	60	48	5	93	1.1
MATURITY CHECK	TX3042xTX2737	103	115	104	109	107	97	91	110	62	13	68	11	61	46	1	116	1.0
NO GAUCHO*	TX3042xTX2737	102	--	--	--	--	96	--	--	--	--	68	11	61	46	0	115	1.0
PIONEER	8500	95	116	92	105	101	89	92	98	64	13	68	11	61	44	0	121	1.0
ASGROW	LASER	95	--	--	--	--	89	--	--	--	--	68	12	61	42	0	111	1.1
HOEGEMEYER	6055	110	123	118	116	117	103	97	124	63	12	69	10	60	44	3	128	1.0
MATURITY CHECK	OK11xTX2741	98	108	66	103	90	91	86	69	63	12	69	10	62	42	1	104	1.0
NC+	6B50	109	--	--	--	--	102	--	--	--	--	69	10	61	43	2	114	1.0
AGRIPRO	AP 2731	102	122	--	112	--	96	97	--	65	13	69	11	61	43	0	118	1.0
DELANGE	DSA 147	110	--	--	--	--	103	--	--	--	--	69	11	61	48	4	113	1.0
GARST	5515	94	--	--	--	--	88	--	--	--	--	69	11	61	43	1	99	1.0
DEKALB	DK-44	113	130	88	121	110	106	103	92	65	12	70	10	62	40	1	108	1.0
HOEGEMEYER	6884	107	126	92	117	109	100	100	97	65	12	70	10	61	42	0	116	1.0
NC+	7B47	110	--	--	--	--	103	--	--	--	--	70	10	61	43	1	119	1.0
ASGROW	A459	105	122	81	114	103	99	97	85	64	12	70	11	61	48	5	113	1.0
DELANGE	DSA 133	113	132	98	122	114	106	104	103	64	12	70	11	61	43	3	109	1.0
HOEGEMEYER	6874	111	136	81	124	110	104	108	86	65	13	70	11	61	45	4	116	1.0
MONSANTO	X944	111	--	--	--	--	104	--	--	--	--	70	11	62	41	2	106	1.0
MYCOGEN	1506	107	132	106	120	115	100	105	112	66	12	70	11	61	47	1	101	1.2
TRIUMPH	TR 438	100	--	--	--	--	94	--	--	--	--	70	11	60	45	0	113	1.0
GARST	5440	117	131	--	124	--	110	104	--	65	13	71	11	61	44	3	120	1.0
MATURITY CHECK	TX2752xTX2783	118	133	99	126	117	111	106	105	66	13	71	11	61	49	11	123	1.0
AGRIPRO	AP 2838	108	--	--	--	--	101	--	--	--	--	71	12	60	44	8	114	1.0
DEKALB	DK-47	110	138	78	124	109	103	110	82	66	13	71	12	61	43	1	114	1.0
DEKALB	DK-54	124	135	123	129	127	116	107	130	66	12	72	10	61	51	1	121	0.9
MATURITY CHECK	TX2752xTX430	111	138	93	125	114	104	109	98	66	12	72	10	60	43	4	105	1.0
WILLCROSS	GB8743-C	90	--	--	--	--	85	--	--	--	--	72	10	60	44	0	102	1.0
ASGROW	MISSILE	110	133	--	122	--	103	105	--	67	13	72	11	60	43	2	104	1.0
DEKALB	DK-53	125	138	133	131	132	117	109	140	68	13	72	11	61	46	1	122	1.0
MONSANTO	X918	124	--	--	--	--	116	--	--	--	--	72	11	61	49	4	105	1.1
MYCOGEN	3696	109	--	84	--	--	102	--	89	--	--	72	11	60	38	0	106	1.0
NC+	7B29	101	--	--	--	--	95	--	--	--	--	72	11	61	41	0	111	1.0
PIONEER	84G62	125	132	97	129	118	117	105	102	67	13	72	11	61	46	4	121	1.0
TRIUMPH	TR 481	101	127	--	114	--	95	101	--	67	13	72	11	61	46	0	112	0.9
WILLCROSS	GB7743-TR	93	--	--	--	--	87	--	--	--	--	72	11	60	43	11	84	1.0
WILLCROSS	GB9347-TR	89	--	--	--	--	83	--	--	--	--	72	11	59	49	6	110	0.9
NO GAUCHO*	TX2752xTX430	104	--	--	--	--	98	--	--	--	--	72	12	60	43	4	106	1.0
ASGROW	A571	110	134	108	122	117	103	107	113	67	12	73	10	60	49	1	120	0.9
HOEGEMEYER	6712	107	122	--	115	--	100	97	--	67	12	73	10	61	42	0	111	1.0
MONSANTO	X914	106	--	--	--	--	99	--	--	--	--	73	11	59	48	4	100	1.0
PIONEER	82G63	114	130	99	122	114	107	103	105	68	13	73	11	61	49	3	110	1.0
WILLCROSS	GB9057-W	94	--	--	--	--	88	--	--	--	--	74	11	60	52	1	69	1.2
	AVERAGES	107	126	95	116	109	107	126	95	65	12	71	11	61	45	2	110	1.0
	CV(%)	8	6	16	--	--	8	6	16	--	--	1	8	1	4	180	8	8.9
	LSD(0.05)**	10	8	26	--	--	9	7	27	--	--	1	1	1	2	5	10	0.1

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

SOUTHEAST KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL

COUNTY: LABETTE

LOCATION: Southeast Agricultural Res. Center, Parsons

TEST SITE: Parsons silt loam

1999 CROP: Soybean

1998 CROP: Sorghum

FERTILIZER (lbs/acre): 120 N 70 P₂O₅ 90 K₂O

PLANTING DATE: 5/19/00

HARVEST DATE: 9/13/00

COOPERATORS: Kenneth Kelley, agronomist

TARGET POPULATION: 45,000 plants/acre, 4.6 in. spacing

FINAL STAND (% of target): 90

BLOOM DATES: 7/14/00 - 7/28/00

YIELD: Avg. (bu/a) 106 Range (bu/a) 68 - 132

LSD (bu/a) 10

CV (%) 8

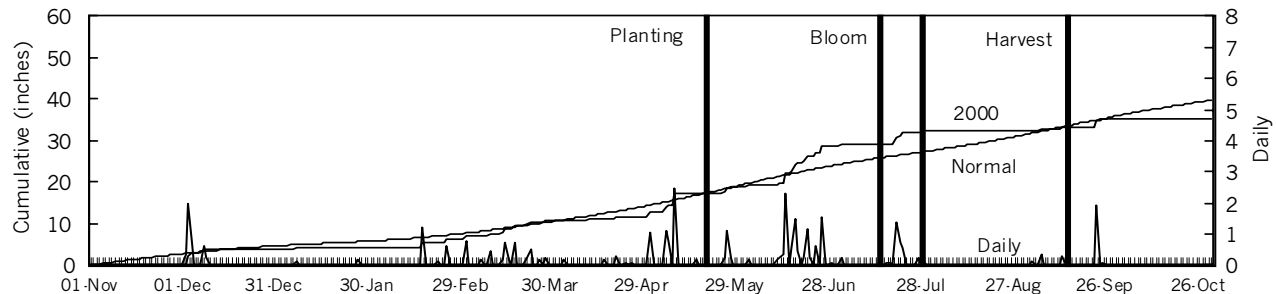
INSECTICIDE EFFECT (bu/a):	Check 1	Check 2	Avg.
Yield with insecticide	108	106	107
Yield without insecticide	104	99	101
Insecticide advantage	5 ns	8 ns	6 ns

* = significant with 95% confidence
ns = not significant at 95% level

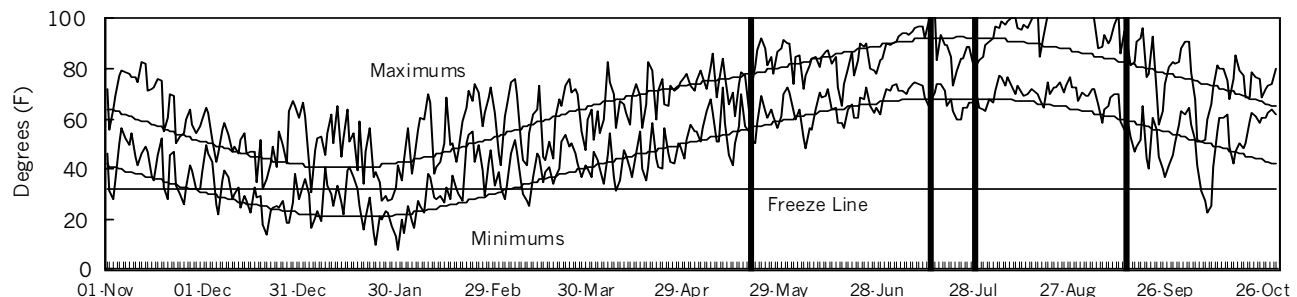
2000 GROWING CONDITIONS

Wet soil conditions prevented an early May planting. Soil moisture conditions in mid-May were favorable for emergence. Heavy rainfall in June resulted in water-logged soil conditions. Rainfall continued until late July, but no rain was received from that time until after harvest. A slight infestation of corn earworms caused no significant damage. The late summer drought caused significant stalk rot-induced lodging, which may have affected yields of some hybrids.

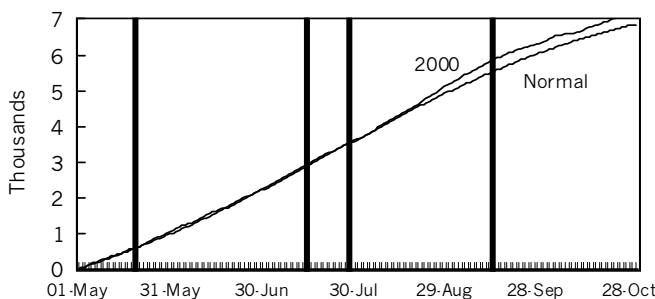
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	1.0	3.7	56	58	0	0
May	7.3	5.0	68	66	1024	965
June	9.8	4.7	73	75	1162	1215
July	3.5	3.5	79	80	1408	1418
August	0.0	3.9	85	78	1576	1371
Sep.	2.9	4.5	73	70	1168	1095
Oct.	0.0	3.8	63	60	901	791
Season Totals	24.4	29.2	71	69	7239	6853

TABLE 6. Labette Co. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plant Ht. in.	Ldg %	Final Stand %	Hds per Plant
					AVG.	AVG.												
MATURITY CHECK	C 305	112	51	109	82	91	106	95	82	54	15	56	13	59	50	5	81	1.6
ASGROW	LASER	99	--	--	--	--	94	--	--	--	--	58	13	60	51	4	95	1.3
DEKALB	DK-35	113	63	123	88	100	106	118	93	58	16	58	13	60	46	4	96	1.3
HOEGEMEYER	6055	114	61	130	87	101	108	113	98	56	16	58	13	60	49	3	97	1.3
MATURITY CHECK	OK11xTX2741	89	62	115	75	88	84	115	87	57	16	58	13	60	47	20	79	1.4
MATURITY CHECK	RS 610	100	62	114	81	92	94	115	86	57	16	58	13	59	52	16	73	1.6
MATURITY CHECK	TX3042xTX2737	108	65	125	87	99	102	121	94	56	16	58	13	60	55	26	95	1.3
NC+	6C21	106	--	--	--	--	101	--	--	--	--	58	13	59	49	2	92	1.4
NK	KS 585	110	73	127	91	103	104	135	96	56	16	58	13	62	46	3	96	1.5
NO GAUCHO*	TX3042xTX2737	104	--	--	--	--	98	--	--	--	--	59	13	60	54	18	91	1.3
AGRIPRO	AP 2468	105	--	119	--	--	99	--	90	--	--	60	13	60	48	0	93	1.3
GARST	5515	104	59	--	82	--	98	110	--	60	17	60	13	60	51	8	78	1.2
HOEGEMEYER	6712	102	49	--	75	--	97	90	--	61	17	60	13	60	48	6	94	1.4
MIDLAND	X-4834	103	--	--	--	--	97	--	--	--	--	60	13	60	48	6	81	1.4
NC+	7B47	120	56	142	88	106	113	104	107	60	17	60	13	60	48	2	96	1.2
PIONEER	8500	111	62	126	86	100	105	115	96	58	15	60	13	61	50	2	102	1.4
TRIUMPH	TR 447	85	61	--	73	--	81	113	--	58	16	60	13	59	46	14	89	1.3
ASGROW	A459	115	54	129	85	99	109	100	97	61	16	61	13	60	53	1	96	1.1
DEKALB	DK-44	104	44	130	74	93	98	83	98	61	16	61	13	60	48	1	93	1.1
DEKALB	DK-47	114	45	136	79	98	107	83	103	61	17	61	13	61	53	2	99	1.3
GARST	5440	108	64	--	86	--	102	120	--	59	17	61	13	60	50	13	88	1.4
TRIUMPH	TR 438	104	--	--	--	--	99	--	--	--	--	61	13	60	50	1	90	1.3
AGRIPRO	AP 2731	118	51	--	84	--	111	95	--	61	17	62	13	61	54	0	98	1.1
AGRIPRO	AP 2838	114	58	130	86	101	108	108	98	62	17	62	13	60	53	10	92	1.2
CARGILL	697	116	--	--	--	--	109	--	--	--	--	62	13	60	49	3	94	1.1
CARGILL	737	116	55	132	86	101	110	103	100	60	16	62	13	60	46	1	90	1.2
DELANGE	DSA 133	107	68	135	88	103	101	127	102	60	16	62	13	60	51	25	90	1.2
HOEGEMEYER	6884	104	60	136	82	100	99	112	103	61	16	62	13	60	51	5	98	1.1
MATURITY CHECK	TX2752xTX430	106	63	141	85	103	100	118	106	61	17	62	13	59	51	15	91	1.3
MYCOGEN	3696	102	--	136	--	--	97	--	103	--	--	62	13	60	48	15	83	1.5
PIONEER	84G62	130	55	162	93	116	123	102	122	62	17	62	13	60	54	9	102	1.3
DELANGE	DSA 147	119	--	--	--	--	113	--	--	--	--	62	14	60	55	7	99	1.1
MONSANTO	X944	99	--	--	--	--	93	--	--	--	--	62	14	60	51	3	90	1.1
MYCOGEN	1506	132	46	143	89	107	125	86	108	62	17	62	14	61	58	0	95	1.3
ASGROW	A571	103	62	143	82	103	97	115	108	62	16	63	13	59	55	6	98	1.1
DEKALB	DK-54	119	36	162	77	106	112	66	123	63	16	63	13	60	57	4	97	1.2
NK	K73-J6	108	48	133	78	96	102	90	100	62	17	63	13	60	53	2	87	1.3
NO GAUCHO*	TX2752xTX430	99	--	--	--	--	93	--	--	--	--	63	13	59	53	19	86	1.3
HOEGEMEYER	6766	110	55	131	82	99	104	102	99	62	17	63	14	60	54	1	94	1.1
MIDLAND	X-4677	110	--	--	--	--	104	--	--	--	--	63	14	60	52	1	90	1.1
ASGROW	MISSILE	108	51	--	79	--	102	94	--	63	17	64	13	60	52	1	90	1.1

(continued)

TABLE 6. Labette Co. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS %			1999-2000		2000						
							OF TEST											
							AVERAGE											
		2000	1999	1998	2-Yr. AVG.	3-Yr. AVG.	2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
MATURITY CHECK	TX2752xTX2783	107	44	145	76	99	101	81	109	63	17	64	13	60	56	8	100	1.1
PIONEER	82G63	110	40	166	75	105	104	74	126	64	17	64	13	59	55	36	90	1.3
WILLCROSS	GB8743-C	86	--	--	--	--	81	--	--	--	--	65	13	59	50	11	84	1.1
MONSANTO	X918	106	--	--	--	--	101	--	--	--	--	66	13	59	58	5	90	1.2
TRIUMPH	TR 481	104	41	136	73	94	99	76	103	64	17	66	14	60	56	1	87	1.2
DEKALB	DK-53	111	59	154	85	108	105	110	117	64	17	67	13	60	56	2	102	1.0
WILLCROSS	GB7743-TR	78	--	--	--	--	73	--	--	--	--	67	13	59	54	14	87	1.0
WILLCROSS	GB9347-TR	83	--	--	--	--	79	--	--	--	--	67	13	58	56	8	88	1.0
MONSANTO	X914	91	--	--	--	--	86	--	--	--	--	69	13	59	58	8	77	1.1
WILLCROSS	GB9057-W	68	--	--	--	--	64	--	--	--	--	70	13	59	55	7	46	1.7
	AVERAGES	106	54	132	80	97	106	54	132	61	16	62	13	60	52	8	90	1.2
	CV(%)	8	11	6	--	--	8	11	6	--	--	2	2	1	3	66	8	10.0
	LSD(0.05)**	10	7	9	--	--	10	13	7	--	--	1	0	0	2	6	9	0.2

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

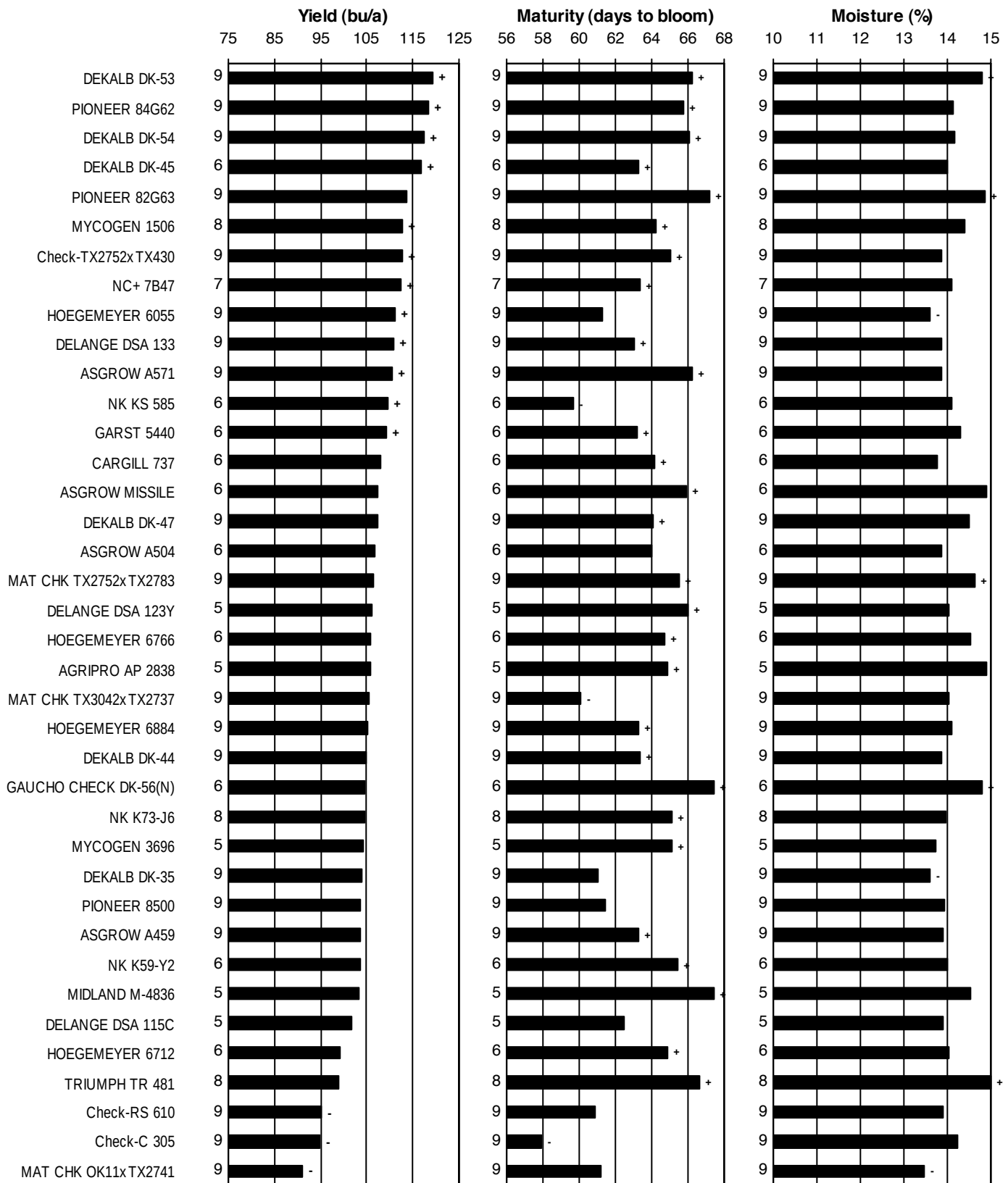
** Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

TABLE 7. SOUTHEAST Kansas grain sorghum hybrid yield summary (% of test average), 2000.

BRAND/NAME	FRD ¹	CHD	LBD	AVG.	BRAND/NAME	FRD	CHD	LBD	AVG.
AGRIPRO					M3838	92	--	--	--
AP 2468	--	--	99	--	NC+				
AP 2731	--	96	111	--	6B50	99	102	--	--
AP 2838	100	101	108	103	6C21	--	--	101	--
ASGROW					7B29	--	95	--	--
A459	105	99	109	104	7B47	103	103	113	107
A571	104	103	97	102	NK				
LASER	96	89	94	93	K73-J6	95	--	102	--
MISSILE	103	103	102	103	KS 585	109	--	104	--
CARGILL					PIONEER				
697	105	--	109	--	82G63	103	107	104	105
737	105	--	110	--	84G62	117	117	123	119
DEKALB					8500	104	89	105	99
DK-35	104	96	106	102	SG				
DK-44	105	106	98	103	SG-91190	100	--	--	--
DK-47	109	103	107	107	SG-94249	101	--	--	--
DK-53	114	117	105	112	SG-96254	101	--	--	--
DK-54	107	116	112	112	SG-97157	105	--	--	--
DELANGE					SG-97619	104	--	--	--
DSA 115C	96	--	--	--	SG-99547	93	--	--	--
DSA 133	97	106	101	101	TRIUMPH				
DSA 147	101	103	113	105	TR 438	93	94	99	95
DYNA-GRO					TR 447	--	--	81	--
DG-751B	99	--	--	--	TR 461	100	--	--	--
DG-780B	95	--	--	--	TR 481	99	95	99	98
GARST					WILLCROSS				
5440	106	110	102	106	GB7743-TR	83	87	73	81
5515	103	88	98	97	GB8743-C	84	85	81	83
HOEGEMEYER					GB9057-W	79	88	64	77
6055	104	103	108	105	GB9347-TR	93	83	79	85
6712	96	100	97	98	MATURITY CHECK				
6766	111	--	104	--	C 305	87	98	106	97
6874	--	104	--	--	OK11xTX2741	90	91	84	88
6884	98	100	99	99	RS 610	89	96	94	93
MIDLAND					TX2752xTX2783	87	111	101	100
X-4677	100	--	104	--	TX2752xTX430	108	104	100	104
X-4834	97	--	97	--	TX3042xTX2737	103	97	102	101
MONSANTO					NO GAUCHO*				
X914	100	99	86	95	TX2752xTX430	104	98	93	98
X918	104	116	101	107	TX3042xTX2737	91	96	98	95
X944	103	104	93	100					
MYCOGEN					AVERAGES	119	107	106	111
1506	--	100	125	--	CV(%)	7	8	8	--
3694	113	--	--	--	LSD(0.05)**	8	9	10	--
3696	--	102	97	--					

¹ FRD = Franklin Co., Ottawa CHD = Chase Co., Strong City LBD = Labette Co., Parsons

**FIGURE 7. SOUTHEAST Kansas sorghum hybrid
standardized performance summary, 1998-2000.**



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

SOUTH CENTRAL KANSAS GRAIN SORGHUM TEST ON SILTY CLAY LOAM SOIL

COUNTY: HARVEY

LOCATION: Harvey County Experiment Field, Hesston

TEST SITE: Smolan silty clay loam

1999 CROP: Soybean

1998 CROP: Sorghum

FERTILIZER (lbs/acre): 100 N 38 P₂O₅ 56 K₂O

PLANTING DATE: 5/18/00

HARVEST DATE: 9/21/00

COOPERATORS: Mark Claassen, agronomist; Lowell Stucky and Kevin Duerksen, technicians

TARGET POPULATION: 35,000 plants/acre, 6.0 in. spacing

FINAL STAND (% of target): 99

BLOOM DATES: 7/12/00 - 7/29/00

YIELD: Avg. (bu/a) 115 Range (bu/a) 82 - 133

LSD (bu/a) 8

CV (%) 5

INSECTICIDE EFFECT (bu/a): Check 1 Check 2 Avg.

