1-1971

1970 Grain Sorghum Performance Trials

J.J. Bonnemann
South Dakota State University

CIRCULAR 202
JANUARY 1971

1970 GRAIN SORGHUM PERFORMANCE TRIALS

PLANT SCIENCE DEPARTMENT
AGRICULTURAL EXPERIMENT STATION
SOUTH DAKOTA STATE UNIVERSITY, BROOKINGS

LOCATION OF TABLES

1970 Grain Sorghum Performance Trials

J. J. Bonnemann, Assistant Agronomist

Plant Science Department
Agricultural Experiment Station
South Dakota State University
Brookings, South Dakota 57006

The primary purpose is to supply interested individuals with information on the relative performance of the grain sorghum hybrids entered when grown under similar environmental conditions. Performance records of the hybrids harvested in 1970 and available two-, three-, four-, and five-year averages are presented. The trials reported in the circular have been under the supervision of the Crop Performance Testing Activity, Agricultural Experiment Station.

Location of the 1970 Trials

To adequately evaluate the performance ability of the various entries they must be grown under similar conditions of environment. The crop adaptation areas in which the trials are grown are based upon differences in soil type, elevation, temperature, rainfall and other physical differences. The exact location of the trials and dates of seeding and harvesting are reported in Table 1. Data from soil samples taken at the various sites at time of seeding and the fertilizer applied are presented in Table 2.

Weather and Climatic Conditions

Climatic data for the 1970 grain sorghum growing season, May-September, are based upon Monthly Climatological Data, U. S. Department of Commerce, and from the reports of substation superintendents at Garden City and Presho. The data are shown in Table 3. Weather data are not available from the immediate Geddes site so data from the nearest recording station, Armour, are given. The cooperator at Geddes stated that about 4 1/2 inches of precipitation fell during June, July and August.

The trials were seeded from May 18 to May 26. Seedbeds were in good friable condition and soil moisture generally adequate. June was wet and cool, especially in the northeastern portion of the state. In the southern and central areas precipitation was near normal and temperatures above normal. Precipitation amounts were quite limited during July and August and temperatures were high,

---

The assistance of the following individuals is acknowledged: A. O. Lunden of the Plant Science Department; Substation supervisors Lloyd Dye, Jake Fredrikson, Harry Geise, Frank Holmes, Quentin Kingsley, Burton Lawrensen and Herb Lund, and farmer-cooperator William Fijala.

TABLE 1. THE LOCATION OF TRIALS AND DATES OF SEEDING AND HARVESTING OF GRAIN SORGHUM PERFORMANCE TRIALS, SOUTH DAKOTA, 1970

County	Location and post office	Date seeded	Date harvested	Row spacing
				inches
Brookings	Agronomy Farm, Brookings	May 26	October 2	40
Charles Mix	William Fijala Farm, Geddes	May 19	Sept. 29	40
Clark	Northeast Research Farm, Garden City	May 26	October 1	36
Clay	Southeast Research Farm, Beresford	May 18	Sept. 30	30
Hyde	Central Substation, Highmore	May 20	Sept. 28	36
Lyman	South Central Research Farm, Presho	May 19	Sept. 28	40
Spink	Redfield Development Farm, Redfield	May 26	October 1	21

often accompanied by strong winds. The stresses of drought and heat slowed growth so that heading was delayed at some sites. The wet period in September together with the absence of killing frosts until early October permitted the plants to mature and generally produce grain of decent quality.

Hybrid Entry Procedure

Grain sorghums offered for sale in South Dakota or being produced for distribution in 1971 were eligible for entry. A closed-pedigree hybrid was entered by the permanent name and number under which it was sold by the parent company only. Varieties entered maintained minimum laboratory germination of 80% as required by South Dakota Certification Standards. A nominal fee was charged for each entry in each area except grain sorghum hybrids developed by State and Federal Experiment Stations and entered by the South Dakota Agricultural Experiment Station.