Yield with insecticide 129 122 125

Yield without insecticide 118 * 111 * 115 *

Insecticide advantage 10 11 11

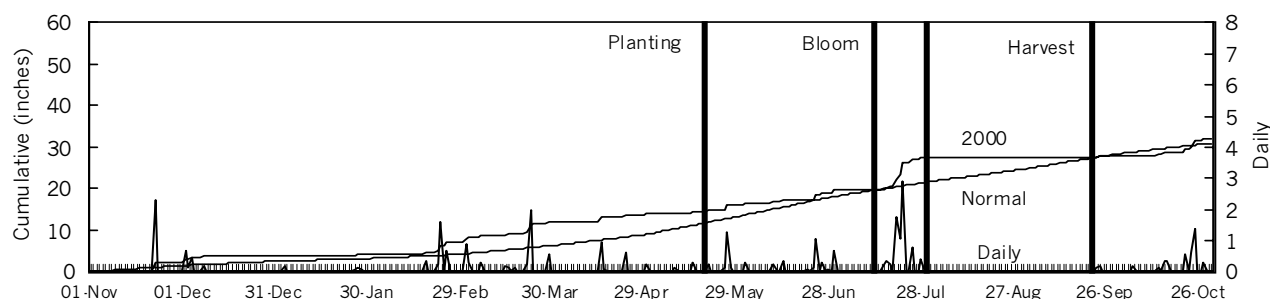
* = significant with 95% confidence

ns = not significant at 95% level

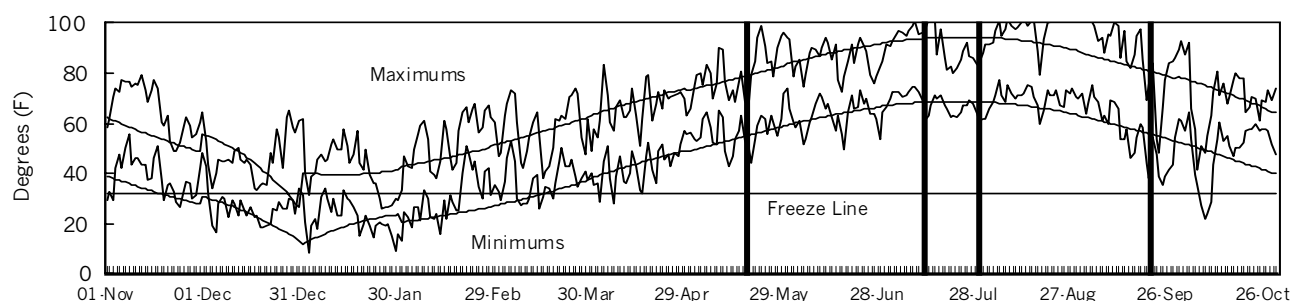
2000 GROWING CONDITIONS

Soil moisture favored normal sorghum emergence and early development. Mean temperatures were near normal in May and below average in June. Heavy rainfall in the last weeks of July coupled with favorable temperatures to ensure a good yield, even though no meaningful rainfall occurred between July 28 and harvest. During this time, temperatures equaled or exceeded 100 F on 23 days, and the mean maximum temperatures were 6.5 F and 4.6 F above normal for the months of August and July, respectively.

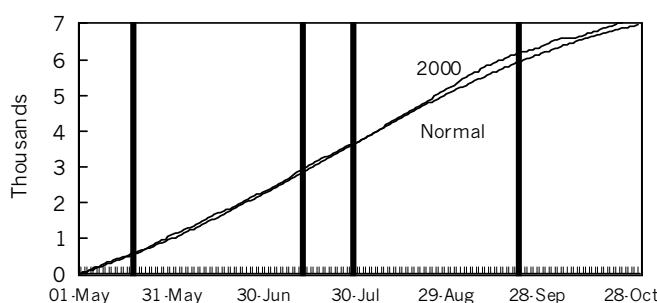
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	1.7	2.6	55	56	0	0
May	2.5	4.5	68	66	1043	963
June	2.6	4.7	75	76	1217	1251
July	8.6	3.6	80	81	1420	1460
August	0.1	3.0	84	79	1557	1407
Sep.	0.3	3.7	72	71	1130	1098
Oct.	4.1	2.6	60	59	815	780
Season Totals	19.9	24.6	71	70	7182	6959

TABLE 8. Harvey Co. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
					AVG.	AVG.												
MATURITY CHECK	C 305	120	76	37	98	78	105	86	55	56	11	55	10	59	44	0	95	1.9
ASGROW	LASER	104	--	--	--	--	91	--	--	--	--	58	10	60	40	1	106	1.7
DEKALB	DK-35	119	96	61	107	92	104	108	90	60	11	58	10	60	40	0	108	1.5
MATURITY CHECK	RS 610	118	70	22	94	70	103	79	32	60	11	58	10	60	45	0	86	1.8
MATURITY CHECK	TX3042xTX2737	129	81	42	105	84	112	91	62	58	11	58	10	61	46	0	109	1.5
NO GAUCHO*	TX3042xTX2737	118	--	--	--	--	103	--	--	--	--	58	10	61	43	2	96	1.5
MATURITY CHECK	OK11xTX2741	101	73	42	87	72	88	83	63	62	11	59	10	60	39	0	79	1.7
MIDLAND	M-4664	125	94	49	109	89	109	106	72	61	11	59	10	59	41	0	110	1.5
WILLCROSS	GB5343-R	103	--	--	--	--	90	--	--	--	--	59	10	60	41	1	98	1.7
DEKALB	DK-44	119	83	74	101	92	103	94	110	65	11	60	10	60	42	0	109	1.2
DELANGE	DSA 115C	121	72	57	97	83	106	81	84	63	11	60	10	62	41	0	105	1.4
HOEGEMEYER	6055	131	91	59	111	94	114	103	88	60	11	60	10	60	41	0	106	1.4
MYCOGEN	M3838	122	--	53	--	--	106	--	79	--	--	60	10	62	39	0	98	1.4
NC+	6B50	122	94	62	108	93	107	106	92	60	11	60	10	60	43	0	101	1.4
NK	KS 585	117	103	56	110	92	102	117	83	59	11	60	10	62	40	0	103	1.7
PIONEER	8414	123	83	88	103	98	107	94	131	63	11	60	10	60	40	0	113	1.4
PIONEER	8500	121	93	60	107	91	105	105	89	62	11	60	10	61	44	0	111	1.6
GARST	5515	111	96	--	104	--	97	109	--	64	12	60	11	60	44	1	95	1.3
DELANGE	DSA 133	122	99	60	110	94	106	112	89	63	11	61	10	60	40	1	96	1.6
MONSANTO	X944	112	--	--	--	--	98	--	--	--	--	61	10	60	43	0	108	1.2
MIDLAND	M-4774	114	90	101	102	102	99	102	150	65	12	61	11	60	46	0	103	1.5
MIDWEST SEED	256	123	112	90	117	108	107	126	134	65	11	61	11	60	48	0	96	1.6
ASGROW	A459	109	98	67	104	91	95	111	100	64	11	62	10	60	48	0	103	1.3
CARGILL	737	116	--	--	--	--	101	--	--	--	--	62	10	60	39	0	99	1.5
DEKALB	DK-43A	120	93	53	106	88	105	105	78	64	11	62	10	60	41	0	100	1.6
GARST	5440	129	91	--	110	--	112	103	--	64	11	62	10	61	45	2	104	1.6
GARST	5664	114	86	--	100	--	99	97	--	63	11	62	10	61	39	0	100	1.5
NC+	6B70	117	96	59	106	91	102	109	87	62	11	62	10	60	42	0	97	1.8
VALLEY PREMIUM	VP 53	124	--	--	--	--	108	--	--	--	--	62	10	61	45	2	91	1.7
GARST	5429	103	92	96	97	97	89	104	142	65	11	62	11	60	46	0	96	1.5
MYCOGEN	1506	130	107	92	118	110	113	121	136	66	12	62	11	60	49	1	99	1.6
AGRIPRO	AP 2838	117	--	71	--	--	102	--	106	--	--	63	10	60	44	1	104	1.1
CARGILL	697	124	90	65	107	93	108	102	96	65	11	63	10	60	45	0	109	1.3
DELANGE	DSA 147	122	--	--	--	--	106	--	--	--	--	63	10	60	48	2	104	1.3
HOEGEMEYER	6884	120	77	72	99	90	105	87	107	64	11	63	10	61	42	1	103	1.3
TRIUMPH	TR 462	117	71	74	94	87	102	80	109	65	11	63	10	61	45	6	103	1.4
VALLEY PREMIUM	VP 70	106	--	--	--	--	92	--	--	--	--	63	10	60	43	0	89	1.7
DEKALB	DK-47	123	96	69	109	96	108	108	102	65	12	63	11	60	47	1	93	1.7
HOEGEMEYER	6874	120	82	71	101	91	105	93	106	65	11	63	11	61	42	2	101	1.6
MIDLAND	M-4757Y	110	102	89	106	101	96	115	132	66	11	63	11	60	45	0	90	1.7
TRIUMPH	TR 459	115	89	--	102	--	100	101	--	66	11	63	11	61	41	0	112	1.4

(continued)

TABLE 8. Harvey Co. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			1999-2000		2000							
		2000	1999	1998	2-Yr.	3-Yr.	2000	1999	1998	Days to Blm	Grain to Moist. %	Days to Blm	Grain to Moist. %	Test Wt. lb/bu	Plant Ht. in.	Ldg %	Final Stand %	Hds per Plnt	
					AVG.	AVG.													
DYNA-GRO	DG-760C	100	82	--	91	--	87	92	--	64	11	64	10	60	44	0	86	1.6	
HOEGEMEYER	6712	98	87	--	92	--	86	98	--	65	11	64	10	60	42	0	90	1.6	
KAYSTAR	X-070	99	--	--	--	--	86	--	--	--	--	64	10	58	46	1	82	1.7	
MATURITY CHECK	TX2752xTX430	122	92	69	107	94	106	104	102	67	11	64	10	59	41	1	96	1.6	
NO GAUCHO*	TX2752xTX430	111	--	--	--	--	97	--	--	--	--	64	10	59	43	1	93	1.5	
PIONEER	84G62	133	104	78	118	105	116	117	116	66	11	64	10	60	46	2	103	1.4	
WILLCROSS	GB7743-TR	82	--	--	--	--	72	--	--	--	--	64	10	58	47	6	81	1.4	
DYNA-GRO	DG-751B	112	91	--	101	--	97	103	--	64	11	65	10	59	47	4	96	1.3	
ASGROW	A571	121	--	71	--	--	105	--	105	--	--	65	11	59	51	1	109	1.2	
VALLEY PREMIUM	VP 90	112	--	--	--	--	98	--	--	--	--	67	10	60	47	1	103	1.3	
DEKALB	DK-53	117	104	86	110	102	102	117	128	71	12	67	11	60	49	1	97	1.2	
MATURITY CHECK	TX2752xTX2783	121	76	65	99	87	105	86	97	69	11	68	10	61	47	4	107	1.2	
ASGROW	MISSILE	115	101	--	108	--	101	114	--	69	11	68	11	59	47	1	99	1.3	
TRIUMPH	TR 481	117	106	102	112	108	102	120	151	71	12	68	11	61	51	0	106	1.4	
WILLCROSS	GB8743-C	90	--	--	--	--	78	--	--	--	--	69	10	58	45	2	86	1.4	
DYNA-GRO	DG-780B	102	--	--	--	--	89	--	--	--	--	71	10	59	51	6	94	1.3	
MONSANTO	X914	94	--	--	--	--	82	--	--	--	--	71	10	59	52	4	83	1.3	
MIDLAND	M-4836	93	78	69	86	80	81	89	102	71	12	72	12	59	49	0	108	1.4	
	AVERAGES	115	88	67	102	90	115	88	67	65	11	63	10	60	44	1	99	1.5	
	CV(%)	5	7	12	--	--	5	7	12	--	--	1	2	1	4	116	6	6.8	
	LSD(0.05)**	8	8	11	--	--	7	9	16	--	--	1	0	1	2	2	8	0.1	

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

SOUTH CENTRAL KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL

COUNTY: RENO

LOCATION: South Central Kansas Exper. Field, Hutchinson

TEST SITE: Ost silt loam

1999 CROP: Wheat

1998 CROP: Oats

FERTILIZER (lbs/acre): 120 N 40 P₂O₅ 0 K₂O

PLANTING DATE: 5/4/00

HARVEST DATE: 9/3/00

COOPERATORS: William Heer, agronomist

TARGET POPULATION: 40,000 plants/acre, 5.2 in. spacing

FINAL STAND (% of target): 117

BLOOM DATES: 7/8/00 - 7/17/00

YIELD: Avg. (bu/a) 128 Range (bu/a) 84 - 157

LSD (bu/a) 10

CV (%) 7

INSECTICIDE EFFECT (bu/a):

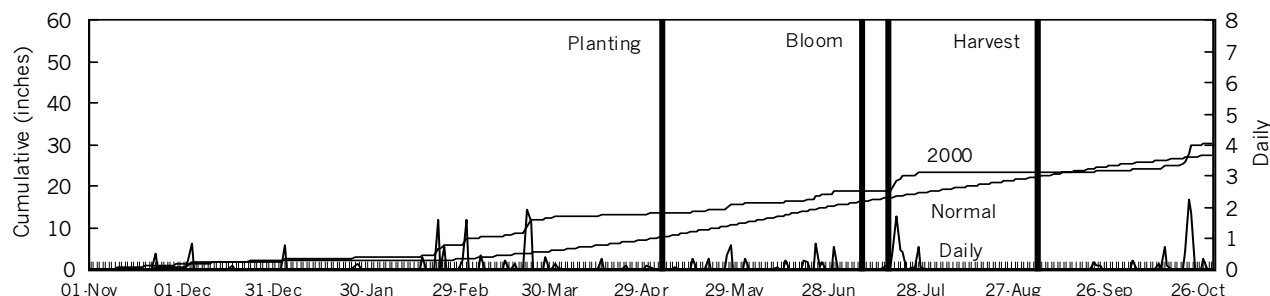
	Check 1	Check 2	Avg.
Yield with insecticide	123	130	126
Yield without insecticide	108 *	131	120
Insecticide advantage	15	-2 ns	7 ns

* = significant with 95% confidence
ns = not significant at 95% level

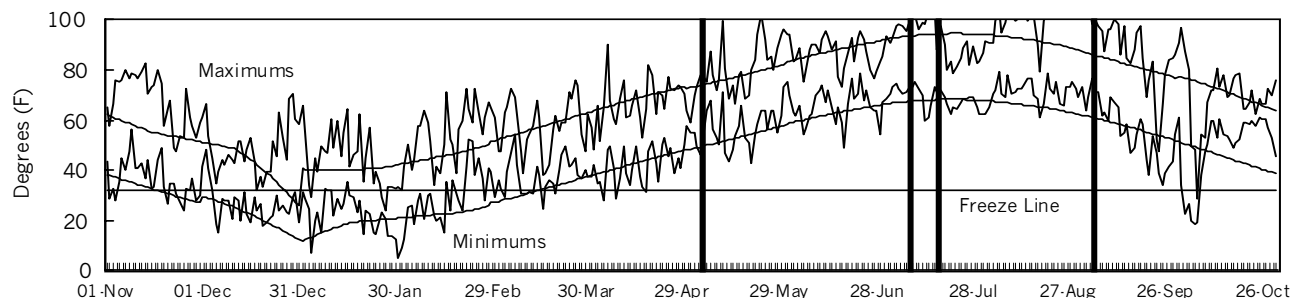
2000 GROWING CONDITIONS

Favorable conditions in May and June with timely rains got the test off to a good start. Hot, dry conditions during the first part of July contrasted with wet, cool conditions during the last 2 weeks of the month. The late-July rains carried the crop through extremely hot, dry conditions in August. The test was harvested before significant lodging occurred.

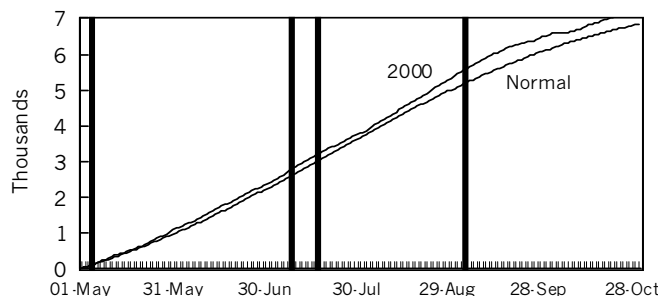
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	0.8	2.6	54	56	0	0
May	2.3	3.9	68	65	1038	940
June	2.5	4.3	76	75	1266	1234
July	5.3	3.4	81	81	1444	1454
August	0.0	3.1	85	79	1594	1385
Sep.	0.5	3.3	72	70	1139	1072
Oct.	6.4	2.5	59	58	795	748
Season Totals	17.8	23.1	71	69	7275	6833

TABLE 9. Reno Co. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plant Ht. in.	Ldg %	Final Stand %	Hds per Plant
					AVG.	AVG.												
MATURITY CHECK	C 305	115	115	53	115	94	90	94	57	62	11	65	10	60	44	--	100	1.7
ASGROW	LASER	109	--	--	--	--	85	--	--	--	--	66	10	62	41	--	125	1.3
DEKALB	DK-35	139	119	101	129	120	109	96	109	64	12	66	10	62	41	--	125	1.3
DYNA-GRO	DG-730B	110	--	--	--	--	86	--	--	--	--	66	10	63	40	--	122	1.2
MATURITY CHECK	RS 610	118	109	75	113	100	92	89	81	64	11	66	10	58	44	--	105	1.5
MATURITY CHECK	TX3042xTX2737	123	120	76	121	106	96	97	82	62	11	66	10	61	43	--	130	1.3
MIDLAND	M-4664	135	125	93	130	118	106	101	100	64	12	66	10	61	40	--	125	1.4
NK	KS 585	133	123	116	128	124	104	100	125	63	12	66	10	63	40	--	117	1.5
NO GAUCHO*	TX3042xTX2737	108	--	--	--	--	84	--	--	--	--	66	10	61	46	--	117	1.4
SG	SG-96254	136	--	--	--	--	107	--	--	--	--	66	10	61	40	--	130	1.4
WILLCROSS	GB5343-R	114	--	--	--	--	89	--	--	--	--	66	10	61	41	--	116	1.5
ASGROW	A459	132	124	105	128	120	103	101	113	65	11	67	10	62	46	--	123	1.2
DELANGE	DSA 115C	129	108	86	119	108	101	88	93	64	11	67	10	63	39	--	132	1.2
DYNA-GRO	DG-740C	110	103	--	107	--	86	84	--	64	12	67	10	61	40	--	87	1.4
HOEGEMEYER	6055	144	129	82	137	119	113	105	89	64	12	67	10	62	41	--	128	1.3
MATURITY CHECK	OK11xTX2741	117	109	76	113	101	92	89	82	64	12	67	10	61	40	--	99	1.4
MYCOGEN	M3838	123	--	90	--	--	96	--	97	--	--	67	10	63	40	--	115	1.3
NC+	6B50	137	130	89	133	119	107	106	96	64	12	67	10	62	41	--	128	1.3
PIONEER	8414	123	130	--	126	--	96	106	--	65	11	67	10	62	40	--	124	1.4
PIONEER	8500	138	128	107	133	124	108	104	115	65	11	68	9	62	42	--	125	1.5
CARGILL	697	131	121	93	126	115	103	99	101	66	12	68	10	62	40	--	122	1.3
DEKALB	DK-43A	137	122	89	129	116	107	100	96	66	12	68	10	62	39	--	131	1.3
DEKALB	DK-47	142	137	96	140	125	111	111	104	65	12	68	10	62	42	--	124	1.3
DELANGE	DSA 133	140	136	88	138	121	109	111	95	66	12	68	10	61	41	--	108	1.5
DELANGE	DSA 147	150	--	--	--	--	117	--	--	--	--	68	10	62	44	--	129	1.2
GARST	5440	136	129	--	132	--	106	105	--	66	12	68	10	62	41	--	120	1.4
GARST	5515	114	107	--	110	--	89	87	--	64	12	68	10	61	41	--	97	1.3
HOEGEMEYER	6874	145	137	91	141	124	113	112	98	66	12	68	10	62	41	--	126	1.3
HOEGEMEYER	6884	134	120	93	127	116	105	97	100	66	12	68	10	62	41	--	127	1.2
NC+	6B70	136	120	101	128	119	106	97	109	65	12	68	10	62	39	--	129	1.4
SG	SG-97619	132	--	--	--	--	103	--	--	--	--	68	10	61	40	--	97	1.6
TRIUMPH	TR 462	138	131	95	135	121	108	107	102	66	12	68	10	62	40	--	122	1.3
VALLEY PREMIUM	VP 53	131	--	--	--	--	103	--	--	--	--	68	10	61	40	--	110	1.5
WILLCROSS	GB7743-TR	124	--	--	--	--	97	--	--	--	--	68	11	61	42	--	83	1.4
AGRIPRO	AP 2731	126	--	--	--	--	99	--	--	--	--	68	12	61	44	--	125	1.2
MIDWEST SEED	256	135	129	128	132	131	106	105	138	66	13	68	12	61	45	--	122	1.3
MYCOGEN	1506	133	126	132	130	130	104	103	143	66	13	68	12	62	49	--	124	1.4
SG	SG-94249	131	--	--	--	--	102	--	--	--	--	68	12	62	41	--	117	1.2
MIDLAND	M-4774	127	118	115	123	120	99	96	123	66	14	68	13	61	42	--	121	1.3
AGRIPRO	AP 2468	124	--	--	--	--	97	--	--	--	--	69	10	62	37	--	132	1.1
DEKALB	DK-44	134	117	104	126	118	104	96	112	66	12	69	10	62	39	--	135	1.1

(continued)

TABLE 9. Reno Co. Grain Sorghum Performance Test, 1998-2000.

		YIELD AS % OF TEST AVERAGE																
		ACRE YIELD, BUSHELS					1999-2000		2000									
BRAND	NAME	2000		1999		2-Yr. 3-Yr.		2000		Days Grain to Moist.		Days Grain to Moist.		Test Wt. Ht.		Final Hds		
		2000	1999	1998	AVG.	AVG.	2000	1999	1998	Blm	%	Blm	%	lb/bu	in.	Ldg %	Stand %	per Plnt
MONSANTO	X944	118	--	--	--	--	92	--	--	--	--	69	10	62	40	--	123	1.2
SG	SG-91190	144	--	--	--	--	112	--	--	--	--	69	10	61	40	--	115	1.5
SG	SG-99547	132	--	--	--	--	104	--	--	--	--	69	12	61	43	--	98	1.5
MIDLAND	M-4757Y	117	119	126	118	121	92	97	136	67	14	69	14	60	41	--	106	1.4
VALLEY PREMIUM	VP 70	125	--	--	--	--	97	--	--	--	--	70	10	61	42	--	100	1.4
AGRIPRO	AP 2838	119	113	97	116	110	93	92	105	67	12	70	11	61	41	--	107	1.4
ASGROW	MISSILE	124	129	--	127	--	97	105	--	68	13	70	12	60	41	--	106	1.3
TRIUMPH	TR 481	130	134	134	132	133	102	109	144	68	13	70	12	62	46	--	110	1.3
HOEGEMEYER	6712	122	114	--	118	--	96	93	--	67	12	71	10	61	39	--	122	1.3
NC+	371	119	--	--	--	--	93	--	--	--	--	71	10	61	39	--	121	1.3
MATURITY CHECK	TX2752xTX430	130	134	82	132	115	101	109	88	68	12	71	11	60	40	--	111	1.4
MATURITY CHECK	TX2752xTX2783	143	138	72	140	118	112	112	78	68	12	72	11	62	45	--	125	1.3
PIONEER	84G62	157	135	105	146	132	122	110	113	68	12	72	11	62	41	--	128	1.3
VALLEY PREMIUM	VP 90	128	--	--	--	--	100	--	--	--	--	72	11	62	40	--	116	1.3
DEKALB	DK-53	134	131	108	133	125	105	107	117	69	13	72	12	60	44	--	118	1.2
NO GAUCHO*	TX2752xTX430	131	--	--	--	--	103	--	--	--	--	72	12	60	39	--	107	1.5
NK	K73-J6	117	118	113	118	116	91	96	122	68	13	72	13	60	41	--	107	1.5
ASGROW	A571	142	--	89	--	--	111	--	96	--	--	73	12	60	40	--	131	1.2
SG	SG-97157	132	--	--	--	--	104	--	--	--	--	74	11	61	43	--	129	1.3
MONSANTO	X914	118	--	--	--	--	92	--	--	--	--	74	13	59	46	--	105	1.3
WILLCROSS	GB8743-C	98	--	--	--	--	77	--	--	--	--	74	14	58	41	--	104	1.4
MIDLAND	M-4836	84	140	74	112	99	66	114	80	69	15	74	16	58	41	--	118	1.3
	AVERAGES	128	123	93	125	115	128	123	93	66	12	69	11	61	41	--	117	1.3
	CV(%)	7	7	17	--	--	7	7	17	--	--	2	6	1	4	--	6	8.7
	LSD(0.05)**	10	9	19	--	--	8	8	20	--	--	2	1	1	2	--	8	0.1

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

SOUTH CENTRAL KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL

COUNTY: SUMNER

LOCATION: Argonia, Kansas

FERTILIZER (lbs/acre): 76 N 40 P₂O₅ 0 K₂O

PLANT, HARVEST DATES: 5/12/00, 9/21/00

COOPERATORS: William Heer, agronomist

TARGET POPULATION: 40,000 plants/acre, 5.2 in. spacing

BLOOM DATES: 7/10/00 - 7/19/00

YIELD: Avg. 67 Range 42 - 78 LSD 9 CV 11

INSECTICIDE EFFECT (bu/a):	Check 1	Check 2	Avg.
Yield with insecticide	72	68	70
Yield without insecticide	71	42 *	57 *
Insecticide advantage	1 ^{ns}	25	13

2000 GROWING CONDITIONS

In light of the increasing sorghum acreage in south central Kansas, a demonstration test was planted in Sumner County for the first time in 2000. Good early-season weed control and rains in late May, June, and late July carried the crop through the hot, dry conditions in August.

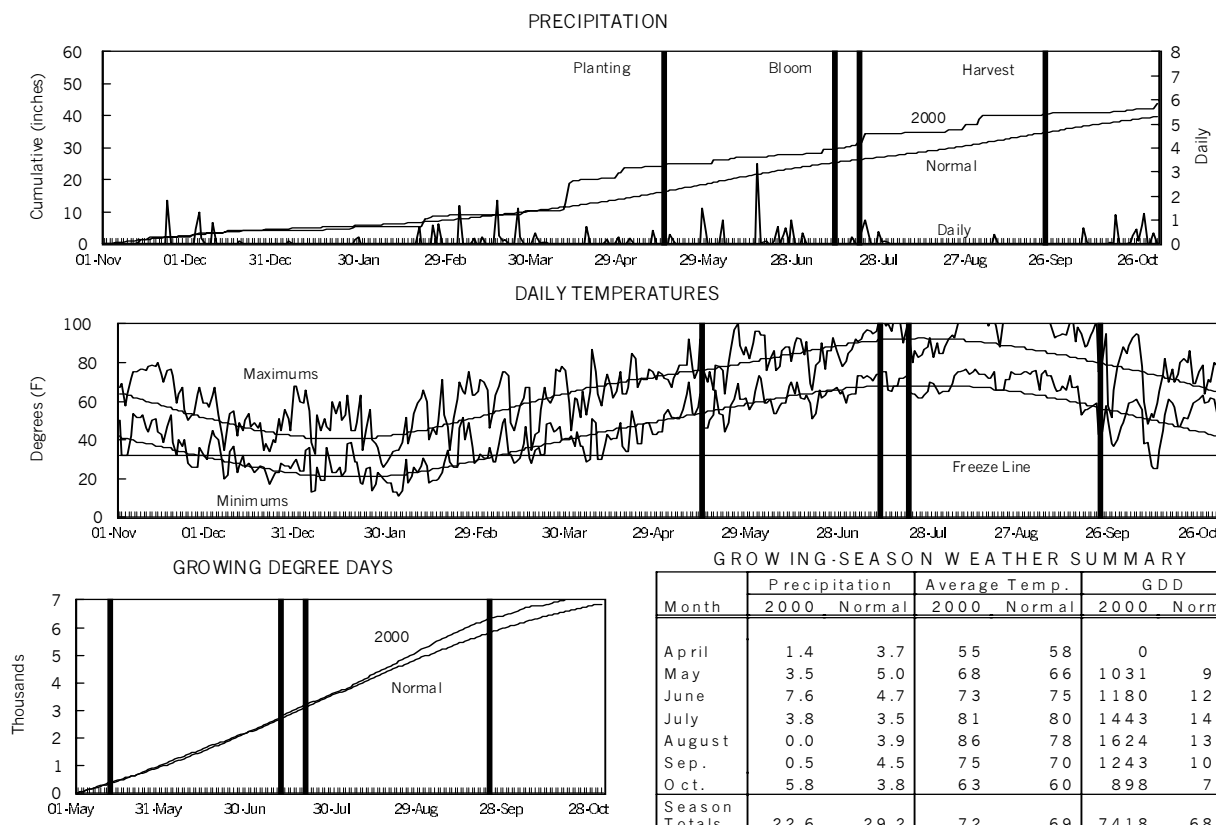


TABLE 10.

BRAND	NAME	Acre Yield, bushels	Yield, % of average	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
NO GAUCHO*	TX3042xTX2737	71	106	59	9	59	44	--	--	1.3
MATURITY CHECK	TX3042xTX2737	72	108	60	9	61	42	--	--	1.3
DEKALB	DK-35	75	113	60	9	61	39	--	--	1.3
GARST	5429	74	111	60	9	61	44	--	--	1.3
MYCOGEN	1506	75	112	62	9	60	47	--	--	1.5
MIDWEST SEED	256	78	117	62	9	60	46	--	--	1.3
MYCOGEN	3694	70	104	65	9	60	41	--	--	1.5
MATURITY CHECK	TX2752xTX430	68	101	66	9	58	41	--	--	1.4
DEKALB	DK-53	61	91	67	9	58	46	--	--	1.2
NK	K73-J6	51	77	67	9	58	43	--	--	1.2
TRIUMPH	TR 481	65	97	67	9	60	46	--	--	1.2
NO GAUCHO*	TX2752xTX430	42	63	68	9	57	41	--	--	1.3
	AVERAGES	67	67	63	9	59	43	--	--	1.3
	CV(%)	11	11	2	3	2	5	--	--	9.5
	LSD(0.05)**	9	13	2	0	2	3	--	--	0.2

TABLE 11. SOUTH CENTRAL Kansas sorghum hybrid yield summary (% of test average), 2000.

BRAND/NAME	HVD ¹	RND	STD	SUD	AVG.	BRAND/NAME	HVD	RND	STD	SUD	AVG.
AGRIPRO						MYCOGEN					
AP 2468	--	97	--	--	--	1506	113	104	--	112	110
AP 2731	--	99	--	--	--	3694	--	--	--	104	--
AP 2838	102	93	--	--	--	M3838	106	96	--	--	--
ASGROW						NC+					
A459	95	103	--	--	--	371	--	93	--	--	--
A571	105	111	--	--	--	6B50	107	107	--	--	--
LASER	91	85	--	--	--	6B70	102	106	--	--	--
MISSILE	101	97	--	--	--	NK					
CARGILL						K73-J6	--	91	--	77	--
697	108	103	--	--	--	KS 585	102	104	--	--	--
737	101	--	--	--	--	PIONEER					
DEKALB						8414	107	96	--	--	--
DK-35	104	109	--	113	108	84G62	116	122	--	--	--
DK-43A	105	107	--	--	--	8500	105	108	--	--	--
DK-44	103	104	--	--	--	SG					
DK-47	108	111	--	--	--	SG-91190	--	112	--	--	--
DK-53	102	105	--	91	99	SG-94249	--	102	--	--	--
DELANGE						SG-96254	--	107	--	--	--
DSA 115C	106	101	--	--	--	SG-97157	--	104	--	--	--
DSA 133	106	109	--	--	--	SG-97619	--	103	--	--	--
DSA 147	106	117	--	--	--	SG-99547	--	104	--	--	--
DYNA-GRO						TRIUMPH					
DG-730B	--	86	--	--	--	TR 459	100	--	--	--	--
DG-740C	--	86	--	--	--	TR 462	102	108	--	--	--
DG-751B	97	--	--	--	--	TR 481	102	102	--	97	100
DG-760C	87	--	--	--	--	VALLEY PREMIUM					
DG-780B	89	--	--	--	--	VP 53	108	103	--	--	--
GARST						VP 70	92	97	--	--	--
5429	89	--	--	111	--	VP 90	98	100	--	--	--
5440	112	106	--	--	--	WILLCROSS					
5515	97	89	--	--	--	GB5343-R	90	89	--	--	--
5664	99	--	--	--	--	GB7743-TR	72	97	--	--	--
HOEGEMEYER						GB8743-C	78	77	--	--	--
6055	114	113	--	--	--	MATURITY CHECK					
6712	86	96	--	--	--	C 305	105	90	--	--	--
6874	105	113	--	--	--	OK11xTX2741	88	92	--	--	--
6884	105	105	--	--	--	RS 610	103	92	--	--	--
KAYSTAR						TX2752xTX2783	105	112	--	--	--
X-070	86	--	--	--	--	TX2752xTX430	106	101	--	101	103
MIDLAND						TX3042xTX2737	112	96	--	108	105
M-4664	109	106	--	--	--	NO GAUCHO*					
M-4757Y	96	92	--	--	--	TX2752xTX430	97	103	--	63	87
M-4774	99	99	--	--	--	TX3042xTX2737	103	84	--	106	98
M-4836	81	66	--	--	--	AVERAGES					
MIDWEST SEED							115	128	--	67	103
256	107	106	--	117	110	CV(%)					
MONSANTO							5	7	--	11	--
X914	82	92	--	--	--	LSD(0.05)**					
X944	98	92	--	--	--		7	8	--	13	--

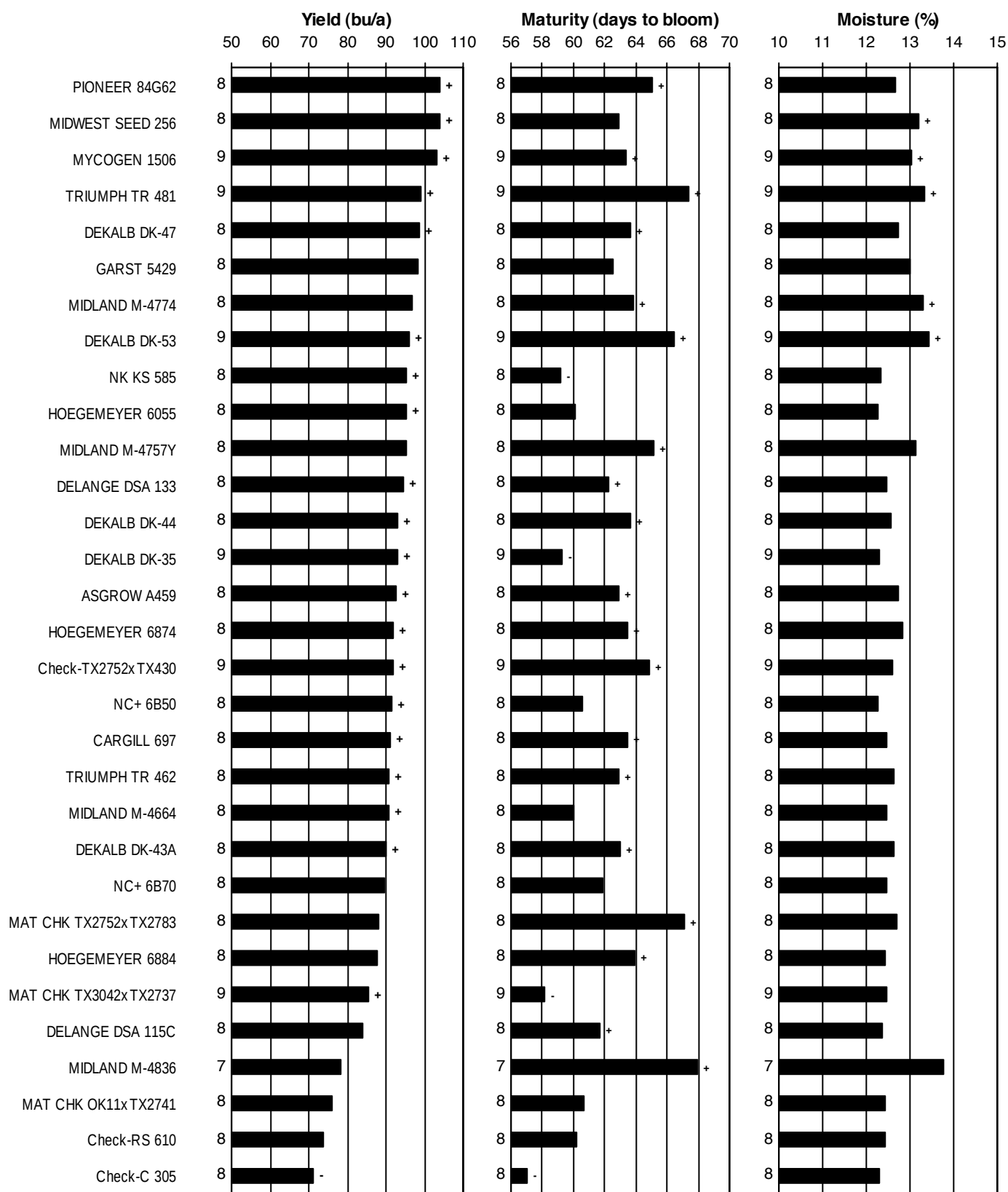
¹ HVD = Harvey Co., Hesston

RND = Reno Co., Hutchinson

STD = Stafford Co., St. John

SUD = Sumner Co., Argonia

**FIGURE 8. SOUTH CENTRAL Kansas sorghum hybrid
standardized performance summary, 1998-2000.**



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

NORTH CENTRAL KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL

COUNTY: ELLIS

LOCATION: Agricultural Research Center, Hays

TEST SITE: Harney silt loam

1999 CROP: Fallow

1998 CROP: Sorghum

FERTILIZER (lbs/acre): 60 N 0 P₂O₅ 0 K₂O

PLANTING DATE: 5/25/00

HARVEST DATE: 9/28/00

COOPERATORS: Kenneth Kofoed, agronomist

TARGET POPULATION: 35,000 plants/acre, 6.0 in. spacing

FINAL STAND (% of target): 99

BLOOM DATES: 7/26/00 - 8/11/00

YIELD: Avg. (bu/a) 92 Range (bu/a) 69 - 107

LSD (bu/a) 10

CV (%) 8

INSECTICIDE EFFECT (bu/a):

Yield with insecticide

Yield without insecticide

Insecticide advantage

Check 1 Check 2 Avg.

86 92 89

80 82 81

6 ns 9 ns 8 ns

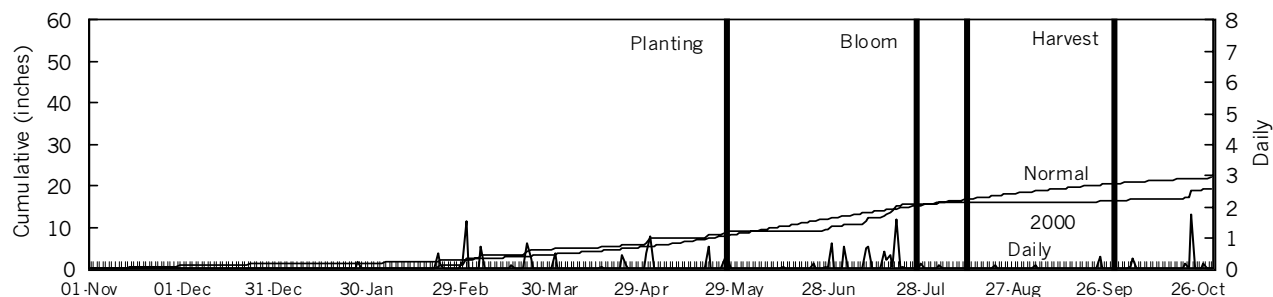
* = significant with 95% confidence

ns = not significant at 95% level

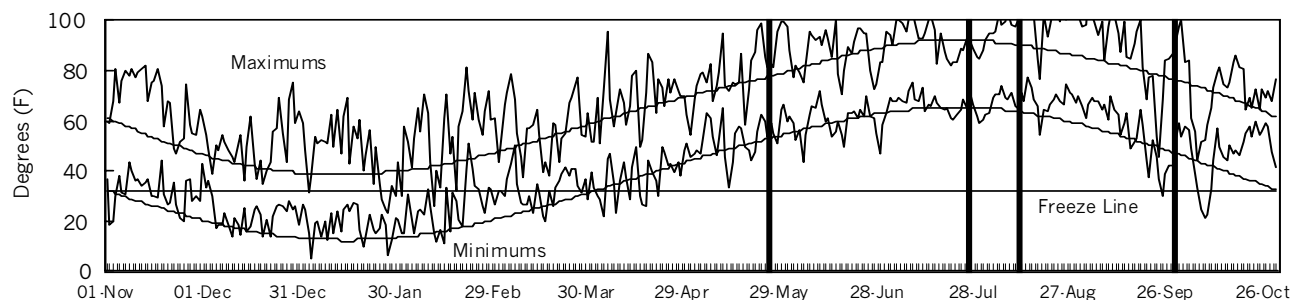
2000 GROWING CONDITIONS

Dry soil conditions at planting reduced emergence somewhat. The dry conditions persisted through the first 30 days after planting. Timely rains in late spring provided the moisture necessary to produce relatively good yields. Hot, dry conditions in late summer caused severe postflowering drought stress, resulting in significant lodging in many hybrids.