TABLE 2. SOIL CLASSIFICATION, LABORATORY ANALYSIS OF SOIL SAMPLES TAKEN PRIOR TO SEEDING GRAIN SORGHUM AND FERTILIZER APPLIED FOR THE 1970 CROP YEAR

		Laboratory analysis				Fertilizer applied			
		Org.	P	K			N	P	K
County and area	Soil classification	mat. %	lb/A		ph	Method	lb/A		
Charles Mix, C2	Reliance SiCl	3.3	8	540	7.2	disced under	87	42	0
Clark, D2	Poinsett SiCl	3.6	21	281	6.6	plowed down	60	40	0
Clay, E	Kranzburg SiCl	3.5	59	430	6.5	plowed down	56	40	4
Hyde, B2	Williams L	2.6	105	512	6.1	disced under	30	20	0
Lyman, B3	Pierre C	3.2	35	682+	7.9	Nobled '69	16	48	0
Spink, C1	Beotia-Harmony SiCl	3.7	68	682+	7.0	disced under	120	25	0

TABLE 3. TEMPERATURE AND PRECIPITATION DATA FOR THE 1970 GRAIN SORGHUM GROWING SEASON IN SOUTH DAKOTA

		Temperature, degrees F.			Precipitation, inches		
Location	Month	Mean Av.	Departure from normal	Av. Departure	Month total	Departure from normal	Total departure
Armour*	May	62.5	2.0		2.67	-0.13	
	June	71.7	1.2		2.23	-1.70	
	July	76.4	-1.2		1.02	-1.05	
	Aug.	75.5	-0.1		1.00	-2.15	
	Sept.	65.0	-0.5	0.3	2.17	0.23	-4.80
	Last freeze May 2				9.09		
Brookings*	May	56.4	-1.2		5.66	2.87	
2 NE	June	66.8	-0.3		4.22	0.27	
	July	71.0	-2.2		2.44	0.29	
	Aug.	67.5	-2.7		1.24	-1.73	
	Sept.	58.2	-3.1	-1.9	1.19	-0.84	0.86
	Last freeze May 4				14.75		
Centerville*	May	63.6			3.65		
6 SE	June	71.7			2.48		
	July	76.0			1.47		
	Aug.	75.2			0.85		
	Sept.	64.8			3.18		
	Last freeze May 2				11.63		
Garden City	May	55.3			2.65		
2 NE	June	65.8			4.70		
	July	71.4			1.52		
	Aug.	70.7			0.22		
	Sept.	58.1			1.66		
	Last freeze May 1				10.75		
Highmore*	May	58.9	1.7		1.54	-0.79	
1 W	June	70.1	3.3		3.28	-0.26	
	July	74.7	0.2		2.64	0.66	
	Aug.	74.1	1.3		1.57	-0.47	
	Sept.	64.0	1.4	1.6	0.84	-0.47	-1.33
	Last freeze May 16				9.87		
Presho	May	60.8			2.37		
11 S	June	71.3			2.73		
	July	76.8			1.42		
	Aug.	76.4			1.67		
	Sept.	62.5			0.82		
	Last freeze May 2				9.01		
Redfield*	May	58.9			3.09		
6 E	June	69.9			3.66		
	July	74.0			2.35		
	Aug.	73.5			0.25		
	Sept.	73.5			0.85		
	Last freeze May 4				10.20		

*Based upon reports of Monthly Climatological Data, Office of State Climatologist, SDSU, Brookings, South Dakota

Experimental Procedure

Each trial consisted of four or five replications and plots of individual entries were ramdomly located within each replication. All trials were seeded two rows at a time, with cone-planters mounted above flexi-planter units. A herbicide and insecticide were banded over the row at time of seeding. The various row spacings used are found in Table 1. The plots were two rows wide, plot lengths dependent upon area available at each location.

The harvested grain was taken from two ten-foot sections of each row in each individual plot. The heads were bagged as harvested, tagged and tied, returned to the Main Station and allowed to air dry in a pole shed for several weeks. Prior to threshing the bags were placed in driers for several days. Yields were calculated on the basis of pounds per acre. Depending upon location, either three or four replications were harvested for yield determination and one replication was left for observational purposes.

Moisture determinations made at the time of normal first-frost dates are generally more reliable and informative than determinations made at harvest time. Generally, these figures and the test weight of the grain indicate more realistically the maturity of the grain.