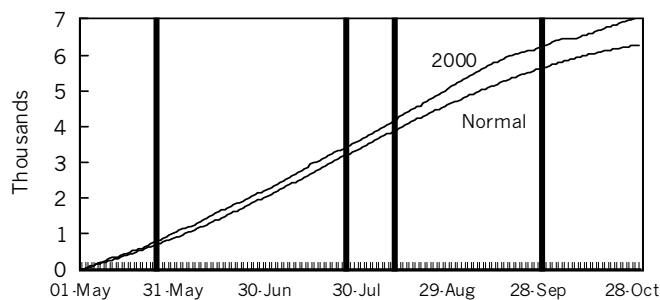
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	1.2	1.9	53	51	0	0
May	3.1	3.2	66	62	982	842
June	1.2	3.8	73	72	1180	1141
July	5.6	3.3	79	78	1408	1366
August	0.3	2.8	84	76	1542	1301
Sep.	0.6	2.2	72	67	1133	995
Oct.	2.6	1.4	60	55	803	638
Season Totals	14.5	18.5	70	66	7048	6281

TABLE 12. Ellis Co. Fallow Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
					AVG.	AVG.												
MATURITY CHECK	C 305	89	133	121	111	114	96	97	81	60	12	62	11	57	43	28	89	2.0
PIONEER	86G71	102	--	--	--	--	111	--	--	--	--	63	13	59	43	13	103	1.9
NO GAUCHO*	TX3042xTX2737	80	--	--	--	--	87	--	--	--	--	64	13	57	47	21	97	1.9
MIDLAND	M-4664	85	--	140	--	--	93	--	94	--	--	65	12	55	42	39	109	2.3
DEKALB	DK-35	90	149	145	119	128	97	109	97	63	13	65	13	57	40	8	110	1.9
MATURITY CHECK	RS 610	73	110	121	92	101	80	80	81	64	13	65	13	56	46	20	85	1.7
NC+	5B74E	90	132	133	111	118	98	96	90	63	13	65	13	58	42	11	79	2.0
MATURITY CHECK	TX3042xTX2737	86	132	154	109	124	93	96	104	63	13	66	13	56	47	28	103	1.9
ASGROW	LASER	69	--	--	--	--	75	--	--	--	--	66	14	58	42	35	101	1.9
NC+	Y363	100	132	144	116	125	109	97	97	65	14	66	16	58	43	1	87	2.3
FRONTIER	F501E	81	--	--	--	--	88	--	--	--	--	67	12	56	40	13	107	1.4
TRIUMPH	TR 438	91	--	--	--	--	99	--	--	--	--	67	12	57	43	10	97	1.9
FRONTIER	F303C	81	--	--	--	--	88	--	--	--	--	67	13	57	41	23	79	1.6
MATURITY CHECK	OK11xTX2741	82	127	132	104	113	89	92	89	66	13	67	13	57	41	33	88	1.6
NK	KS 585	100	140	148	120	130	109	102	100	65	13	67	13	59	43	14	103	2.0
MYCOGEN	M3838	88	139	146	114	125	96	102	99	65	13	67	14	59	40	7	94	1.8
DYNA-GRO	DG-732B	95	119	--	107	--	104	87	--	65	14	67	15	59	41	8	106	1.9
DYNA-GRO	DG-730B	93	133	--	113	--	101	97	--	65	12	68	12	59	42	5	109	1.5
PIONEER	85G85	90	--	--	--	--	98	--	--	--	--	68	12	57	42	14	104	1.7
DEKALB	DK-43A	92	132	166	112	130	100	96	111	67	13	68	13	56	40	11	98	1.7
MIDWEST SEED	530	92	128	--	110	--	100	93	--	66	13	68	13	59	40	7	107	1.6
DYNA-GRO	DG-740C	71	109	--	90	--	77	80	--	66	13	68	14	57	41	14	84	2.0
GARST	5631Y	84	134	160	109	126	92	98	108	66	13	68	14	59	43	6	100	1.7
MONSANTO	X944	88	--	--	--	--	95	--	--	--	--	68	14	58	41	6	99	1.5
DEKALB	DK-44	96	136	142	116	124	104	99	96	67	14	69	15	58	43	5	102	1.8
GOLDEN WORLD	GW 7431	74	--	--	--	--	81	--	--	--	--	69	15	57	39	21	95	1.5
HOEGEMEYER	6766	92	138	162	115	131	100	101	109	68	15	69	15	57	45	12	103	1.5
AGRIPRO	AP 2731	101	150	--	126	--	110	109	--	68	15	69	17	58	45	2	97	1.7
MIDLAND	M-4774	94	141	153	117	129	102	103	103	68	16	69	18	57	43	5	109	1.8
CARGILL	770Y	90	155	141	122	129	98	113	95	68	12	70	13	56	42	18	114	1.7
CARGILL	627	97	142	150	119	130	105	104	101	68	14	70	15	57	39	2	109	1.8
CARGILL	697	89	--	--	--	--	97	--	--	--	--	70	15	58	43	5	103	1.7
GARST	5515	93	137	--	115	--	101	100	--	66	14	70	15	58	42	10	84	1.8
CARGILL	737	106	152	160	129	139	116	111	108	67	14	70	16	57	41	3	95	1.8
DEKALB	DK-47	106	--	--	--	--	115	--	--	--	--	70	16	58	42	1	111	1.8
MIDWEST SEED	256	85	--	--	--	--	93	--	--	--	--	70	16	56	48	7	96	1.6
MIDLAND	M-4757Y	103	139	167	121	136	112	102	112	69	15	70	17	58	46	2	93	2.0
ASGROW	A459	106	150	154	128	137	116	110	104	68	12	71	12	59	43	5	105	1.3
GARST	5664	97	116	--	107	--	106	85	--	68	13	71	13	55	40	0	103	2.0
GOLDEN WORLD	GW 1489	88	153	162	121	135	96	112	109	69	13	71	13	57	45	31	111	1.5
HOEGEMEYER	6874	97	143	153	120	131	105	104	103	70	13	71	13	59	41	26	106	1.8

(continued)

TABLE 12. Ellis Co. Fallow Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHELS						YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000		1999		1998		2-Yr. AVG.		3-Yr. AVG.	Days to Blm	Grain to Moist. %	Days to Blm	Grain to Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
		2000	1999	1998	2000	1999	1998	2000	1999	1998									
DYNA-GRO	DG-751B	93	133	--	113	--		101	97	--	68	14	71	14	59	41	18	111	1.6
TRIUMPH	TR 464	96	134	--	115	--		104	98	--	68	13	71	14	55	43	17	86	2.0
FRONTIER	F700E	101	--	--	--	--		110	--	--	--	--	72	13	57	43	27	104	1.5
GARST	5440	85	--	--	--	--		92	--	--	--	--	72	14	60	44	28	102	1.6
DYNA-GRO	DG-760C	82	132	--	107	--		90	96	--	69	14	72	15	57	41	3	105	1.3
MIDWEST SEED	240W	87	--	--	--	--		95	--	--	--	--	72	15	56	42	9	93	1.9
PIONEER	84G62	105	157	157	131	139		114	115	106	70	14	72	15	58	42	4	114	1.7
HOEGEMEYER	6712	91	134	--	112	--		99	98	--	70	14	72	16	57	39	3	106	1.6
MATURITY CHECK	TX2752xTX430	92	155	168	124	139		100	113	113	71	14	73	14	53	39	31	96	1.5
MIDLAND	XM-2005	90	--	--	--	--		98	--	--	--	--	73	14	57	40	11	93	1.6
ASGROW	A571	100	--	--	--	--		109	--	--	--	--	73	16	56	44	3	94	1.8
MIDLAND	XM-4838	107	--	--	--	--		117	--	--	--	--	73	16	59	47	0	93	1.8
TRIUMPH	TR 481	104	139	--	122	--		113	102	--	72	15	73	17	59	49	2	88	1.6
MATURITY CHECK	TX2752xTX2783	88	147	165	118	133		96	107	111	72	14	74	15	58	44	23	113	1.6
MIDLAND	M-4836	101	141	166	121	136		110	103	112	72	16	74	20	57	43	0	97	1.9
DYNA-GRO	DG-780B	102	--	--	--	--		111	--	--	--	--	75	14	59	44	9	96	1.6
DEKALB	DK-53	106	148	--	127	--		116	108	--	72	15	75	16	59	46	3	94	1.4
NO GAUCHO*	TX2752xTX430	82	--	--	--	--		90	--	--	--	--	75	16	57	42	30	95	1.7
FRONTIER	F647E	89	--	--	--	--		97	--	--	--	--	76	14	58	41	5	51	1.7
MIDLAND	XM-2002	98	--	--	--	--		107	--	--	--	--	78	17	56	43	0	105	1.8
	AVERAGES	92	137	148	114	126		92	137	148	68	13	70	14	57	43	12	98	1.7
	CV(%)	8	6	7	--	--		8	6	7	--	--	1	10	3	4	79	9	15.4
	LSD(0.05)**	10	11	15	--	--		11	8	10	--	--	1	2	2	3	13	12	0.4

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

NORTHWESTERN KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL, FALLOW

COUNTY: THOMAS

LOCATION: Northwest Research-Extension Center, Colby

TEST SITE: Keith silt loam

1999 CROP: Fallow

1998 CROP: Sunflower

FERTILIZER (lbs/acre): 120 N 10 P₂O₅ 0 K₂O

PLANTING DATE: 6/1/00

HARVEST DATE: 10/17/00

COOPERATORS: Patrick Evans, agronomist

TARGET POPULATION: 24,000 plants/acre, 8.7 in. spacing

FINAL STAND (% of target): 75

BLOOM DATES: 8/3/00 - 8/24/00

YIELD: Avg. (bu/a) 84 Range (bu/a) 47 - 113

LSD (bu/a) 11 CV (%) 11

INSECTICIDE EFFECT (bu/a): Check 1 Check 2 Avg.

Yield with insecticide 96 107 101

Yield without insecticide 94 88 * 91

Insecticide advantage 2 ns 19 * 10 ns

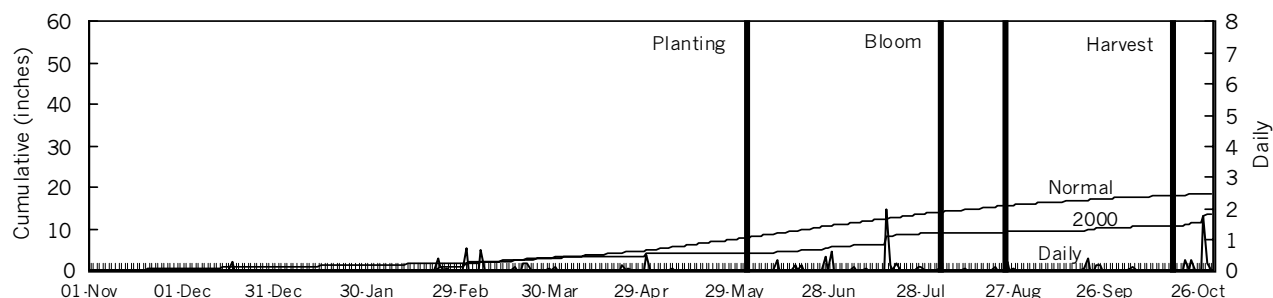
* = significant with 95% confidence

ns = not significant at 95% level

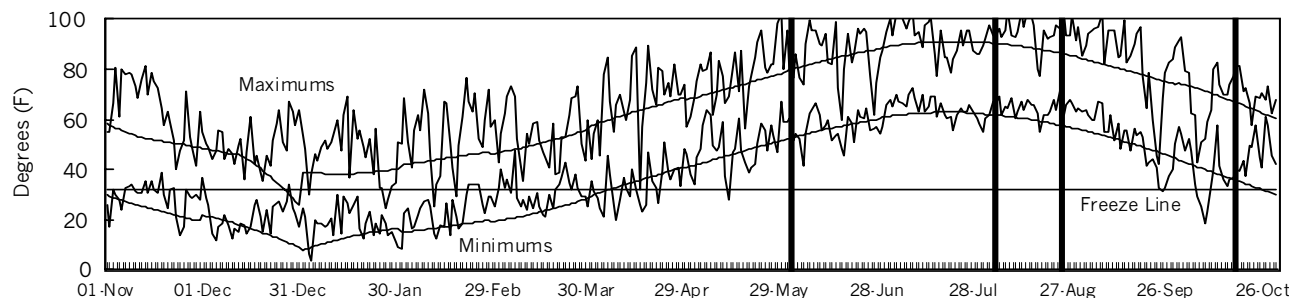
2000 GROWING CONDITIONS

Dry conditions at planting resulted in nonuniform emergence and generally poor stands. The dry conditions lasted throughout the growing season, limiting yields and increasing variability. Insects and diseases caused no apparent problems.

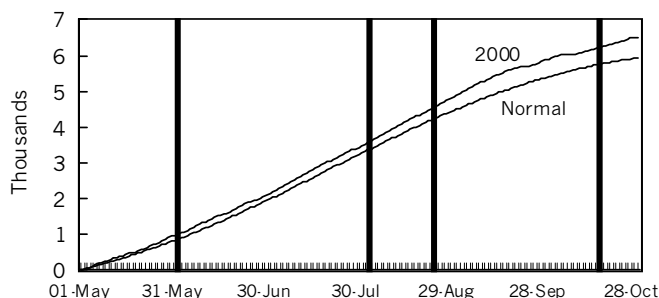
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	0.5	1.8	51	49	0	0
May	0.6	2.9	64	60	908	781
June	1.8	3.1	71	70	1112	1093
July	2.9	3.0	79	76	1384	1317
August	0.7	2.2	80	74	1414	1241
Sep.	0.8	1.5	68	65	1013	928
Oct.	3.0	1.1	56	53	691	574
Season Totals	10.4	15.6	67	64	6522	5934

TABLE 13. Thomas Co. Fallow Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL						YIELD AS % OF TEST AVERAGE			1999-2000		2000					
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
					AVG.	AVG.												
NK	KS 310	79	119	--	99	--	94	82	--	65	11	62	9	47	35	0	66	1.9
GARST	9135	94	--	--	--	--	112	--	--	--	--	63	10	47	34	9	84	1.8
MATURITY CHECK	C 305	81	127	106	104	104	96	87	83	65	11	63	10	51	37	10	68	2.4
PIONEER	87G57	91	125	132	108	116	109	86	103	66	12	64	10	51	36	10	84	2.5
ASGROW	LASER	104	--	--	--	--	124	--	--	--	--	66	11	50	35	0	75	2.6
DYNA-GRO	DG-730B	80	142	--	111	--	96	98	--	69	12	67	10	53	35	2	85	1.5
MATURITY CHECK	RS 610	87	119	106	103	104	104	82	83	69	11	67	10	49	36	0	65	2.2
MATURITY CHECK	TX3042xTX2737	96	145	140	120	127	114	100	110	67	12	67	11	52	38	2	78	2.2
NO GAUCHO*	TX3042xTX2737	94	--	--	--	--	112	--	--	--	--	67	11	51	39	2	67	2.1
NC+	5B74E	85	140	136	112	120	102	96	106	68	13	67	12	54	34	0	78	2.2
TRIUMPH	TR 438	73	--	--	--	--	88	--	--	--	--	68	9	47	36	1	73	2.1
DEKALB	DK-35	91	152	127	121	123	109	105	100	69	12	68	10	49	36	2	75	2.1
NC+	Y363	113	157	134	135	134	135	108	105	69	12	68	10	49	39	1	75	2.4
DYNA-GRO	DG-740C	99	127	--	113	--	118	88	--	70	13	68	11	52	37	0	69	2.0
FRONTIER	F303C	87	--	--	--	--	104	--	--	--	--	68	11	51	37	0	75	1.8
FRONTIER	F501E	75	--	--	--	--	89	--	--	--	--	68	11	50	35	0	68	1.7
MATURITY CHECK	OK11xTX2741	88	125	118	107	111	106	86	92	70	13	68	12	55	38	0	78	1.6
DEKALB	DK-44	91	150	130	121	124	109	103	102	71	11	69	9	46	36	1	78	1.8
AGRIPRO	AP 2731	84	--	--	--	--	101	--	--	--	--	69	12	51	38	0	84	1.6
DYNA-GRO	DG-732B	97	122	--	109	--	116	84	--	70	13	69	12	53	35	0	69	1.9
MIDLAND	M-4774	94	167	--	131	--	112	115	--	71	14	69	12	51	38	0	84	1.5
NK	KS 585	112	166	139	139	139	134	114	109	70	13	69	12	52	36	0	83	2.0
GOLDEN WORLD	GW 7431	74	--	--	--	--	89	--	--	--	--	70	10	47	36	1	76	1.6
TRIUMPH	TR 447	85	134	118	110	113	102	92	92	72	12	70	11	49	37	0	70	2.1
MONSANTO	X944	79	--	--	--	--	94	--	--	--	--	71	10	51	37	2	75	1.7
MYCOGEN	M3838	88	132	--	110	--	105	91	--	71	12	71	10	49	36	1	72	1.8
DEKALB	DK-43A	91	152	138	122	127	109	105	108	72	13	71	11	51	36	1	81	1.7
MIDLAND	M-4757Y	93	157	143	125	131	112	108	112	73	13	71	11	48	40	0	69	2.0
DEKALB	DK-47	90	--	--	--	--	108	--	--	--	--	72	9	46	36	5	84	1.8
CARGILL	770Y	85	151	147	118	127	101	104	115	74	11	72	10	50	38	0	78	1.9
TRIUMPH	TR 461	82	158	139	120	126	99	109	109	74	12	72	10	47	37	8	77	1.7
FRONTIER	F700E	78	--	--	--	--	94	--	--	--	--	72	11	50	37	0	71	1.7
GARST	5631Y	79	--	127	--	--	95	--	100	--	--	72	11	52	37	0	63	1.8
MIDLAND	XM-2005	87	--	--	--	--	104	--	--	--	--	72	11	52	37	0	71	2.4
PIONEER	86G71	80	--	--	--	--	96	--	--	--	--	72	11	51	35	0	71	1.9
CARGILL	697	76	150	123	113	116	90	103	96	73	13	73	10	49	38	0	69	1.8
GARST	5515	79	--	--	--	--	95	--	--	--	--	73	10	49	38	0	66	1.8
AGRIPRO	HY 2660	75	140	--	108	--	90	96	--	74	13	73	11	50	36	0	85	1.3
ASGROW	A459	90	146	144	118	126	107	100	113	74	13	73	11	50	39	0	81	1.6
GOLDEN WORLD	GW 1489	86	151	122	118	119	102	104	95	74	13	73	11	51	38	1	74	1.6
GARST	5664	59	140	--	99	--	70	96	--	75	12	74	9	47	35	0	88	1.3

(continued)

TABLE 13. Thomas Co. Fallow Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHELS						YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000		1999		1998		2-Yr. AVG.		3-Yr. AVG.	Days to Blm	Grain to Moist. %	Days to Blm	Grain to Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
		2000	1999	1998	2000	1999	1998	2000	1999	1998									
DYNA-GRO	DG-751B	79	157	--	118	--		94	108	--	74	12	74	10	47	37	0	88	1.5
MIDLAND	XM-4838	75	--	--	--	--		90	--	--	--	--	74	10	49	40	0	73	1.4
CARGILL	606	59	--	--	--	--		71	--	--	--	--	74	11	51	37	2	81	1.5
MATURITY CHECK	TX2752xTX430	107	178	147	143	144		128	123	115	75	12	74	11	47	38	0	87	2.0
PIONEER	85G85	67	--	--	--	--		80	--	--	--	--	74	11	50	34	0	95	1.5
CARGILL	627	78	150	121	114	116		94	103	95	73	12	75	10	48	37	0	63	1.9
DYNA-GRO	DG-760C	86	157	--	121	--		102	108	--	76	13	75	10	47	40	0	68	1.8
MYCOGEN	3696	82	--	--	--	--		98	--	--	--	--	75	10	46	37	0	70	1.9
DYNA-GRO	DG-780B	67	--	--	--	--		81	--	--	--	--	76	9	48	37	0	75	1.3
MATURITY CHECK	TX2752xTX2783	74	164	142	119	126		89	113	111	77	13	76	10	48	38	2	84	1.4
NO GAUCHO*	TX2752xTX430	88	--	--	--	--		105	--	--	--	--	76	10	46	36	0	81	1.9
FRONTIER	F647E	70	--	--	--	--		83	--	--	--	--	77	7	40	39	1	61	1.5
MIDLAND	M-4836	68	159	134	114	120		82	110	105	78	12	80	9	41	40	0	67	1.5
MIDLAND	XM-2002	47	--	--	--	--		57	--	--	--	--	84	9	42	38	0	66	1.0
	AVERAGES	84	145	128	114	119		84	145	128	72	12	71	10	49	37	1	75	1.8
	CV(%)	11	6	8	--	--		11	6	8	--	--	2	13	6	4	230	15	14.3
	LSD(0.05)**	11	10	12	--	--		13	7	9	--	--	2	2	4	2	3	13	0.3

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

SOUTHWESTERN KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL, FALLOW

COUNTY: FINNEY

LOCATION: Southwest Res.-Ext. Center, Garden City

TEST SITE: Keith silt loam

1999 CROP: Fallow

1998 CROP: Sorghum

FERTILIZER (lbs/acre): 60 N 0 P₂O₅ 0 K₂O

PLANTING DATE: 5/15/00

HARVEST DATE: 10/13/00

COOPERATORS: Merle Witt, agronomist

TARGET POPULATION: 30,000 plants/acre, 7.0 in. spacing

FINAL STAND (% of target): 116

BLOOM DATES: 7/8/00 - 7/30/00

YIELD: Avg. (bu/a) 66 Range (bu/a) 44 - 88

LSD (bu/a) 15 CV (%) 16

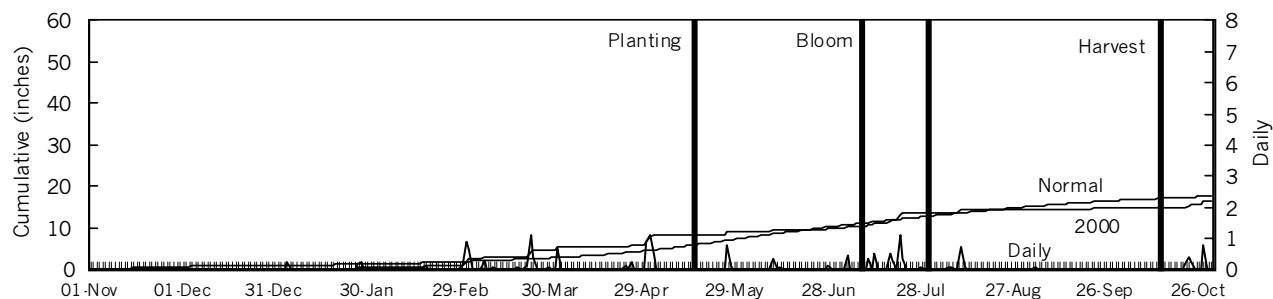
INSECTICIDE EFFECT (bu/a):	Check 1	Check 2	Avg.
Yield with insecticide	57	81	69
Yield without insecticide	74 *	75	74
Insecticide advantage	-17 *	7 ns	-5 ns

* = significant with 95% confidence
ns = not significant at 95% level

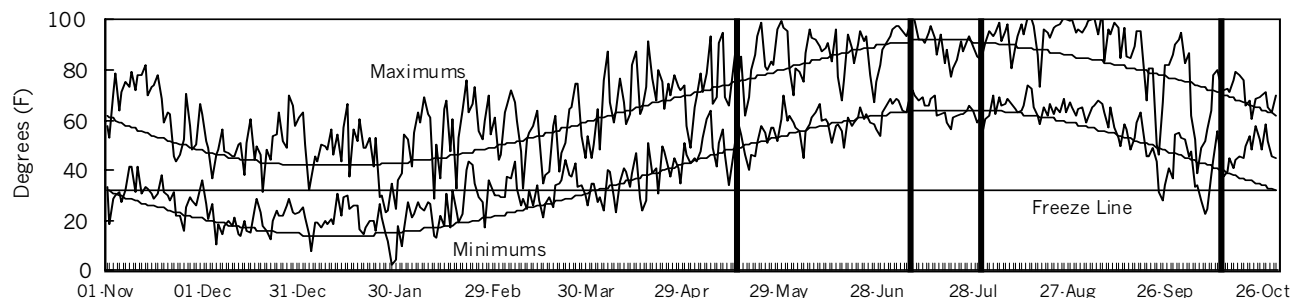
2000 GROWING CONDITIONS

Excellent seeding conditions resulted in good stands for all entries. Warm spring temperatures accelerated spring growth. Hot, dry conditions in August and September caused severe postflowering stress and shortened the grain filling period. Some of the lodging was caused by a July 22 wind storm.

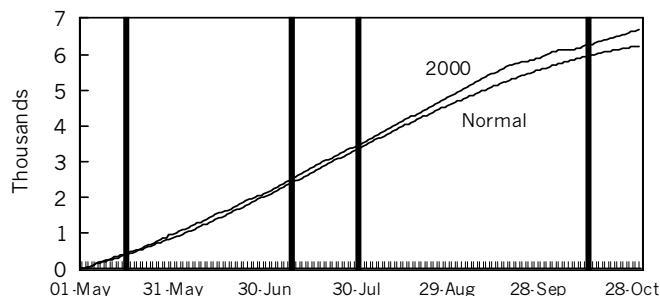
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	1.0	1.7	53	51	0	0
May	3.4	2.9	65	62	948	842
June	0.7	2.9	72	72	1130	1145
July	3.8	2.5	78	78	1365	1352
August	1.0	2.2	80	75	1419	1275
Sep.	0.1	1.6	70	67	1087	986
Oct.	1.7	1.0	57	54	724	632
Season Totals	11.6	14.8	68	66	6672	6231

TABLE 14. Finney Co. Fallow Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
					AVG.	AVG.												
MATURITY CHECK	C 305	55	65	61	60	60	83	73	75	56	13	54	12	60	43	16	95	2.0
MATURITY CHECK	RS 610	50	75	65	63	63	76	85	80	61	13	60	12	60	44	6	95	1.6
PIONEER	86G71	60	--	--	--	--	90	--	--	--	--	61	12	61	44	4	112	1.7
DEKALB	DK-35	63	90	72	77	75	96	102	89	62	13	62	12	61	43	15	120	1.7
NO GAUCHO*	TX3042xTX2737	74	--	--	--	--	112	--	--	--	--	62	12	60	46	12	131	1.5
TRIUMPH	TR 438	73	--	--	--	--	110	--	--	--	--	62	12	60	45	6	119	1.6
ASGROW	LASER	44	--	--	--	--	66	--	--	--	--	63	12	60	46	46	106	1.9
PIONEER	85G85	69	--	--	--	--	105	--	--	--	--	63	12	60	43	4	123	1.8
MATURITY CHECK	TX3042xTX2737	57	78	84	68	73	87	88	103	63	13	64	12	60	48	20	119	1.7
MONSANTO	X944	65	--	--	--	--	99	--	--	--	--	64	12	61	45	7	125	1.4
MYCOGEN	1482	70	--	--	--	--	106	--	--	--	--	64	12	60	43	6	105	1.5
AGRIPRO	AP 2731	70	--	--	--	--	107	--	--	--	--	65	12	61	48	4	137	1.4
DEKALB	DK-44	69	76	84	72	76	104	85	103	66	13	65	12	60	45	13	106	1.7
DEKALB	DK-47	72	--	--	--	--	108	--	--	--	--	65	12	61	44	5	141	1.5
MIDLAND	M-4757Y	72	95	79	84	82	110	107	97	67	14	65	12	61	49	4	131	1.5
MYCOGEN	M3838	55	72	81	64	70	84	81	100	64	13	65	12	61	43	4	111	1.5
NC+	6R30	72	91	--	82	--	109	103	--	64	13	65	12	60	42	10	116	1.7
NC+	Y363	70	--	87	--	--	106	--	106	--	--	65	12	61	48	1	103	1.8
DEKALB	DK-43A	65	94	86	80	82	99	106	105	67	13	66	12	60	44	6	122	1.6
DYNA-GRO	DG-740C	53	67	--	60	--	81	75	--	66	13	66	12	60	45	12	83	1.9
FRONTIER	F303C	60	--	--	--	--	91	--	--	--	--	66	12	60	44	17	118	1.6
FRONTIER	F501E	55	--	--	--	--	83	--	--	--	--	66	12	60	44	7	113	1.4
GARST	5515	72	85	--	79	--	109	96	--	64	13	66	12	60	48	5	99	1.7
GARST	5631Y	54	--	--	--	--	82	--	--	--	--	66	12	61	43	4	118	1.4
MATURITY CHECK	OK11xTX2741	63	73	64	68	66	95	82	78	66	13	66	12	61	44	6	115	1.5
MIDLAND	M-4774	57	97	--	77	--	86	109	--	67	14	66	12	61	47	6	128	1.4
NC+	5B74E	53	90	88	71	77	81	101	108	65	13	66	12	60	43	7	107	1.8
TRIUMPH	TR 459	60	--	--	--	--	91	--	--	--	--	66	12	61	43	3	121	1.4
CARGILL	697	67	104	86	85	85	102	117	105	67	13	67	12	60	47	5	121	1.4
DYNA-GRO	DG-730B	55	101	--	78	--	84	114	--	65	13	67	12	61	45	13	112	1.5
DYNA-GRO	DG-732B	71	74	--	72	--	108	83	--	66	13	67	12	61	43	1	119	1.6
GOLDEN WORLD	GW 7431	69	--	--	--	--	104	--	--	--	--	67	12	60	43	2	114	1.6
NC+	6B50	74	100	98	87	91	112	113	120	67	13	67	12	60	47	4	129	1.4
PIONEER	84G62	87	103	90	95	93	132	116	111	69	13	68	12	60	47	14	134	1.5
TRIUMPH	TR 481	67	90	83	79	80	102	102	102	70	14	68	12	61	48	5	112	1.5
ASGROW	A459	62	83	85	72	77	94	94	104	68	13	69	12	61	48	14	125	1.2
DEKALB	DK-53	75	98	--	86	--	114	111	--	69	14	69	12	61	50	3	117	1.3
AGRIPRO	AP 2838	72	95	81	84	83	109	107	100	69	13	70	12	60	45	5	117	1.3
CARGILL	770Y	66	93	86	79	82	100	105	106	70	13	70	12	60	46	6	121	1.4
AGRIPRO	HY 2660	74	99	92	86	88	112	112	113	70	13	71	12	61	46	3	131	1.4
DYNA-GRO	DG-760C	88	98	--	93	--	134	110	--	71	13	71	12	60	48	4	131	1.5

(continued)

TABLE 14. Finney Co. Fallow Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL						YIELD AS %			1999-2000		2000													
		OF TEST						AVERAGE			Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt							
		2000		1999		1998		2-Yr. AVG.		3-Yr. AVG.										2000		1999		1998		
		2000	1999	1998	AVG.	AVG.	2000	1999	1998	2000										1999	1998	Blm	%	Blm	%	lb/bu
GARST	5664	63	98	--	81	--	96	110	--	70	13	71	12	61	45	3	131	1.4								
FRONTIER	F700E	82	--	--	--	--	124	--	--	--	--	72	12	60	49	35	104	1.5								
DYNA-GRO	DG-751B	70	85	--	78	--	106	96	--	72	14	73	12	60	49	7	127	1.3								
GOLDEN WORLD	GW 1489	64	92	103	78	86	98	104	127	70	13	73	12	60	48	11	112	1.3								
NO GAUCHO*	TX2752xTX430	75	--	--	--	--	113	--	--	--	--	73	12	60	48	13	123	1.5								
DYNA-GRO	DG-780B	62	--	--	--	--	93	--	--	--	--	74	12	60	49	12	125	1.3								
MATURITY CHECK	TX2752xTX2783	61	88	93	74	80	92	99	114	73	14	74	12	60	51	58	119	1.4								
MATURITY CHECK	TX2752xTX430	81	109	88	95	93	123	123	108	73	14	75	12	60	47	28	95	1.6								
FRONTIER	F647E	60	--	--	--	--	91	--	--	--	--	76	12	60	48	14	66	2.0								
	AVERAGES	66	89	81	77	79	66	89	81	67	13	67	12	60	46	10	116	1.5								
	CV(%)	16	10	10	--	--	16	10	10	--	--	2	2	0	2	123	13	10.6								
	LSD(0.05)**	15	12	11	--	--	22	14	14	--	--	2	NS	0	1	17	21	0.2								

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

TABLE 15. WEST Kansas grain sorghum hybrid yield summary (% of test average), 2000.

BRAND/NAME	ELD ¹	THD	GRD	FND	AVG.	BRAND/NAME	ELD	THD	GRD	FND	AVG.
AGRIPRO						M-4836	110	82	--	--	--
AP 2731	110	101	--	107	106	XM-2002	107	57	--	--	--
AP 2838	--	--	--	109	--	XM-2005	98	104	--	--	--
HY 2660	--	90	--	112	--	XM-4838	117	90	--	--	--
ASGROW						MIDWEST SEED					
A459	116	107	--	94	106	240W	95	--	--	--	--
A571	109	--	--	--	--	256	93	--	--	--	--
LASER	75	124	--	66	88	530	100	--	--	--	--
CARGILL						MONSANTO					
606	--	71	--	--	--	X944	95	94	--	99	96
627	105	94	--	--	--	MYCOGEN					
697	97	90	--	102	96	1482	--	--	--	106	--
737	116	--	--	--	--	3696	--	98	--	--	--
770Y	98	101	--	100	100	M3838	96	105	--	84	95
DEKALB						NC+					
DK-35	97	109	--	96	101	5B74E	98	102	--	81	94
DK-43A	100	109	--	99	103	6B50	--	--	--	112	--
DK-44	104	109	--	104	106	6R30	--	--	--	109	--
DK-47	115	108	--	108	110	Y363	109	135	--	106	117
DK-53	116	--	--	114	--	NK					
DYNA-GRO						KS 310	--	94	--	--	--
DG-730B	101	96	--	84	94	KS 585	109	134	--	--	--
DG-732B	104	116	--	108	109	PIONEER					
DG-740C	77	118	--	81	92	84G62	114	--	--	132	--
DG-751B	101	94	--	106	100	85G85	98	80	--	105	94
DG-760C	90	102	--	134	109	86G71	111	96	--	90	99
DG-780B	111	81	--	93	95	87G57	--	109	--	--	--
FRONTIER						TRIUMPH					
F303C	88	104	--	91	94	TR 438	99	88	--	110	99
F501E	88	89	--	83	87	TR 447	--	102	--	--	--
F647E	97	83	--	91	91	TR 459	--	--	--	91	--
F700E	110	94	--	124	109	TR 461	--	99	--	--	--
GARST						TR 464	104	--	--	--	--
5440	92	--	--	--	--	TR 481	113	--	--	102	--
5515	101	95	--	109	102	MATURITY CHECK					
5631Y	92	95	--	82	90	C 305	96	96	--	83	92
5664	106	70	--	96	91	OK11xTX2741	89	106	--	95	96
9135	--	112	--	--	--	RS 610	80	104	--	76	87
GOLDEN WORLD						TX2752xTX2783	96	89	--	92	92
GW 1489	96	102	--	98	99	TX2752xTX430	100	128	--	123	117
GW 7431	81	89	--	104	91	TX3042xTX2737	93	114	--	87	98
HOEGEMEYER						NO GAUCHO*					
6712	99	--	--	--	--	TX2752xTX430	90	105	--	113	103
6766	100	--	--	--	--	TX3042xTX2737	87	112	--	112	104
6874	105	--	--	--	--						
MIDLAND						AVERAGES	92	84	--	66	80
M-4664	93	--	--	--	--	CV(%)	8	11	--	16	--
M-4757Y	112	112	--	110	111	LSD(0.05)**	11	13	--	22	--
M-4774	102	112	--	86	100						

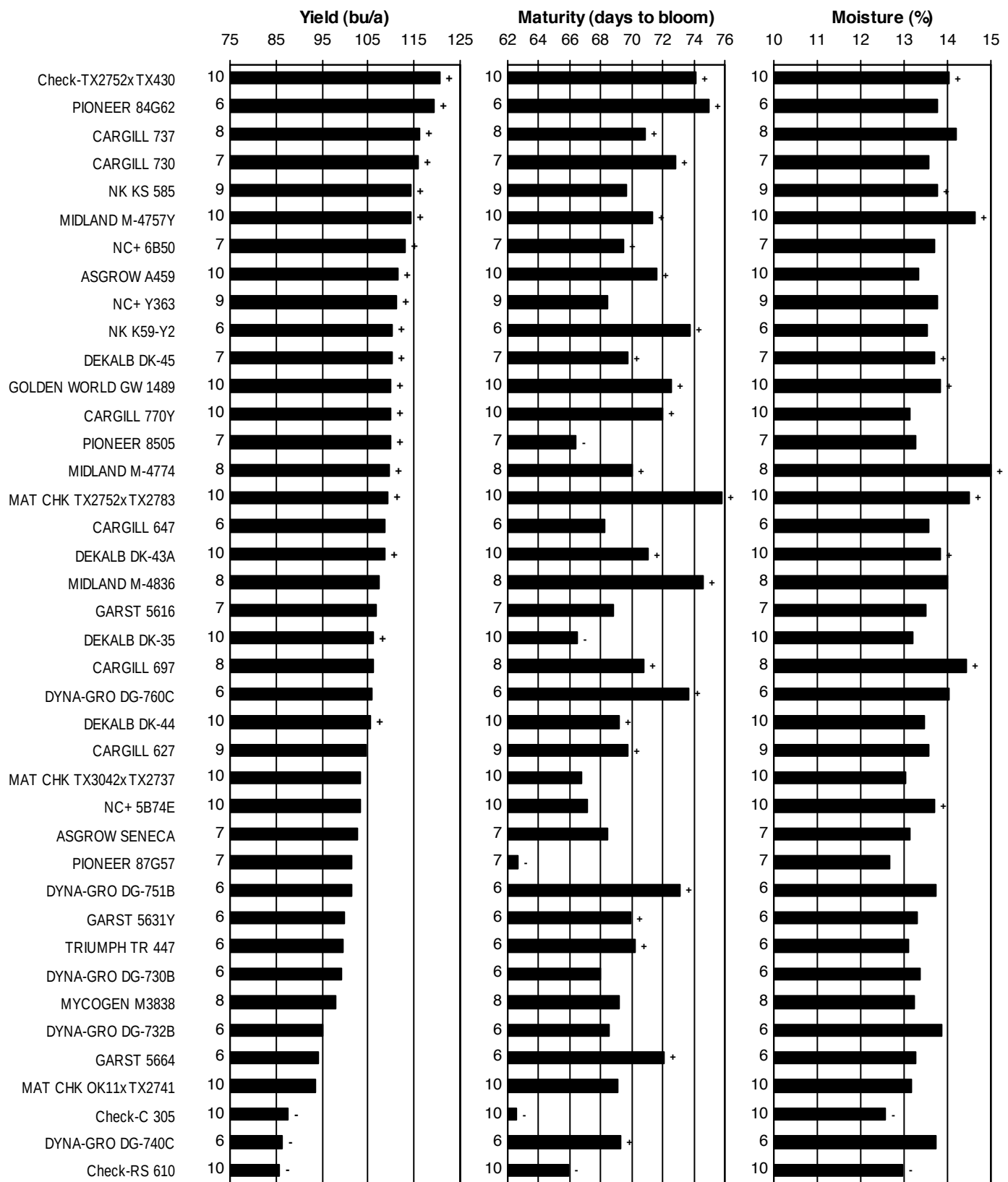
¹ ELD = Ellis Co., Hays

THD = Thomas Co., Colby

GRD = Greeley Co., Tribune

FND = Finney Co., Garden City

FIGURE 9. WEST Kansas sorghum hybrid standardized performance summary, 1998-2000.



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

NORTH CENTRAL KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL, IRRIGATED

COUNTY: REPUBLIC

LOCATION: Irrigation Experiment Field, Scandia

TEST SITE: Crete silt loam

1999 CROP: Corn

1998 CROP: Soybean

FERTILIZER (lbs/acre): 175 N 30 P₂O₅ 0 K₂O

PLANTING DATE: 5/15/00

HARVEST DATE: 9/15/00

COOPERATORS: Barney Gordon, agronomist; Michael Larson and Allan Milner, technicians

TARGET POPULATION: 84,000 plants/acre, 2.5 in. spacing

FINAL STAND (% of target): 100

BLOOM DATES: 7/18/00 - 7/28/00

YIELD: Avg. (bu/a) 158 Range (bu/a) 124 - 206

LSD (bu/a) 8 CV (%) 4

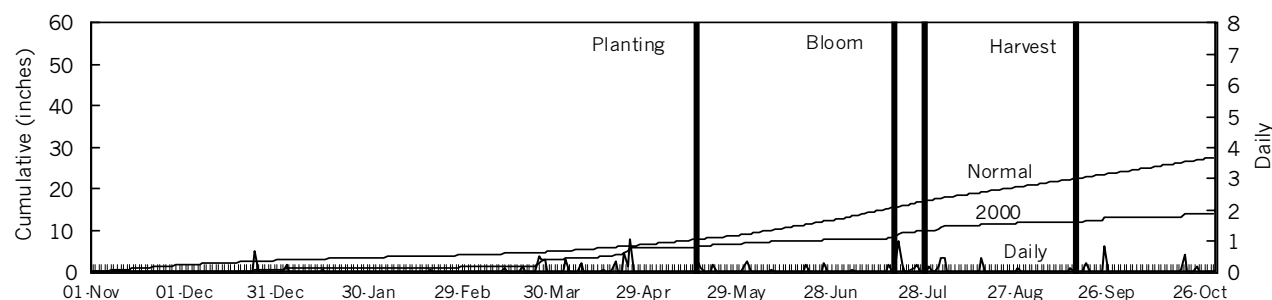
INSECTICIDE EFFECT (bu/a):	Check 1	Check 2	Avg.
Yield with insecticide	127	169	148
Yield without insecticide	131	161	146
Insecticide advantage	-4 ns	8 ns	2 ns

* = significant with 95% confidence
ns = not significant at 95% level

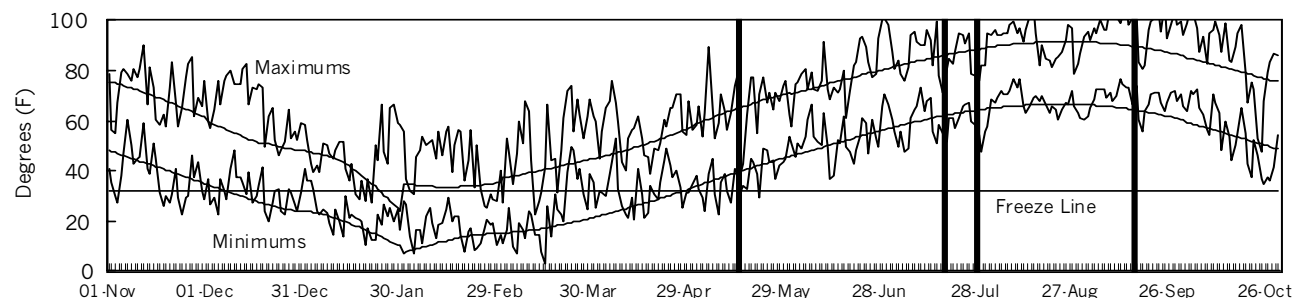
2000 GROWING CONDITIONS

Adequate moisture at planting resulted in good stands in all plots. Extremely dry, hot conditions characterized the rest of the growing season. Frequent irrigations were needed to maintain adequate soil moisture.

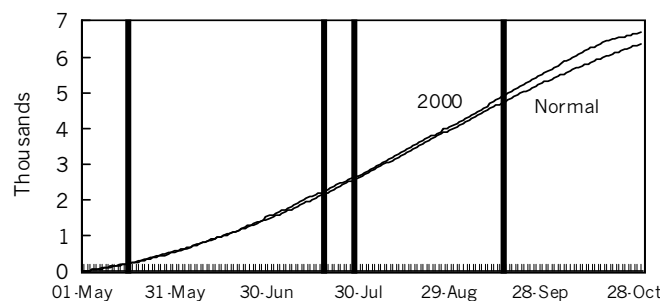
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	3.1	1.7	45	38	0	0
May	0.7	2.3	51	52	524	548
June	1.2	3.6	65	63	938	877
July	2.2	4.7	73	73	1221	1210
August	1.8	3.4	79	78	1407	1379
Sep.	1.3	3.3	83	77	1473	1288
Oct.	0.9	3.6	71	68	1141	1046
Season Totals	11.2	22.6	67	64	6705	6348

TABLE 16. Republic Co. Irr. Grain Sorghum Performance Test, 1998-2000.

		YIELD AS %																
		ACRE YIELD, BUSHEL					OF TEST AVERAGE			1999-2000		2000						
BRAND	NAME	2000	1999	1998	2-Yr.	3-Yr.	2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
					AVG.	AVG.												
MATURITY CHECK	C 305	126	130	--	128	--	80	81	--	60	13	64	13	58	47	--	97	1.0
MATURITY CHECK	OK11xTX2741	144	132	--	138	--	91	82	--	63	14	64	15	59	51	--	100	1.0
MATURITY CHECK	RS 610	124	135	--	130	--	79	84	--	62	14	64	15	58	49	--	103	1.0
MIDLAND	M-4664	155	--	--	--	--	98	--	--	--	--	66	14	58	49	--	100	1.0
MATURITY CHECK	TX3042xTX2737	127	159	--	143	--	80	99	--	64	13	67	13	59	52	--	101	1.0
NO GAUCHO*	TX3042xTX2737	131	--	--	--	--	83	--	--	--	--	67	14	59	49	--	100	1.0
KAYSTAR	X-060	147	--	--	--	--	93	--	--	--	--	67	16	59	50	--	103	1.0
NC+	7B47	144	--	--	--	--	91	--	--	--	--	68	15	59	48	--	104	1.0
ASGROW	A459	165	155	--	160	--	105	96	--	68	13	71	14	60	50	--	98	1.0
MYCOGEN	3694	170	155	--	163	--	108	97	--	69	14	71	15	59	49	--	97	1.0
TRIUMPH	TR 461	149	--	--	--	--	94	--	--	--	--	71	15	59	52	--	99	1.0
AGRIPRO	AP 2731	156	176	--	166	--	99	109	--	68	15	71	17	59	45	--	99	1.0
MIDLAND	M-4774	158	--	--	--	--	100	--	--	--	--	71	17	59	48	--	99	1.0
MIDLAND	XM-4838	168	--	--	--	--	107	--	--	--	--	71	17	59	55	--	98	1.0
AGRIPRO	AP 2838	146	171	--	158	--	92	106	--	68	14	72	15	58	55	--	99	1.0
MATURITY CHECK	TX2752xTX430	169	171	--	170	--	107	106	--	69	14	72	16	58	52	--	100	1.0
NO GAUCHO*	TX2752xTX430	161	--	--	--	--	102	--	--	--	--	72	16	58	51	--	99	1.0
WILLCROSS	GB9057-W	149	--	--	--	--	95	--	--	--	--	72	16	59	53	--	98	1.0
ASGROW	A571	162	185	--	174	--	103	115	--	69	15	72	17	57	54	--	101	1.0
DEKALB	DK-53	179	174	--	177	--	113	108	--	70	15	72	17	59	53	--	101	1.0
MYCOGEN	3696	145	157	--	151	--	92	97	--	66	15	72	18	58	49	--	99	1.0
PIONEER	82G63	179	--	--	--	--	113	--	--	--	--	72	18	58	49	--	100	1.0
MONSANTO	X914	184	--	--	--	--	117	--	--	--	--	72	19	58	53	--	99	1.0
KAYSTAR	X-080	139	--	--	--	--	88	--	--	--	--	73	15	59	54	--	100	1.0
MATURITY CHECK	TX2752xTX2783	169	164	--	166	--	107	102	--	70	14	73	15	60	55	--	98	1.0
WILLCROSS	GB9347-TR	162	--	--	--	--	103	--	--	--	--	73	15	58	53	--	98	1.0
MONSANTO	X918	177	--	--	--	--	112	--	--	--	--	73	16	59	55	--	102	1.0
ASGROW	MISSILE	190	180	--	185	--	121	112	--	70	15	73	17	59	50	--	99	1.0
MIDLAND	XM-2005	144	--	--	--	--	91	--	--	--	--	73	17	58	53	--	100	1.0
PIONEER	84G62	206	182	--	194	--	131	113	--	71	15	73	17	59	55	--	102	1.0
DEKALB	DK-54	187	169	--	178	--	119	105	--	70	15	73	18	58	56	--	103	1.0
MIDLAND	XM-2002	133	--	--	--	--	84	--	--	--	--	73	18	57	50	--	101	1.0
ASGROW	A581	181	--	--	--	--	115	--	--	--	--	73	19	57	52	--	100	1.0
MIDLAND	M-4836	140	171	--	156	--	89	106	--	70	16	74	19	58	50	--	99	1.0
	AVERAGES	158	161	--	159	--	158	161	--	68	14	71	16	59	51	--	100	1.0
	CV(%)	4	3	--	--	--	4	3	--	--	--	1	9	1	2	--	3	1.7
	LSD(0.05)**	8	6	--	--	--	5	4	--	--	--	1	2	1	1	--	NS	NS

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

SOUTH CENTRAL KANSAS GRAIN SORGHUM TEST ON SANDY LOAM, IRRIGATED

COUNTY: STAFFORD

LOCATION: Sandyland Experiment Field, St. John

TEST SITE: Naron loamy fine sand

1999 CROP: Soybean

1998 CROP: Wheat

FERTILIZER (lbs/acre): 200 N 0 P₂O₅ 0 K₂O

PLANTING DATE: 5/25/00

HARVEST DATE: 11/1/00

COOPERATORS: Victor Martin, agronomist; Ron Cunningham and Jeff Scott, technicians

TARGET POPULATION: 84,000 plants/acre, 2.5 in. spacing

FINAL STAND (% of target): 87

BLOOM DATES: 7/24/00 - 8/4/00

YIELD: Avg. (bu/a) 106 Range (bu/a) 80 - 128

LSD (bu/a) 16 CV (%) 13

INSECTICIDE EFFECT (bu/a): Check 1 Check 2 Avg.