Moisture samples were taken at all locations during the period of September 21 to 25. Ten to twelve heads, adequate for a 400-500 gram grain sample, were cut from each entry, placed in a polyethylene bag, tagged and sealed tightly. Upon returning to the Main Station the samples were threshed, cleaned and moisture percentages determined with an electronic moisture meter. The upper limit of the meter is 35 percent. Material above this level is indicated at 35.+ in the tables and normally would indicate hybrids of late maturity for this area. Most 1970 samples tested were physiologically mature as few samples tested were over 35% moisture. At several locations all samples were found to have less than 20% moisture.

A bird repellant was used at locations where birds have been a serious problem. The repellant is not harmful to the birds but is bitter to the taste and discourages continual picking. Seed and forage treated with this repellant is unfit for food or feed so treatment is limited to fields planted for experimental use or seed production on substations. The plots at Redfield, Brookings and Beresford were sprayed in late July for greenbug control.

Measurement of Performance

Variations in soil fertility, slope or stand may cause varieties of equal potential to yield differently. Mathematical determinations were made to determine whether yield differences were caused by variations in environment or were true varietal differences. Small yield differences have no significance.

Duncan's Multiple Range Test (5% level) was used to determine whether significant differences occurred. The line drawn between any two entry means in the 1970 yield data indicates that there is no difference between the entries above that line at the 5% level of probability.

Discussion of Results

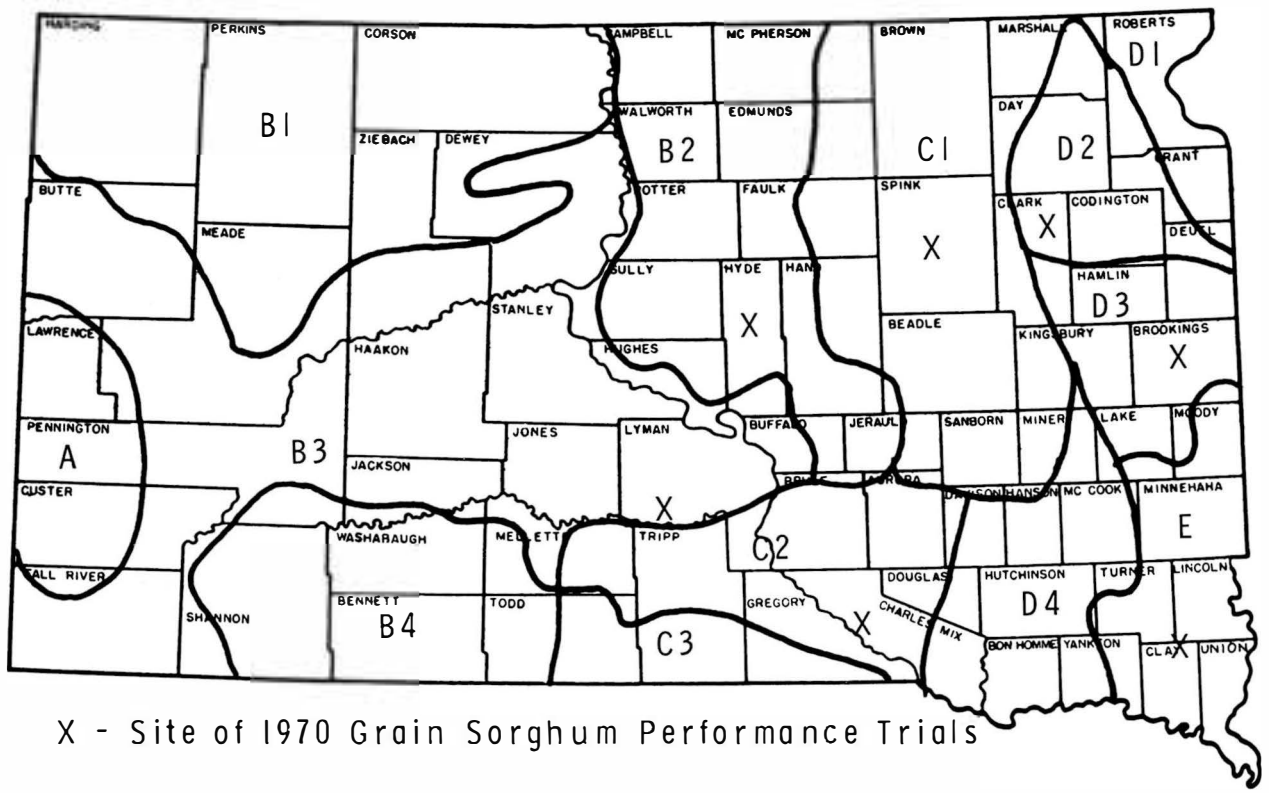
Grain sorghums are grown extensively in the south central part of the state and in varying amounts elsewhere around the state too hot or dry for corn production. The 1970 season was cool during June and warmer than normal in most areas during July and August. Precipitation was excessive in the northeastern fourth of the state in June but during the remainder of the summer rainfall was limited and near drought conditions prevailed in some areas. Grain sorghum generally withstood these stresses and produced satisfactory yields, whereas, corn suffered and the yields were quite low in many areas.

Seedbeds and soil moisture conditions were good at planting time and stands were not seriously reduced. The trial site at Redfield was subjected to a severe hailstorm on Memorial Day. The material at this site was just breaking the soil surface and the storm caused many broken shoots and severe soil crusting. At Garden City some stand reductions occurred when a heavy downpour caused washing and either buried or washed out plants 1-2 inches tall. Lodging was very severe at the Garden City site at harvest time.

The yield and quality of the grain was generally good for limited precipitation and periods of high temperatures. Most entries in the severe drought areas had not reached the permanent wilting point before some precipitation fell and were able to resume sufficient growth to mature and produce yields of economic value. Some later maturing varieties failed to recover and resume growth rapidly enough to mature and produce seed of good quality. The stresses did probably contribute to smaller, spindlier stalks and allow more lodging than common in many years.

A summary of the entries tested and companies submitting them is presented in Table 18.

Crop Adaptation Areas



X - Site of 1970 Grain Sorghum Performance Trials

TABLE 4. 1970 GRAIN SORGHUM PERFORMANCE TRIAL, AREA B2, CENTRAL SUBSTATION HIGHMORE

Brand and Variety	Percent lodging 9/28/70	Height, inches	Date headed	Percent moisture 9/21/70	Test wt. lb/B	Yield lb/A
Northrup-King 125	30	38	7/18	17.0	55.0	3880
SD 503	10	37	7/22	14.2	57.0	3510
ACCO R 920	40	36	7/18	14.9	55.0	3400
DeKalb B-36	3	37	7/24	15.5	57.0	3390
ACCO R 1010	30	36	7/22	14.1	59.0	3370
Northrup-King Mini-Milo 54BR	7	35	7/18	14.4	56.5	3280
Frontier 388A	15	35	7/25	15.6	59.0	3250
DeKalb A-25	30	34	7/17	14.8	53.0	3220
RS 610	15	36	7/27	16.5	57.0	3220
Pioneer 894	5	32	7/21	13.7	57.5	3210
DeKalb B-32a	10	34	7/24	14.0	57.0	3160
Northrup-King 120	50	36	7/15	14.5	55.0	3140
SD 25265	40	39	7/20	14.2	56.5	2940
SD 451	65	38	7/19	14.7	54.0	2560
SD 441	15	43	7/19	15.2	56.0	1670
					Mean Yield	3140

C.V. = 16.2%

TABLE 5. TWO-, THREE-, FOUR-, AND FIVE-YEAR AVERAGE YIELDS OF GRAIN SORGHUM HYBRIDS ENTERED AT HIGHMORE, 1966-1970

Brand and Variety	Average yields, pounds per acre			
	1966-70	1967-70	1968-70	1969-70
ACCO R 920				3520
DeKalb A-25				3645
DeKalb B32a				3765
Frontier 388a			3970	3360
Northrup-King 120	4230	4045	4090	3420
Northrup-King 125	4270	4155	4285	3890
Pioneer 894		3730	4100	3655
RS 610				3360
SD 441	3325	3010	3220	2690
SD 451	3730	3625	3680	3410
SD 503	4000	3865	4360	3970