Yield with insecticide 80 110 95

Yield without insecticide 111 * 126 * 118 *

Insecticide advantage -31 * -16 * -24 *

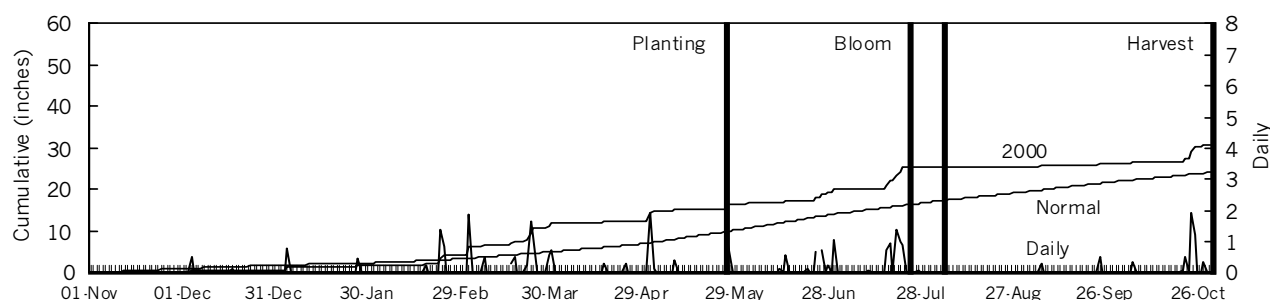
* = significant with 95% confidence

ns = not significant at 95% level

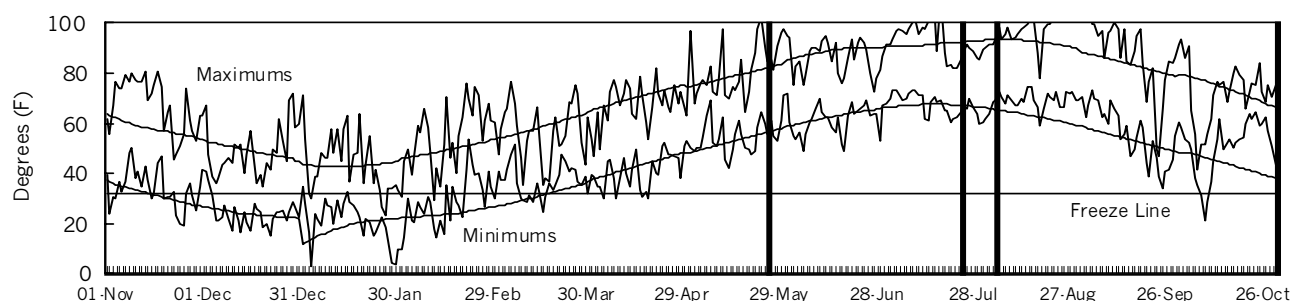
2000 GROWING CONDITIONS

Initial stands and early growth were good. Hot winds caused extremely stressful conditions that lowered yields and increased variability. Even flowering dates and plant heights were not as consistent as usual.

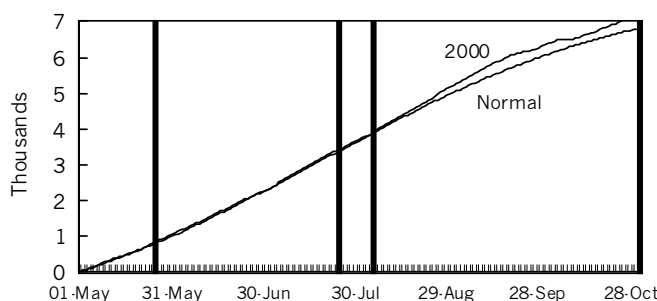
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	0.6	2.0	54	57	0	0
May	4.1	3.4	68	66	1032	971
June	2.5	3.7	74	76	1189	1252
July	6.3	2.9	80	79	1436	1407
August	0.1	2.5	83	78	1523	1356
Sep.	0.8	2.5	72	69	1129	1044
Oct.	4.6	2.2	62	59	856	769
Season Totals	18.9	19.1	70	69	7165	6800

TABLE 17. Stafford Co. Irr. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS % OF TEST AVERAGE			1999-2000		2000						
		2000	1999	1998	2-Yr. 3-Yr.		2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
					AVG.	AVG.												
TRIUMPH	TR 438	101	--	--	--	--	96	--	--	--	--	60	16	57	50	0	94	1.2
SG	SG-96254	89	--	--	--	--	84	--	--	--	--	61	16	56	47	0	84	1.2
MATURITY CHECK	RS 610	97	156	90	127	115	92	96	81	55	13	62	16	57	46	0	91	1.2
KAYSTAR	X-060	95	--	--	--	--	90	--	--	--	--	64	15	58	47	0	97	1.2
MATURITY CHECK	TX2752xTX430	110	183	106	146	133	104	113	95	58	12	64	15	57	45	0	95	1.1
NC+	7R83	100	167	109	134	126	95	103	98	58	12	64	15	57	47	0	83	1.1
MATURITY CHECK	C 305	114	133	97	124	115	108	82	87	54	12	64	16	56	48	0	86	1.2
MIDLAND	M-4774	101	153	103	127	119	95	94	93	57	13	64	16	58	49	0	84	1.2
NO GAUCHO*	TX3042xTX2737	111	--	--	--	--	105	--	--	--	--	64	16	57	51	0	91	1.1
SG	SG-97619	97	--	--	--	--	92	--	--	--	--	64	16	57	55	1	88	1.2
WILLCROSS	GB9057-W	95	--	--	--	--	90	--	--	--	--	64	16	58	49	0	86	1.1
WILLCROSS	GB9347-TR	89	--	--	--	--	84	--	--	--	--	64	16	55	47	0	83	1.1
AGRIPRO	AP 2731	112	174	--	143	--	106	107	--	58	12	65	15	58	50	1	83	1.4
FRONTIER	F647E	98	--	--	--	--	93	--	--	--	--	65	16	56	46	1	80	1.0
MATURITY CHECK	TX2752xTX2783	104	153	118	128	125	98	94	106	59	13	65	16	57	49	1	91	1.1
DEKALB	DK-53	110	177	133	143	140	104	109	119	59	12	66	15	58	53	0	93	1.2
DEKALB	DK-54	100	190	124	145	138	95	117	111	58	12	66	15	57	49	0	83	1.1
FRONTIER	F700E	97	--	--	--	--	92	--	--	--	--	66	15	58	52	0	86	1.1
MATURITY CHECK	OK11xTX2741	119	141	104	130	121	113	87	93	56	12	66	15	57	52	0	82	1.2
SG	SG-94249	88	--	--	--	--	83	--	--	--	--	66	15	58	46	1	84	1.1
SG	SG-97157	109	--	--	--	--	103	--	--	--	--	66	15	59	49	0	95	0.9
SG	SG-99547	105	--	--	--	--	100	--	--	--	--	66	15	58	47	0	80	1.1
ASGROW	A571	111	157	129	134	132	104	97	115	58	13	66	16	57	49	0	81	1.1
DELANGE	DSA 147	117	--	--	--	--	111	--	--	--	--	66	16	58	53	1	94	1.1
MIDLAND	M-4757Y	126	163	118	145	136	119	101	106	59	13	66	16	57	53	0	85	1.3
NC+	7B47	114	154	144	134	137	108	95	129	57	13	66	16	57	52	0	98	1.1
MATURITY CHECK	TX3042xTX2737	80	144	87	112	104	75	89	78	55	13	66	17	56	46	1	85	1.1
MONSANTO	X914	118	--	--	--	--	112	--	--	--	--	67	15	58	46	0	88	1.1
NO GAUCHO*	TX2752xTX430	126	--	--	--	--	119	--	--	--	--	67	15	55	52	0	93	1.1
PIONEER	84G62	120	162	134	141	139	113	100	120	60	12	67	15	58	50	0	89	1.2
AGRIPRO	AP 2838	92	163	--	128	--	87	100	--	59	13	67	16	58	48	0	69	1.1
ASGROW	A459	98	161	99	129	119	93	99	88	58	13	67	16	58	49	0	91	1.1
ASGROW	MISSILE	117	187	--	152	--	110	115	--	60	13	67	16	58	48	0	85	1.1
KAYSTAR	X-080	115	--	--	--	--	109	--	--	--	--	67	16	56	51	0	87	1.1
MYCOGEN	3696	116	136	--	126	--	110	84	--	58	12	67	16	56	49	0	79	1.0
DELANGE	DSA 133	110	165	--	138	--	104	102	--	59	13	68	16	57	46	0	85	1.1
TRIUMPH	TR 82-G	110	170	113	140	131	104	105	101	61	13	68	16	58	48	0	92	1.1
PIONEER	82G63	113	--	--	--	--	107	--	--	--	--	69	15	58	49	1	91	1.1
SG	SG-91190	93	--	--	--	--	88	--	--	--	--	69	15	58	47	1	80	1.0
MONSANTO	X918	128	--	--	--	--	121	--	--	--	--	69	16	58	52	0	96	1.1
MYCOGEN	3694	97	167	--	132	--	92	103	--	60	12	69	16	57	46	1	77	1.1
ASGROW	A581	99	169	--	134	--	94	104	--	61	12	71	15	56	47	0	92	1.1
	AVERAGES	106	162	112	134	127	106	162	112	58	13	66	16	57	49	0	87	1.1
	CV(%)	13	10	14	--	--	13	10	14	--	--	6	5	2	7	162	14	12.6
	LSD(0.05)**	16	19	18	--	--	15	19	16	--	--	NS	NS	1	4	NS	NS	NS

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

NORTHWESTERN KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL, IRRIGATED

COUNTY: THOMAS

LOCATION: Northwest Research-Extension Center, Colby

TEST SITE: Keith silt loam

1999 CROP: Soybean

1998 CROP: Sorghum

FERTILIZER (lbs/acre): 120 N 30 P₂O₅ 0 K₂O

PLANTING DATE: 5/24/00

HARVEST DATE: 10/18/00

COOPERATORS: Patrick Evans, agronomist

TARGET POPULATION: 90,000 plants/acre, 2.3 in. spacing

FINAL STAND (% of target): 75

BLOOM DATES: 7/30/00 - 8/18/00

YIELD: Avg. (bu/a) 99 Range (bu/a) 73 - 121

LSD (bu/a) 16

CV (%) 14

INSECTICIDE EFFECT (bu/a): Check 1 Check 2 Avg.

Yield with insecticide 107 113 110

Yield without insecticide 102 89 * 96

Insecticide advantage 4^{ns} 24^{*} 14^{ns}

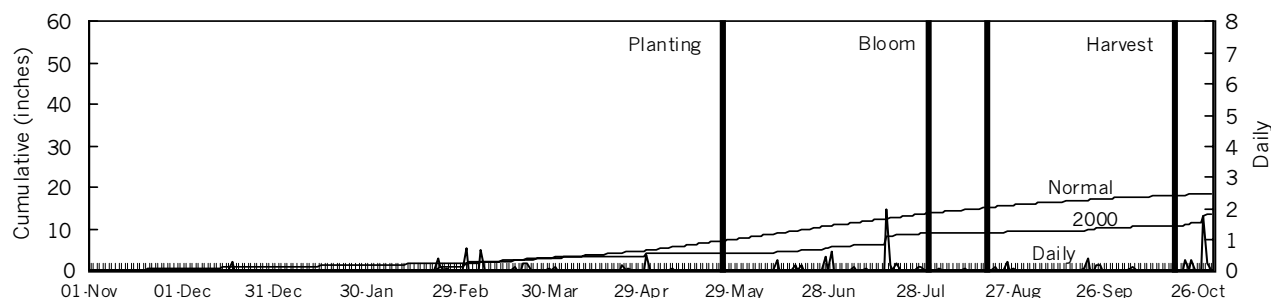
* = significant with 95% confidence

ns = not significant at 95% level

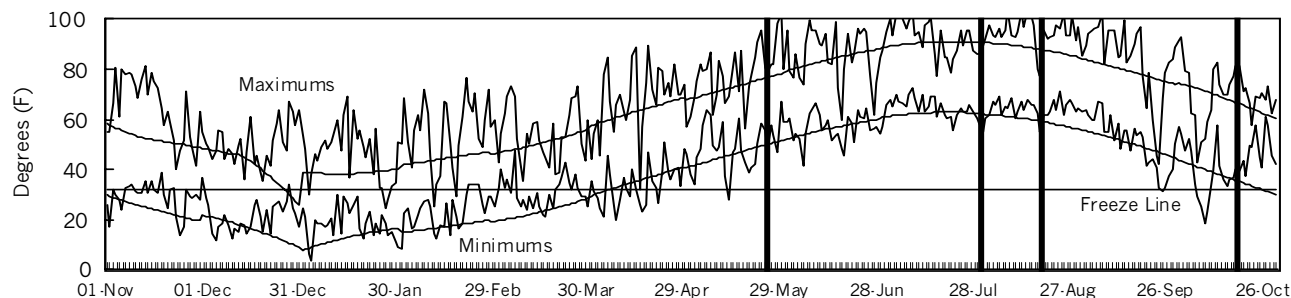
2000 GROWING CONDITIONS

Hot, dry, windy conditions at planting caused nonuniform emergence and generally poor stands. The hot, dry weather continued for the rest of the season. Later maturing hybrids may have been killed prematurely by a hard freeze on October 8.

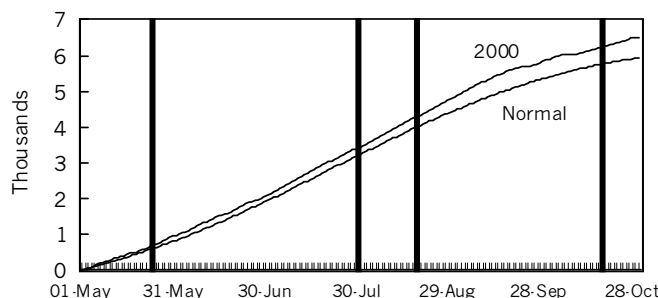
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	0.5	1.8	51	49	0	0
May	0.6	2.9	64	60	908	781
June	1.8	3.1	71	70	1112	1093
July	2.9	3.0	79	76	1384	1317
August	0.7	2.2	80	74	1414	1241
Sep.	0.8	1.5	68	65	1013	928
Oct.	3.0	1.1	56	53	691	574
Season Totals	10.4	15.6	67	64	6522	5934

TABLE 18. Thomas Co. Irr. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	ACRE YIELD, BUSHEL					YIELD AS %			1999-2000		2000						
							OF TEST											
							AVERAGE											
		2000	1999	1998	2-Yr. AVG.	3-Yr. AVG.	2000	1999	1998	Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
MATURITY CHECK	C 305	91	135	95	113	107	92	82	90	65	12	66	12	56	42	5	68	1.0
MATURITY CHECK	RS 610	99	137	91	118	109	100	83	86	70	12	72	11	54	43	3	59	0.9
NO GAUCHO*	TX3042xTX2737	102	--	--	--	--	103	--	--	--	--	72	12	56	43	0	82	1.0
MIDLAND	M-4774	117	171	--	144	--	118	104	--	73	13	74	12	54	43	0	92	0.8
MATURITY CHECK	TX3042xTX2737	107	150	117	128	124	108	91	110	71	13	74	13	56	43	1	81	0.9
AGRIPRO	AP 2731	107	171	--	139	--	108	104	--	73	14	75	12	53	43	0	76	0.8
MIDLAND	XM-2005	106	--	--	--	--	107	--	--	--	--	75	13	59	41	0	85	0.8
KAYSTAR	X-060	101	--	--	--	--	102	--	--	--	--	76	13	58	41	0	91	0.7
MATURITY CHECK	OK11xTX2741	111	145	105	128	120	112	88	100	73	14	76	13	57	41	0	64	1.0
MIDLAND	M-4757Y	99	170	118	134	129	100	103	111	74	14	76	13	56	43	1	81	0.8
MIDLAND	XM-4838	112	--	--	--	--	113	--	--	--	--	76	13	57	46	0	78	0.9
ASGROW	A459	83	169	123	126	125	84	103	116	75	13	77	11	54	41	0	84	0.7
DEKALB	DK-53	110	174	98	142	127	110	106	93	75	14	77	13	56	44	0	67	0.9
FRONTIER	F700E	102	--	--	--	--	103	--	--	--	--	77	13	58	42	3	78	0.8
TRIUMPH	TR 461	88	--	--	--	--	89	--	--	--	--	77	13	57	42	2	76	0.7
AGRIPRO	HY 2660	85	163	121	124	123	85	99	115	76	13	78	12	53	39	0	79	0.7
AGRIPRO	AP 2468	100	--	--	--	--	101	--	--	--	--	79	13	56	37	0	91	0.7
KAYSTAR	X-080	105	--	--	--	--	106	--	--	--	--	80	11	52	42	0	72	0.8
NO GAUCHO*	TX2752xTX430	89	--	--	--	--	90	--	--	--	--	80	12	55	39	1	70	0.8
MATURITY CHECK	TX2752xTX430	113	178	81	146	124	114	108	77	77	14	80	13	54	42	0	80	0.8
PIONEER	84G82	92	--	--	--	--	93	--	--	--	--	80	14	58	39	0	82	0.8
MYCOGEN	3696	107	--	--	--	--	108	--	--	--	--	81	13	55	39	0	56	0.9
DEKALB	DK-54	115	193	118	154	142	116	117	111	77	14	82	13	53	45	0	66	0.9
FRONTIER	F647E	96	--	--	--	--	96	--	--	--	--	82	13	54	42	1	41	0.9
MATURITY CHECK	TX2752xTX2783	81	183	101	132	122	82	111	96	79	14	82	13	54	42	4	88	0.6
MONSANTO	X918	121	--	--	--	--	122	--	--	--	--	82	13	53	44	0	67	0.8
ASGROW	MISSILE	93	166	--	129	--	94	101	--	80	15	82	14	57	42	0	69	0.7
MONSANTO	X914	98	--	--	--	--	98	--	--	--	--	82	14	57	44	1	37	0.9
MIDLAND	M-4836	75	165	--	120	--	76	100	--	78	14	83	13	55	41	0	69	0.8
PIONEER	84G62	91	179	--	135	--	92	109	--	78	15	83	13	55	41	1	87	0.6
ASGROW	A571	94	175	92	135	120	95	106	87	81	14	85	12	52	41	0	87	0.6
MIDLAND	XM-2002	73	--	--	--	--	74	--	--	--	--	86	12	52	39	0	102	0.6
ASGROW	A581	108	183	--	146	--	109	111	--	83	14	86	13	54	45	0	80	0.8
	AVERAGES	99	165	106	132	123	99	165	106	76	14	79	13	55	42	1	75	0.8
	CV(%)	14	6	10	--	--	14	6	10	--	--	2	7	5	5	268	18	15.6
	LSD(0.05)**	16	11	12	--	--	17	7	12	--	--	2	1	3	3	2	15	0.1

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

WEST CENTRAL KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL, IRRIGATED

COUNTY: GREELEY

LOCATION: Southwest Res.-Ext. Center, Tribune

TEST SITE: Ulysses silt loam

1999 CROP: Wheat

1998 CROP: Fallow

FERTILIZER (lbs/acre): 187 N 23 P₂O₅ 0 K₂O

PLANTING DATE: 5/22/00

HARVEST DATE: 10/9/00

COOPERATORS: Alan Schlegel, agronomist; Ed Beason, agricultural technician

TARGET POPULATION: 90,000 plants/acre, 2.3 in. spacing

FINAL STAND (% of target): 45

BLOOM DATES: 8/9/00 - 9/7/00

YIELD: Avg. (bu/a) 61 Range (bu/a) 6 - 101

LSD (bu/a) 15 CV (%) 21

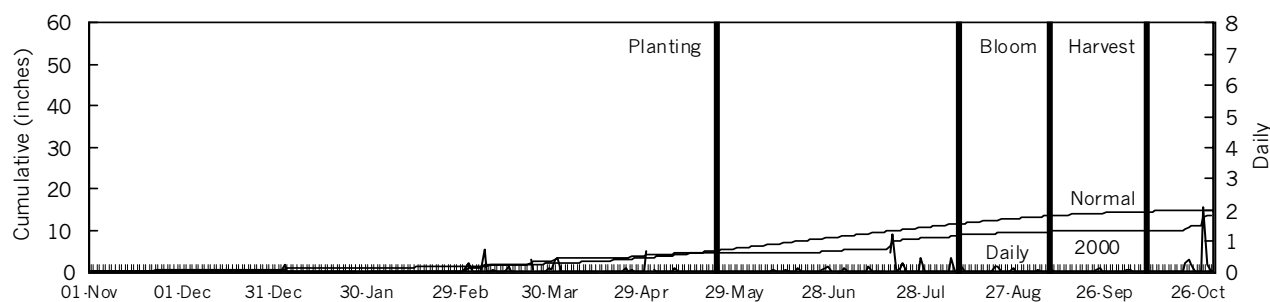
INSECTICIDE EFFECT (bu/a):	Check 1	Check 2	Avg.
Yield with insecticide	72	67	70
Yield without insecticide	76	55	66
Insecticide advantage	-4 ^{ns}	12 ^{ns}	4 ^{ns}

* = significant with 95% confidence
ns = not significant at 95% level

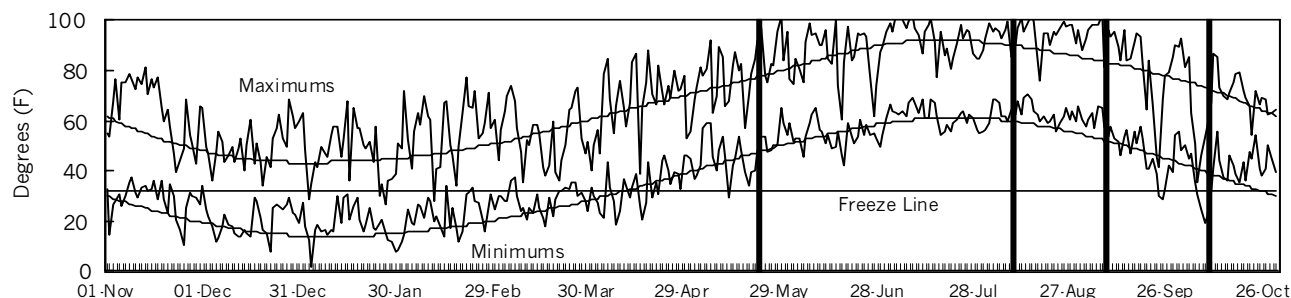
2000 GROWING CONDITIONS

Poor stands resulted from dry spring conditions and heavy wheat residue. Yield was correlated significantly to stand ($r=0.52$) and correlated inversely to maturity as measured by days to half bloom ($r=-0.57$) and harvest moisture ($r=-0.65$). Iron chlorosis symptoms also were apparent and likely contributed to yield variability.