TABLE 6. 1970 GRAIN SORGHUM PERFORMANCE TRIAL, AREA B3, SOUTHCENTRAL RESEARCH FARM, PRESHO

Brand and Variety	Percent lodging 9/28/70	Height, inches	Date headed	Percent moisture 9/25/70	Test wt. lb/B	Yield, lb/A
Pioneer 883	2	39	7/31	15.4	57.0	3410
SD 25265	10	45	7/26	15.0	57.0	3410
Pride P-550 BR		43	7/31	18.4	56.0	3300
Northrup King Mini-Milo 54BR		38	7/26	16.0	57.0	3250
Frontier GX 410	3	36	8/2	17.8	57.0	3090
RS 610	3	41	8/4	22.2	57.0	3090
Frontier Super 400 A		41	8/1	22.5	56.0	3070
Weathermaster GS-30A	2	42	7/28	13.5	59.0	3050
ACCO R 1010	5	41	7/28	13.6	59.0	3040
Frontier GX 389		39	7/31	17.5	59.0	2990
Pioneer 894		33	7/28	13.6	58.0	2950
DeKalb B32a	2	38	7/27	14.4	58.0	2920
Weathermaster GS-30B		42	7/26	15.1	57.0	2920
SD 503	2	56	7/28	14.5	57.0	2890
DeKalb A-25	2	38	7/26	14.4	54.0	2890
Pride P-500A	5	38	7/26	13.6	56.0	2880
DeKalb B-36		42	7/28	16.3	58.0	2850
Weathermaster GS-31Y		41	7/29	17.3	59.0	2850
Northrup-King 120	5	40	7/23	14.4	57.0	2830
ACCO R 920	5	39	7/26	13.8	56.0	2830
Frontier Grassy Grain I		44	7/27	15.1	57.0	2710
ACCO R 1019	2	41	8/7	19.5	58.0	2620
Frontier 388A	2	42	7/29	17.0	58.0	2620
SD 451	15	45	7/27	13.6	55.0	2570
RS 633		44	8/10	25.5	58.0	2550
Weathermaster Grazor Grain 27		44	7/27	14.5	58.0	2480
Pride P-200	10	37	7/21	13.9	56.0	2190
Coop SG-10		39	8/11	35.+	52.0	1740
					Mean Yield	2860

C.V. = 7.4%

TABLE 7. 1970 GRAIN SORGHUM PERFORMANCE TRIAL, AREA C1, IRRIGATED, REDFIELD DEVELOPMENT FARM, REDFIELD

Brand and Variety	Height, Inches	Percent moisture, 9/23/70	Test wt. lb/B	Yield lb/A
Pioneer 866	56	28.4	58.0	7310
SD 25265	52	16.5	58.0	7290
ACCO R 1010	58	16.0	60.0	7060
RS 610	53	24.7	59.0	6920
Northrup-King 265	53	26.0	60.0	6790
Pioneer 883	48	25.3	58.0	6780
SD 503	55	19.7	58.0	6600
Northrup-King 133A	48	24.5	60.0	6580
DeKalb B-32a	49	17.0	59.0	6530
Pioneer 885	48	26.7	59.0	6460
DeKalb C-42a	48	29.4	58.0	6370
DeKalb B-36	49	21.6	59.0	6360
RS 633	52	30.4	59.0	6350
Northrup-King X3016	50	20.7	59.0	6340
Coop SG-20	46	18.5	59.0	6320
ACCO R 1019	48	31.7	59.0	6280
Northrup-King 127	44	17.6	58.0	6270
DeKalb A-25	44	17.6	55.0	5960
Northrup-King 120	45	15.9	57.0	5830
Pioneer 894	39	16.0	59.0	5830
ACCO R 920	48	17.5	58.0	5800
Coop SG-10	54	35.+	57.0	5700
Barzan GS 25	46	16.1	60.0	5660
SD 451	55	15.2	56.0	5500
Frontier Grassy Grain I	50	15.3	58.0	5240
			Mean Yield	6320

C.V. = 10.6%

The stands were not as high as desired because a severe hailstorm passed over the area on May 30 just as the young shoots were emerging.