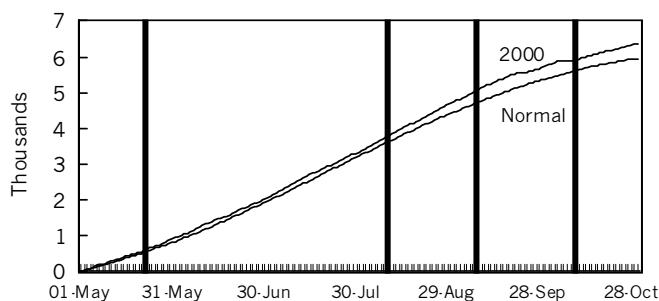
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	1.1	1.3	51	50	0	0
May	0.9	2.4	63	60	880	786
June	0.6	2.5	70	70	1077	1093
July	3.1	2.5	78	76	1352	1307
August	1.2	2.2	79	74	1387	1231
Sep.	0.4	1.3	68	65	1013	944
Oct.	3.5	0.7	55	53	652	597
Season Totals	10.8	12.9	66	64	6361	5958

TABLE 19. Greeley Co. Irr. Grain Sorghum Performance Test, 1998-2000.

BRAND	NAME	YIELD AS %										1999-2000				2000			
		ACRE YIELD, BUSHEL					OF TEST			AVERAGE		Days Grain		Days Grain		Test Plnt		Final Hds	
		2000		1999		1998		2-Yr.		3-Yr.		to Moist.		to Moist.		Wt. Ht.		Ldg	
		2000	1999	1998	2000	1999	1998	2000	1999	2000	1999	Blm	%	Blm	%	lb/bu	in.	%	%
TRIUMPH	TR 438	72	--	--	--	--	--	117	--	--	--	--	--	79	14	57	139	--	49
MATURITY CHECK	C 305	47	90	124	68	87		76	77	82		74	13	79	15	55	90	--	32
MATURITY CHECK	RS 610	75	85	118	80	92		123	73	77		77	14	84	16	56	116	--	41
NO GAUCHO*	TX3042xTX2737	76	--	--	--	--		124	--	--		--	--	84	16	56	118	--	42
TRIUMPH	TR 432	45	--	--	--	--		74	--	--		--	--	84	16	54	120	--	43
MATURITY CHECK	TX3042xTX2737	72	119	151	96	114		118	103	99		78	14	86	16	56	140	--	50
PIONEER	85G85	101	--	--	--	--		165	--	--		--	--	87	15	57	145	--	51
NC+	5B74E	74	--	--	--	--		121	--	--		--	--	88	18	54	126	--	45
MYCOGEN	M3838	75	--	--	--	--		122	--	--		--	--	89	18	55	109	--	39
SG	SG-94249	89	--	--	--	--		145	--	--		--	--	90	18	55	155	--	55
AGRIPRO	AP 2731	99	114	--	106	--		161	98	--		83	15	91	18	55	148	--	52
MIDLAND	M-4774	87	123	116	105	108		142	106	76		83	15	91	19	54	145	--	51
MIDLAND	M-4757Y	91	131	143	111	122		149	113	94		83	15	92	18	55	143	--	51
MONSANTO	X918	85	--	--	--	--		138	--	--		--	--	93	18	53	124	--	44
KAYSTAR	X-060	81	--	--	--	--		132	--	--		--	--	94	17	54	153	--	54
DEKALB	DK-54	97	129	168	113	131		158	111	111		85	14	95	17	53	148	--	52
ASGROW	A459	94	129	161	111	128		153	112	106		86	15	95	18	54	150	--	53
KAYSTAR	X-080	61	--	--	--	--		99	--	--		--	--	96	20	49	109	--	39
MATURITY CHECK	OK11xTX2741	37	106	140	72	94		60	92	92		87	16	96	20	49	94	--	33
SG	SG-97619	53	--	--	--	--		86	--	--		--	--	96	20	51	131	--	47
DEKALB	DK-53	51	131	157	91	113		83	114	103		88	17	96	21	50	100	--	36
PIONEER	84G62	84	--	--	--	--		136	--	--		--	--	97	19	53	143	--	51
MONSANTO	X914	38	--	--	--	--		61	--	--		--	--	98	22	49	101	--	36
MYCOGEN	3696	38	--	--	--	--		62	--	--		--	--	98	22	48	121	--	43
AGRIPRO	AP 2838	63	124	--	93	--		102	107	--		88	17	98	23	48	116	--	41
FRONTIER	F700E	36	--	--	--	--		59	--	--		--	--	100	20	50	126	--	45
MATURITY CHECK	TX2752xTX2783	60	110	184	85	118		99	95	121		92	16	100	20	51	160	--	57
ASGROW	MISSILE	41	113	--	77	--		67	98	--		92	16	100	21	49	128	--	45
SG	SG-91190	21	--	--	--	--		34	--	--		--	--	100	21	48	131	--	47
MATURITY CHECK	TX2752xTX430	67	131	175	99	124		110	113	115		91	17	100	23	46	155	--	55
ASGROW	A571	55	118	165	86	113		90	102	109		91	16	101	20	47	150	--	53
NO GAUCHO*	TX2752xTX430	55	--	--	--	--		90	--	--		--	--	101	24	45	139	--	49
SG	SG-99547	21	--	--	--	--		34	--	--		--	--	102	24	46	85	--	30
ASGROW	A581	47	116	--	82	--		76	101	--		95	17	104	22	45	153	--	54
SG	SG-97157	15	--	--	--	--		24	--	--		--	--	108	21	45	135	--	48
FRONTIER	F647E	6	--	--	--	--		11	--	--		--	--	108	24	44	49	--	17
	AVERAGES	61	116	152	88	110		61	116	152		85	15	94	19	51	128	--	45
	CV(%)	21	8	6	--	--		21	8	6		--	--	2	10	4	18	--	18
	LSD(0.05)**	15	11	12	--	--		25	9	8		--	--	2	2	3	26	--	9

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

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

SOUTHWESTERN KANSAS GRAIN SORGHUM TEST ON SILT LOAM SOIL, IRRIGATED

COUNTY: FINNEY

LOCATION: Southwest Research-Extension Center, Garde

TEST SITE: Keith silt loam

1999 CROP: Fallow

1998 CROP: Sorghum

FERTILIZER (lbs/acre): 100 N 0 P₂O₅ 0 K₂O

PLANTING DATE: 5/15/00

HARVEST DATE: 10/14/00

COOPERATORS: Merle Witt, agronomist

TARGET POPULATION: 90,000 plants/acre, 2.3 in. spacing

FINAL STAND (% of target): 97

BLOOM DATES: 7/8/00 - 7/31/00

YIELD: Avg. (bu/a) 103 Range (bu/a) 82 - 126

LSD (bu/a) 15 CV (%) 10

INSECTICIDE EFFECT (bu/a): Check 1 Check 2 Avg.

Yield with insecticide 95 108 101

Yield without insecticide 94 94 94

Insecticide advantage 1 ns 14 ns 7 ns

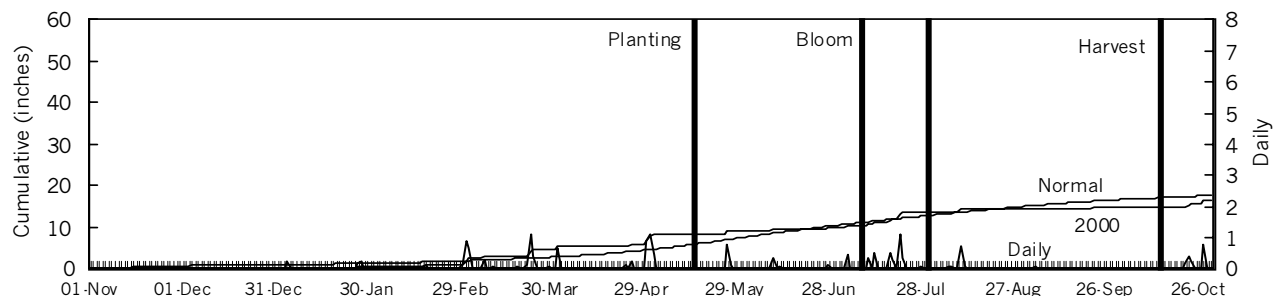
* = significant with 95% confidence

ns = not significant at 95% level

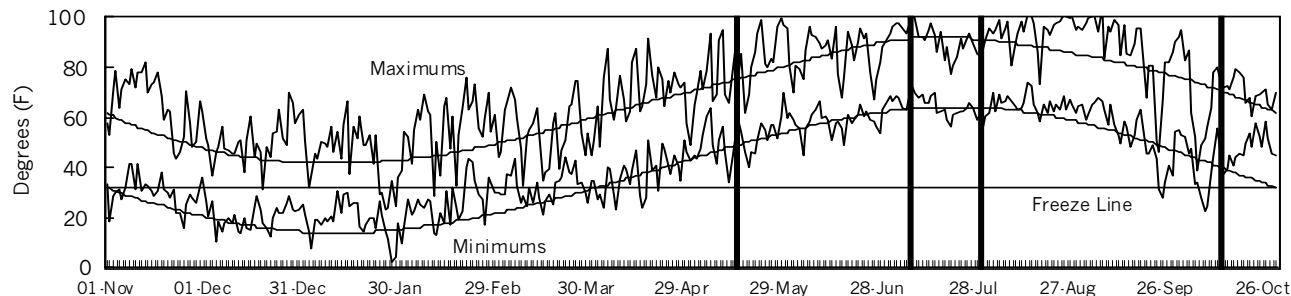
2000 GROWING CONDITIONS

Excellent seeding conditions resulted in good stands for all entries. Warm spring temperatures accelerated early growth. Hot, dry conditions in August and September caused rapid maturation and dry-down.

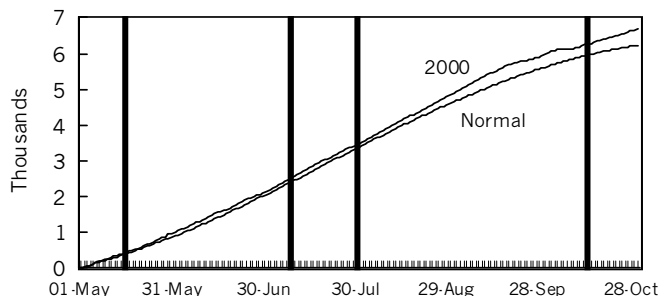
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation		Average Temp.		GDD	
	2000	Normal	2000	Normal	2000	Normal
April	1.0	1.7	53	51	0	0
May	3.4	2.9	65	62	948	842
June	0.7	2.9	72	72	1130	1145
July	3.8	2.5	78	78	1365	1352
August	1.0	2.2	80	75	1419	1275
Sep.	0.1	1.6	70	67	1087	986
Oct.	1.7	1.0	57	54	724	632
Season Totals	11.6	14.8	68	66	6672	6231

TABLE 20. Finney Co. Irr. Grain Sorghum Performance Test, 1998-2000.

		YIELD AS %																
		ACRE YIELD, BUSHEL					OF TEST			1999-2000		2000						
BRAND	NAME	2000	1999	1998	2-Yr.	3-Yr.	AVERAGE			Days to Blm	Grain Moist. %	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plant Ht. in.	Ldg %	Final Stand %	Hds per Plnt
					AVG.	AVG.	2000	1999	1998									
MATURITY CHECK	C 305	82	79	98	80	86	79	75	83	57	13	54	13	59	47	--	100	1.4
MATURITY CHECK	RS 610	83	75	85	79	81	81	72	72	61	12	59	12	60	50	--	85	1.6
NO GAUCHO*	TX3042xTX2737	94	--	--	--	--	91	--	--	--	--	63	12	60	53	--	104	1.4
MATURITY CHECK	TX3042xTX2737	95	90	101	93	95	92	86	86	63	13	64	12	60	55	--	93	1.5
MYCOGEN	3694	92	116	122	104	110	90	110	104	67	13	64	13	60	52	--	109	1.4
MIDLAND	M-4757Y	98	110	110	104	106	95	104	94	68	13	65	12	60	55	--	99	1.4
MIDWEST SEED	256	96	--	115	--	--	93	--	98	--	--	65	13	61	58	--	99	1.4
PIONEER	84G82	109	--	--	--	--	106	--	--	--	--	66	12	61	51	--	107	1.4
AGRIPRO	AP 2731	92	115	--	103	--	89	109	--	67	14	66	13	61	54	--	109	1.3
KAYSTAR	X-060	91	--	--	--	--	88	--	--	--	--	66	13	61	51	--	101	1.5
MATURITY CHECK	OK11xTX2741	91	89	117	90	99	88	85	99	68	13	66	13	61	48	--	90	1.4
MIDLAND	M-4774	93	100	--	97	--	91	95	--	68	14	66	13	61	53	--	109	1.3
NC+	6B50	87	101	--	94	--	84	96	--	67	13	66	13	60	51	--	104	1.4
AGRIPRO	AP 2838	93	105	116	99	105	91	100	99	68	13	67	13	60	52	--	96	1.5
DEKALB	DK-53	111	119	137	115	122	108	113	117	69	14	67	13	61	56	--	106	1.3
DEKALB	DK-54	85	120	119	102	108	82	114	101	68	14	67	13	61	57	--	103	1.3
KAYSTAR	X-080	101	--	--	--	--	98	--	--	--	--	67	13	60	53	--	99	1.5
TRIUMPH	TR 481	109	99	--	104	--	106	94	--	69	14	67	13	60	56	--	102	1.4
PIONEER	84G62	115	102	--	108	--	111	97	--	70	13	68	12	61	51	--	109	1.4
ASGROW	A459	121	99	133	110	118	118	94	113	68	13	68	13	61	53	--	112	1.3
MONSANTO	X918	114	--	--	--	--	111	--	--	--	--	68	13	61	57	--	102	1.3
FRONTIER	F700E	96	--	--	--	--	94	--	--	--	--	70	12	60	55	--	100	1.3
MONSANTO	X914	110	--	--	--	--	107	--	--	--	--	70	13	60	57	--	82	1.5
MATURITY CHECK	TX2752xTX430	108	123	130	116	120	105	117	111	71	13	71	13	60	53	--	93	1.4
NO GAUCHO*	TX2752xTX430	94	--	--	--	--	91	--	--	--	--	72	12	60	53	--	97	1.4
ASGROW	MISSILE	121	115	--	118	--	117	109	--	72	14	72	13	60	56	--	95	1.4
MATURITY CHECK	TX2752xTX2783	126	111	122	119	120	122	106	104	72	14	72	13	61	54	--	98	1.4
NC+	6B70	121	--	--	--	--	118	--	--	--	--	72	13	60	53	--	105	1.4
ASGROW	A571	104	113	122	109	113	101	108	104	72	13	73	13	60	56	--	107	1.2
FRONTIER	F647E	113	--	--	--	--	109	--	--	--	--	74	12	61	53	--	64	1.6
ASGROW	A581	103	121	--	112	--	100	115	--	75	14	75	13	60	61	--	107	1.1
MYCOGEN	3696	104	107	--	106	--	101	101	--	73	13	75	13	60	50	--	77	1.6
TRIUMPH	TR 82-G	123	107	130	115	120	119	102	111	73	14	75	13	61	56	--	104	1.2
NC+	7R83	126	123	121	124	123	122	116	103	74	14	77	13	60	52	--	33	2.2
	AVERAGES	103	105	118	104	109	103	105	118	68	13	68	13	60	54	--	97	1.4
	CV(%)	10	7	9	--	--	10	7	9	--	--	1	1	1	3	--	10	8.9
	LSD(0.05)**	15	11	14	--	--	14	10	12	--	--	1	0	0	2	--	13	0.2

* Not treated with Gaucho to estimate effect of seed-applied insecticide.

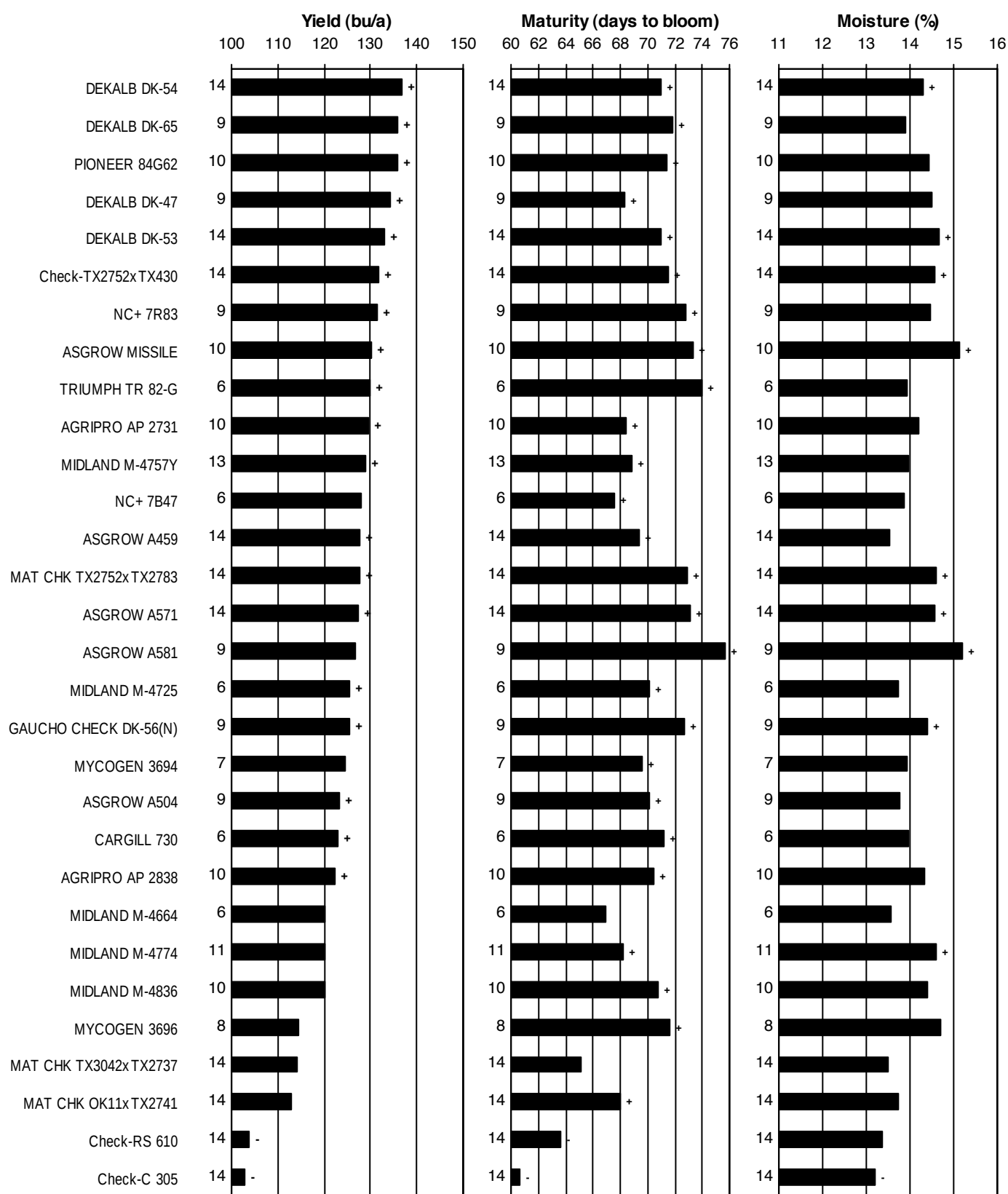
** Unless two varieties differ by more than the LSD, little confidence can be placed in one being superior to the other.

TABLE 21. Kansas IRRIGATED grain sorghum hybrid yield summary (% of test average), 2000.

BRAND/NAME	RPI ¹	STI	THI	GRI	FNI	AVG.	BRAND/NAME	RPI	STI	THI	GRI	FNI	AVG.
AGRIPRO							6B70	--	--	--	--	118	--
AP 2468	--	--	101	--	--	--	7B47	91	108	--	--	--	--
AP 2731	99	106	108	161	89	113	7R83	--	95	--	--	122	--
AP 2838	92	87	--	102	91	--	PIONEER						
HY 2660	--	--	85	--	--	--	82G63	113	107	--	--	--	--
ASGROW							84G62	131	113	92	136	111	117
A459	105	93	84	153	118	110	84G82	--	--	93	--	106	--
A571	103	104	95	90	101	99	85G85	--	--	--	165	--	--
A581	115	94	109	76	100	99	SG						
MISSILE	121	110	94	67	117	102	SG-91190	--	88	--	34	--	--
DEKALB							SG-94249	--	83	--	145	--	--
DK-53	113	104	110	83	108	104	SG-96254	--	84	--	--	--	--
DK-54	119	95	116	158	82	114	SG-97157	--	103	--	24	--	--
DELANGE							SG-97619	--	92	--	86	--	--
DSA 133	--	104	--	--	--	--	SG-99547	--	100	--	34	--	--
DSA 147	--	111	--	--	--	--	TRIUMPH						
FRONTIER							TR 432	--	--	--	74	--	--
F647E	--	93	96	11	109	--	TR 438	--	96	--	117	--	--
F700E	--	92	103	59	94	--	TR 461	94	--	89	--	--	--
KAYSTAR							TR 481	--	--	--	--	106	--
X-060	93	90	102	132	88	101	TR 82-G	--	104	--	--	119	--
X-080	88	109	106	99	98	100	WILLCROSS						
MIDLAND							GB9057-W	95	90	--	--	--	--
M-4664	98	--	--	--	--	--	GB9347-TR	103	84	--	--	--	--
M-4757Y	--	119	100	149	95	--	MATURITY CHECK						
M-4774	100	95	118	142	91	109	C 305	80	108	92	76	79	87
M-4836	89	--	76	--	--	--	OK11xTX2741	91	113	112	60	88	93
XM-2002	84	--	74	--	--	--	RS 610	79	92	100	123	81	95
XM-2005	91	--	107	--	--	--	TX2752xTX2783	107	98	82	99	122	102
XM-4838	107	--	113	--	--	--	TX2752xTX430	107	104	114	110	105	108
MIDWEST SEED							TX3042xTX2737	80	75	108	118	92	95
256	--	--	--	--	93	--	NO GAUCHO*						
MONSANTO							TX2752xTX430	102	119	90	90	91	98
X914	117	112	98	61	107	99	TX3042xTX2737	83	105	103	124	91	101
X918	112	121	122	138	111	121							
MYCOGEN							AVERAGES	158	106	99	61	103	105
3694	108	92	--	--	90	--	CV(%)	4	13	14	21	10	--
3696	92	110	108	62	101	95	LSD(0.05)**	5	15	17	25	14	--
M3838	--	--	--	122	--	--							
NC+													
5B74E	--	--	--	121	--	--							
6B50	--	--	--	--	84	--							

¹ RPI=Republic Co. Scandia STI=Stafford Co. St. John THI=Thomas Co. Colby GRI=Greeley Co. Tribune FNI=Finney Co. Garden City

**FIGURE 10. Kansas IRRIGATED sorghum hybrid
standardized performance summary, 1998-2000.**



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

TAN-PLANT SORGHUM TESTS

Tan-plant sorghums lack the purple pigments found in typical grain sorghum plants. The grain produced on tan-plant hybrids is more appealing to food processors and poultry feeders, who want to avoid potential discoloration associated with the purple pigments. Also, many of these hybrids have shown excellent yield potential and resistance to grain weathering.

A regional effort to characterize tan-plant hybrids was initiated in early 2000. This cooperative effort, involving researchers in Texas, Kansas, and Nebraska, included 10 testing locations in 2000: 6 in Texas, 3 in Kansas, and 1 in Nebraska. Eventually, a summary of results from the entire region including grain quality information should be available.

The following results are averaged over the 2 locations that survived in Kansas this year. Hybrid rankings were different at each location, so be sure to examine results from the individual tests in Table 23. Lodging was significant at both locations, especially at Hesston.

TABLE 22. Summary of Kansas tan-plant sorghum tests, 2000.

BRAND/NAME		Grain Color*	Plant Color*	Acre Yield, bushels	Yield, % of average	Days to Blm	Grain Moist. %	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt
CARGILL	888Y	Y	T	105	117	69	10	58	53	8	95	1.8
CARGILL	X24062	Y	T	104	116	68	11	59	52	0	112	1.5
WARNER	902W	W	T	101	113	67	11	58	57	37	104	1.3
CHECK	ATX631xTX436	W	T	100	111	69	11	58	57	26	94	1.4
CROSBYTON	CSC5054	W	T	99	110	62	10	58	46	25	115	1.2
CARGILL	X28663	R	T	98	109	63	11	58	47	33	92	1.4
TAES-DTR	ATX631*335-337	W	T	98	109	67	10	58	59	56	103	1.3
TAES-DTR	AHF8*727,728	W	T	97	108	68	11	59	54	31	115	1.3
CARGILL	X20464	R	T	96	107	65	10	58	49	51	113	1.6
DEKALB	X934	W	T	95	106	65	11	58	50	15	86	1.8
JOHNSON GEN.	7V7514	C	T	95	106	69	10	59	61	38	110	1.3
MMR GENETICS	JOWAR I	W	T	92	103	68	11	58	59	37	95	1.3
TAES-WLR	ATX631*R9603	W	T	92	102	69	10	57	57	30	99	1.3
TAES-WLR	ATX631*R9120	R	T	91	102	67	10	56	57	49	98	1.2
GARRISON & TOWN.	SG 98019	W	T	91	101	69	10	58	60	20	104	1.4
GARRISON & TOWN.	SG 20545	W	T	90	101	61	11	58	52	52	87	1.5
GARRISON & TOWN.	SG 20655	W	T	89	100	60	10	57	45	22	104	1.3
CHECK	ATXArg1*RTX436	W	T	89	100	69	10	58	51	12	93	1.4
GARRISON & TOWN.	SG 20541	W	T	89	99	61	10	57	58	54	98	1.1
GARRISON & TOWN.	SG 20386	W	T	88	98	72	10	56	53	5	83	1.7
CHECK	ATX631*TX2903	R	T	88	98	67	10	55	57	47	102	1.2
CROSBYTON	CSC5010	W	T	88	98	60	10	58	42	13	100	1.7
CROSBYTON	CSC6346	W	T	87	97	69	11	58	55	28	57	2.1
MMR GENETICS	MMR98W248*247	W	T	87	97	65	11	58	52	62	114	1.2
Novartis	1486	Y	P	85	95	63	10	58	45	17	69	2.2
CHECK	ATX635xTX436	W	T	85	95	71	11	59	65	64	77	1.7
MATURITY CHECK	OK11xTX2741	W	P	84	93	63	11	58	47	55	92	1.5
DEKALB	GRINGO	W	T	83	93	73	11	57	64	10	65	1.8
CHECK	ATX378*RTX430	R	P	82	92	64	11	57	60	93	115	1.2
MATURITY CHECK	TX3042xTX2737	B	P	82	91	62	10	57	51	60	58	2.3
DEKALB	D69	W	T	79	88	73	11	57	67	56	88	1.4
MMR GENETICS	MMR341/10	W	T	75	84	64	10	58	50	35	42	2.7
CHECK	ATX623*RTX430	W	P	74	83	64	11	57	62	86	117	1.3
TAES-WLR	ATX631*R88B928	W	T	73	82	68	11	58	64	91	109	1.2
	AVERAGES	--	--	90	90	66	11	58	55	39	94	1.5
	CV(%)	--	--	10	10	1	6	1	2	30	6	10.0
	LSD(0.05)**	--	--	9	10	1	1	1	1	11	6	0.1

* W = white, P = purple, T = tan, B = bronze, R = red, C = cream

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

TABLE 23. Tan-Plant Sorghum Tests, 2000.

BRAND/NAME	East Central Kansas, Ottawa									South Central Kansas, Hesston								
	Acre Yield, bushels	Yield, Days % of average Blm	Grain to Moist.	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt		Acre Yield, bushels	Yield, Days % of average Blm	Grain to Moist.	Test Wt. lb/bu	Plnt Ht. in.	Ldg %	Final Stand %	Hds per Plnt	
CARGILL																		
888Y	139	107	69	11	61	56	10	104	1.3	70	141	68	10	55	51	5	86	2.2
X20464	135	104	67	11	61	51	23	119	1.3	57	115	64	10	55	47	78	107	1.9
X24062	146	112	68	11	62	55	0	122	1.1	62	124	68	11	57	49	1	101	1.8
X28663	142	110	65	11	61	48	0	99	1.2	52	105	61	10	56	46	67	86	1.5
CHECK																		
ATX378*RTX430	111	85	65	13	59	64	88	121	1.3	54	109	63	10	55	55	98	109	1.2
ATX623*RTX430	108	83	65	11	60	65	72	132	1.1	41	82	64	10	54	58	100	103	1.5
ATX631*TX2903	125	96	68	11	59	60	32	110	0.9	51	102	66	10	51	54	63	94	1.4
ATX631xTX436	150	116	69	11	60	61	10	106	1.0	50	101	68	10	55	53	42	83	1.8
ATX635xTX436	132	102	70	12	61	68	47	85	1.3	38	76	71	11	56	62	82	70	2.0
ATXArg1*RTX436	127	98	69	11	61	53	3	104	1.0	51	103	70	10	55	50	21	81	1.7
CROSBYTON																		
CSC5010	116	89	61	10	60	42	2	100	1.5	59	119	58	10	56	41	25	100	1.9
CSC5054	144	111	63	10	61	49	3	124	1.1	53	107	60	10	55	44	47	107	1.4
CSC6346	133	103	70	12	60	60	13	73	1.4	42	84	69	10	55	51	42	42	2.9
DEKALB																		
D69	125	96	71	11	60	70	22	95	1.1	33	67	75	11	55	64	89	81	1.6
GRINGO	131	101	70	11	61	68	5	76	1.3	35	71	76	12	54	60	15	53	2.3
X934	140	108	67	11	60	52	5	93	1.4	50	101	64	10	55	49	26	79	2.2
GARRISON & TOWN.																		
SG 20386	118	91	73	9	58	58	5	93	1.2	58	117	70	10	54	49	5	73	2.2
SG 20541	127	98	63	11	59	61	28	99	1.0	50	101	59	10	55	56	80	97	1.3
SG 20545	138	106	64	11	60	54	18	93	1.3	43	87	58	10	56	51	85	82	1.7
SG 20655	119	92	62	10	59	46	0	101	1.3	59	119	58	10	55	44	44	108	1.4
SG 98019	124	96	70	10	59	65	18	112	1.1	57	116	68	10	56	56	21	96	1.6
JOHNSON GEN.																		
7V7514	140	108	68	11	60	63	58	118	1.2	50	100	69	10	58	58	19	102	1.5
MATURITY CHECK																		
OK11xTX2741	120	93	64	12	61	49	27	98	1.3	47	95	61	10	55	46	82	86	1.6
TX3042xTX2737	130	100	63	11	61	54	30	65	1.8	33	67	61	10	53	48	90	52	2.7
MMR GENETICS																		
JOWAR I	136	105	68	11	61	64	12	102	1.1	49	98	67	10	55	54	61	88	1.6
MMR341/10	111	86	65	11	60	53	2	50	2.1	39	78	64	10	55	46	69	34	3.4
MMR98W248*247	119	92	65	12	59	54	37	119	1.1	54	109	64	10	56	50	88	109	1.3
Novartis																		
1486	119	92	65	11	61	46	0	76	1.7	51	103	62	10	55	44	33	62	2.7
TAES-DTR																		
AHF8*727,728	139	107	68	11	62	55	8	130	1.0	54	109	68	10	56	52	54	100	1.6
ATX631*335-337	139	107	67	11	62	61	33	106	1.1	56	112	66	10	55	57	78	101	1.4
TAES-WLR																		
ATX631*R88B928	97	75	68	12	61	70	90	113	1.0	49	99	67	10	56	58	92	104	1.3
ATX631*R9120	139	107	68	11	59	59	27	104	1.1	43	87	65	10	53	54	72	92	1.3
ATX631*R9603	135	104	69	11	60	62	7	102	1.0	49	98	68	10	54	53	54	96	1.5
WARNER																		
902W	153	118	68	11	61	62	12	114	1.0	49	98	67	10	55	53	63	94	1.5
AVERAGES	130	130	67	11	60	57	22	102	1.2	50	50	65	10	55	52	56	87	1.8
CV(%)	9	9	1	7	1	2	65	5	9.9	10	10	1	4	1	3	14	8	9.8
LSD(0.05)**	16	13	1	1	1	2	19	7	0.2	7	14	1	0	1	2	11	9	0.2

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

APPENDIX 1: Entrants in the 2000 Kansas Sorghum Performance Tests

AgriPro

AgriPro Seeds Inc
Front St
PO Box 2212
Hereford, TX 79045
800-858-4603

Golden World

Crosbyton Seed
PO Box 429
Crosbyton, TX 79322
806-675-2308

NK

Novartis Seeds Inc
1060 Wheatland Dr
Buhler, KS 67522
316-543-2707

Asgrow/DeKalb

Monsanto Seed
7159 n 247th West
PO Box 7
Mt. Hope, KS 67108
316-445-2290

Hoegemeyer

Hoegemeyer Hybrids
1755 Hoegemeyer Rd
Hooper, NE 68031-2125
402-654-3399

Pioneer

Pioneer Hi-Bred Intl Inc
1616 S Kentucky St
Suite C-150
Amarillo, TX 79102
806-356-0160

Cargill

Cargill Hybrid Seeds
PO Box 5645
Minneapolis, MN 55440-5645
612-742-6727

Kaystar

Kaystar Seed
40329 US Hwy 14E
PO Box 947
Huron, SD 57350
605-352-8791

SG

Garrison & Townsend Inc
PO Drawer 2420
Hereford, TX 79045
800-333-9048

DeLange

DeLange Seed
PO Box 7
Girard, KS 66743-0007
316-724-6223

Midland

Midland Genetics Group
1906 Kingman Rd
Ottawa, KS 66067
800-819-SEED

Triumph

Triumph Seed Co Inc
PO Box 1050
Ralls, TX 79357
800-530-4789

Dyna-Gro

UAP-Pueblo
PO Box 1279
2502 John St
Garden City, KS 67846
316-275-6127

Midwest Seed

Midwest Seed Genetics
PO Box 518
Carroll, IA 51401
800-369-8218

Valley Premium

Valley Feed & Seed Inc
1903 S Meridian
Wichita, KS 67213
316-942-2278

Frontier

Frontier Hybrids
PO Box 177
1612 Ave H
Abernathy, TX 79311
806-298-2595

Mycogen

Mycogen Seeds
Technical Information Manager
9330 Zionsville Rd
Indianapolis, IN 46268
317-337-7557

Willcross

Greenbush Seed&Supply Inc
315 S Adams
PO Box 661
Hutchinson, KS 67504-0661
316-662-6659

Garst

Garst Seed Co
2369 330th St
PO Box 500
Slater, IA 50244
800-831-6630

NC+

NC+ Hybrids
PO Box 4408
1300 N 79th
Lincoln, NE 68504
402-467-2517

APPENDIX 2: Entries in the 2000 Kansas Grain Sorghum Performance Tests

	Grain	End.	Mat.	Days	G-bug	SP			Grain	End.	Mat.	Days	G-bug	SP	
						1	2							1	2
AGRIPRO								GARST							
AP 2468	B	HY	ME	64	C	17		9135	B	HY	E	56	-		25
AP 2731	B	HY	M	66	C	23		5664	B	Y	E	62	C		23
HY 2660	R	W	M	68	CE	22		5631Y	C	HY	E	63	E		21
AP 2838	R	W	ML	71	CE	14		5429	B	HY	L	68	C		13
								5515	B	HY	M	68	-		29
ASGROW								5440	R	W	L	70	CE		25
A459	B	W	ME	68	CE	21		5522Y	C	HY	M	70	C		21
LASER	B	HY	E	68	CEI	25									
A571	B	HY	ML	71	-	24		GOLDEN WORLD							
MISSILE	B	HY	L	74	CE	19		GW 7431	R	HY	ME	58	C		24
A581	R	W	ML	75	-	21		GW 1489	R	W	ML	68	E		17
CARGILL								HOEGEMEYER							
606	R	W	M	62	CE	26		6055	B	Y	E	62	-		23
697	B	HY	M	68	CEIK	20		6766	R	Y	M	67	E		21
627	B	HY	M	69	CEIK	23		6712	C	Y	L	70	C		17
737	B	HY	M	70	C	19		6874	R	Y	L	70	E		24
770Y	C	Y	M	70	CEIK	20		6884	R	Y	L	72	E		20
DEKALB								KAYSTAR							
DK-35	B	HY	E	67	CE	20		X-060	R	Y	ME	64	E		23
DK-43A	B	HY	E	70	CE	17		X-070	R	Y	M	65	-		16
DK-44	B	HY	M	71	CE	17		X-080	R	Y	ML	65	E		24
DK-47	B	HY	M	72	CE	22									
DK-53	B	HY	L	74	CE	21		MIDLAND							
DK-54	B	HY	L	75	CE	25		M-4664	B	R	ME	60	O		25
								X-4677	B	R	M	63	O		20
DELANGE								M-4757Y	Y	HY	M	64	O		23
DSA 115C	C	HY	ME	60	CE	25		XM-2002	B	R	M	64	O		28
DSA 133	B	HY	M	64	CE	33		M-4774	B	R	M	65	O		20
DSA 147	R	W	ML	67	CE	16		X-4834	R	R	ML	66	O		18
								XM-4838	B	R	ML	67	I		23
DYNA-GRO								M-4836	R	R	ML	68	O		25
DG-730B	B	HY	E	60	CE	15		XM-2005	C	R	ML	68	O		17
DG-740C	C	HY	E	61	C	23									
DG-732B	R	W	E	62	CE	18		MIDWEST SEED							
DG-751B	B	HY	M	64	C	16		530	C	Y	ME	63	E		20
DG-760C	C	HY	M	65	C	21		240W	C	Y	M	67	E		21
DG-780B	B	HY	ML	66	C	17		256	B	Y	M	68	E		18
FRONTIER								MONSANTO							
F501E	R	R	M	55	E	25		X944	B	HY	M	71	CEI		26
F303C	C	W	M	58	E	18		X914	B	HY	ML	74	CEI		18
F647E	R	R	L	68	E	24		X918	B	HY	L	75	CEI		21
F700E	R	R	L	70	E	24									

(continued)

¹ Grain = grain color: bronze, cream, red, yellow, white; End. = endosperm color: white, yellow, hetero-yellow; Mat. = relative maturity: early, medium, late; Days = days to half bloom; G-bug = greenbug biotype resistance: resistant, susceptible, biotype E, biotype I. Blank spaces indicate that the information was not provided. Most information was provided by entrants.

² Spad meter reading: measure of the intensity of green color. A higher number indicates a deeper green and less chlorosis. Readings from boot stage sorghum at Colby, KS on July 19. Typical readings for well-fertilized sorghum are usually much higher (45-65). The low readings above reflect severe iron chlorosis and also may be results of low N fertility.

APPENDIX 2: Entries in the 2000 Kansas Grain Sorghum Performance Tests

	Grain	End.	Mat.	Days	G-bug	SP			Grain	End.	Mat.	Days	G-bug	SP	
						1	2							1	2
MYCOGEN								TRIUMPH							
1482	R	HY	ME	60	CE		26	TR 438	B	W	E	60	CE		20
M3838	C	HY	M	60	CE		12	TR 432	B	W	E	62	CE		17
1506	C	HY	M	62	CE		17	TR 461	R	W	ME	62	CE		20
3696	Y	Y	M	65	CEIK		18	TR 447	C	W	ME	63	CE		14
3694	B	HY	ML	68	CE		20	TR 459	B	W	ME	64	CE		23
								TR 462	R	W	M	70	CE		21
NC+								TR 464	B	W	M	71	CE		29
5B74E	B	HY	E	60	CE		23	TR 481	R	W	ML	72	CE		21
6B50	B	HY	ME	62	-		23	TR 82-G	R	W	ML	73	CE		21
6C21	C	HY	ME	62	C		20								
6R30	R	W	ME	63	-		20	VALLEY PREMIUM	Grain	End.	Mat.	Days	G-bug	1	2
Y363	Y	Y	ME	64	C		15	VP 90	B	HY	ML	75	CDE		21
6B70	B	HY	M	65	C		23	VP 53	R	R	ME	80	CDE		21
6C69	C	HY	M	67	CE		28	VP 70	C	W	M	80	CDE		22
7B29	B	HY	M	69	-		14								
371	C	HY	M	70	C		20	WILLCROSS	Grain	End.	Mat.	Days	G-bug	1	2
7B47	B	HY	M	70	-		25	GB5343-R	R	W	E	55	CE		23
7R83	R	W	ML	70	-		21	GB7743-TR	R	W	M	77	CE		20
								GB9057-W	W	W	ML	80	CE		27
NK								GB9347-TR	R	W	ML	80	CE		9
KS 310	B	HY	E	55	E		26	GB8743-C	C	C	M	85	CE		18
KS 585	B	HY	ME	65	E		28								
K73-J6	R	HY	ML	71	E		14	MATURITY CHECK	Grain	End.	Mat.	Days	G-bug	1	2
								C 305	R	-	E	60	-		22
PIONEER								TX3042xTX2737	B	W	E	65	-		22
87G57	B	Y	E	63	CE		25	RS 610	R	W	M	68	-		24
85Y34	Y	Y	E	66	CE		15	OK11xTX2741	W	W	M	69	-		18
86G71	B	Y	E	66	CE		24	TX2752xTX430	B	W	L	73	-		22
8500	R	W	M	68	-		24	TX2752xTX2783	R	W	L	74	E		22
8505	R	W	M	68	CE		20								
8414	R	W	M	69	CE		23	NO GAUCHO*	Grain	End.	Mat.	Days	G-bug	1	2
85G85	B	Y	M	69	-		18	TX3042xTX2737	B	W	E	65	-		25
84G82	R	W	L	71	EIK		12	TX2752xTX430	B	W	L	73	-		22
84G62	B	Y	L	72	CE		21								
82G63	B	Y	L	73	-		23		Grain	End.	Mat.	Days	G-bug	1	2
								AVERAGES	-	-	-	-	-		22
SG								CV(%)	-	-	-	-	-		21
SG-96254	B	HY	M	63	C		27	LSD(0.05)**	-	-	-	-	-		6
SG-97619	B	HY	M	64	C		21								
SG-94249	B	HY	M	67	C		24								
SG-91190	R	W	L	72	E		20								
SG-97157	R	W	L	73	E		22								
SG-99547	B	HY	L	73	E		24								

¹ Grain = grain color: bronze, cream, red, yellow, white; End. = endosperm color: white, yellow, hetero-yellow; Mat. = relative maturity: early, medium, late; Days = days to half bloom; G-bug = greenbug biotype resistance: resistant, susceptible, biotype E, biotype I. Blank spaces indicate that the information was not provided. Most information was provided by entrants.

² Spad meter reading: measure of the intensity of green color. A higher number indicates a deeper green and less chlorosis. Readings from boot stage sorghum at Colby, KS on July 19. Typical readings for well-fertilized sorghum are usually much higher (45-65). The low readings above reflect severe iron chlorosis and also may be results of low N fertility.

For those interested in accessing crop performance testing information electronically, visit our World Wide Web site. Most of the information contained in this publication is available for viewing or downloading. The URL is <http://www.ksu.edu/kscpt>.

**Excerpts from the UNIVERSITY RESEARCH POLICY AGREEMENT
WITH COOPERATING SEED COMPANIES***

Permission is hereby given to Kansas State University 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 825 '1998 Kansas Performance Tests with Soybean Varieties', or the Kansas Crop Performance Test website, <http://www.ksu.edu/kscpt>, for details. Endorsement or recommendation by Kansas State University is not implied."

These materials may be freely reproduced for educational purposes. All other rights reserved. In each case, give credit to the author(s), name of work, Kansas State University, and the date the work was published.

CONTRIBUTORS

MAIN STATION, MANHATTAN

Kraig Roozeboom, Associate

Agronomist (Senior Author)

Douglas Jardine, Extension

Plant Pathologist

RESEARCH CENTERS

Patrick Evans, Colby

Kenneth Kelley, Parsons

Kenneth Kofoid, Hays

Alan Schlegel, Tribune

Merle Witt, Garden City

EXPERIMENT FIELDS

Mark Claassen, Hesston

W. Barney Gordon, Scandia

William Heer, Hutchinson

Keith Janssen, Ottawa

Larry Maddux, Powhattan

Victor Martin, St. John

Cooperation of Research Center and Experiment Field personnel who furnished land and performed many or all of the field operations is appreciated. Technicians Edward O. Quigley and James R. Cochrane packaged seed and performed field operations for some of the tests. Student intern Paul McGinness helped with seed counting, sign painting, and plot maintenance. Mary Knapp of the Weather Data Library provided much of the climatological information.

NOTE: Trade names are used to identify products. No endorsement is intended, nor is any criticism implied of similar products not named.

NOTE: Trade names are used to identify products. No endorsement is intended, nor is any criticism implied of similar products not named.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service, Manhattan 66506

SRP 865

November 2000

It is the policy of Kansas State University Agricultural Experiment Station and Cooperative Extension Service that all persons shall have equal opportunity and access to its educational programs, services, activities, and materials without regard to race, color, religion, national origin, sex, age, or disability. Kansas State University is an equal opportunity organization. These materials may be available in alternative formats.

10M