The trial was sprayed with Di-syston on July 23 for greenbug control.

TABLE 8. TWO-, THREE-, FOUR-, and FIVE-YEAR AVERAGE YIELDS OF GRAIN SORGHUM HYBRIDS ENTERED AT PRESHO, 1966-1970

Brand and Variety	Average yield, pounds per acre			
	1966-70	1967-70	1968-70	1969-70
ACCO R 920		3360	3150	2680
COOP SG-10				1750
DeKalb A-25				2830
DeKalb B-32a				2925
Frontier Grassy Grain I			2940	2525
Northrup-King 120	3400	3590	3440	2750
Pioneer 883			3675	3235
Pioneer 894		3305	3345	2785
RS 610	3670	3205	3245	2780
RS 633				2665
SD 451	3385	3380	3035	2550
SD 503	3570	3525	3385	2810

TABLE 9. TWO-, THREE-, FOUR-, AND FIVE-YEAR AVERAGE YIELDS OF GRAIN SORGHUM HYBRIDS ENTERED AT REDFIELD, 1966-1970

Brand and Variety	Average yield, pounds per acre			
	1966-70	1967-70	1968-70	1969-70
ACCO R 920				6380
DeKalb A-25				6345
DeKalb B-32a				7075
Frontier Grassy Grain I			5470	5210
Northrup-King 120		7635	7080	6905
Northrup-King 127		6865	6660	6750
Pioneer 866				8160
Pioneer 883			7180	7475
Pioneer 885	6275	6655	6855	6885
Pioneer 894		6005	6065	5770
RS 610	6370	6865	7295	7480
RS 633				7390
SD 451	6170	6735	6560	6215
SD 503	6570	7095	7145	7170

TABLE 10. 1970 GRAIN SORGHUM PERFORMANCE TRIAL, AREA C2, WILLIAM FIJALA FARM, GEDDES

Brand and Variety	Percent lodging 9/29/70	Height, inches	Percent moisture 9/25/70	Test weight, lb/B	Yield, lb/A
Pioneer 883	2	34	15.0	57.0	2780
SD 25265	2	37	16.9	58.0	2740
Northrup King X3016		34	15.6	58.0	2650
Frontier Super 400 C	2	32	15.5	56.0	2650
Frontier 400 A	2	34	16.2	57.5	2660
Northrup-King 265	2	33	15.7	58.0	2600
Pioneer 866	3	38	15.4	58.0	2590
RS 610		33	15.6	57.5	2580
Pride P-550BR		33	15.6	57.0	2570
Curry's XM-534		31	15.1	58.0	2530
Pioneer 885	2	33	15.6	58.0	2430
Barzan GS 33		32	15.7	58.0	2420
Frontier G380X	3	32	15.6	57.5	2400
RS 633		34	18.4	58.0	2400
SD 503		36	16.4	56.0	2390
ACCO R1010	2	32	15.5	59.0	2380
Curry's XM-536	3	31	15.3	58.0	2370
DeKalb C-42a		31	17.0	57.5	2320
Curry's M-530	10	34	15.6	58.5	2290
ACCO R 1019	2	31	19.0	58.0	2290
DeKalb B-36	3	32	15.8	57.0	2210
ACCO R 1029	2	34	17.0	58.0	2100
Northrup-King 222	2	31	15.9	58.0	1940
Pride P-800Y	5	30	16.1	56.5	1940
ACCO R 1050		32	16.3	58.0	1880
Pride P-500A	12	37	16.6	54.0	1720
				Mean Yield	2380

C.V. = 13.7%

TABLE 11. TWO-, THREE-, FOUR-, AND FIVE-YEAR AVERAGE YIELDS OF GRAIN SORGHUM HYBRIDS ENTERED AT GEDDES, 1966-1970

Brand and Variety	Average yield, pounds per acre			
	1966-70	1967-70	1968-70	1969-70
ACCO R 1029				3515
ACCO R 1050			3165	3365
Barzan GS 33				3415
Curry's M-530			3185	3370
DeKalb C-42a				3635
Frontier Super 400C				3515
Northrup-King 222	3680	3375	3245	3370
Pioneer 866				4000
Pioneer 883				
Pioneer 885		3380	3215	3475
RS 610	4070	3815	3570	3760
RS 633				3710
SD 503	3780	3455	3190	3560

TABLE 12. 1970 GRAIN SORGHUM PERFORMANCE TRIAL, AREA D2, NORTHEAST RESEARCH FARMS, GARDEN CITY UNIT

Brand and Variety	Percent lodging 10/1/70	Height, inches	Date headed	Percent moisture 9/23/70	Test wt. lb/B	Yield, lb/A
Northrup-King Mini-Milo 54BR	20	40	7/24	13.7	56.0	2440
Pioneer 894	5	36	7/27	13.8	57.0	2250
DeKalb A-25	35	40	7/24	14.1	51.0	2140
RS 610	30	43	8/6	27.0	50.0	2080
Northrup-King 120	60	41	7/23	16.3	54.0	2020
DeKalb B-32a	30	40	7/29	19.8	57.0	2000
SD 441	55	48	7/24	13.9	54.0	1940
SD 451	90	44	7/27	14.7	54.0	1830
DeKalb B-36	65	41	7/31	20.4	55.0	1770
SD 25265	90	43	7/28	20.1	54.0	1660
SD 503	75	45	7/30	17.6	54.0	1650
					Mean Yield	1980
C.V. = 23.5%						N.S.

TABLE 13. TWO-, THREE-, FOUR-, AND FIVE-YEAR AVERAGE YIELDS OF GRAIN SORGHUM HYBRIDS ENTERED AT GARDEN CITY, 1966-1970

Brand and Variety	Average yields, pounds per acre			
	1966-70	1967-70	1968-70	1969-70
DeKalb A-25				3515
DeKalb B-32a				3095
Northrup-King 120	2990	2930	3340	3315
Pioneer 894		2750	3330	3360
RS 610				3025
SD 441	2765	2710	2860	3010
SD 451	2785	2640	3150	3205
SD 503	2640	2570	3055	3090

TABLE 14. 1970 GRAIN SORGHUM PERFORMANCE TRIAL, AREA D3, AGRONOMY FARM, BROOKINGS

Brand and Variety	Percent lodging 10/2/70	Height, inches	Date headed	Percent moisture 9/22/70	Test wt. lb/B	Yield, lb/A
SD 25265	5	58	7/29	29.8	56.0	5450
SD 451		58	7/28	27.9	56.0	5340
DeKalb A-25		49	7/26	24.3	55.0	5230
Northrup-King X3016		51	8/2	29.1	57.0	5180
DeKalb A-32a		49	8/1	27.4	57.0	5170
DeKalb B-36		51	7/30	31.8	56.0	5100
Coop SG-20		51	7/31	28.4	58.0	4970
Northrup-King 125		51	7/27	26.5	56.0	4950
Northrup-King 120		51	7/26	25.9	56.0	4920
Northrup-King Mini-Milo 54BR		43	7/24	23.0	57.0	4720
SD 503		61	7/31	22.0	55.0	4680
SD 441		60	7/26	23.2	56.0	4640
Pioneer 894		40	7/28	23.8	59.0	4560
Pioneer 883		46	8/3	32.5	56.0	4490
Northrup-King 127		45	7/29	25.2	57.0	4430
Northrup-King 133A		45	8/2	32.3	57.0	4150
RS 610		55	8/6	34.0	55.0	4120
Coop SG-10		54	8/14	35.+	51.0	2790
					Mean Yield	4720

C.V. 7.9%

TABLE 15. TWO-, THREE-, FOUR-, AND FIVE-YEAR AVERAGE YIELDS OF GRAIN SORGHUM HYBRIDS ENTERED AT BROOKINGS, 1966-1970

DeKalb A-25				5075
DeKalb B-32a				4890
NK 120			4850	4960
NK 125	4770	4630	4930	5005
Pioneer 883			4400	4335
Pioneer 894		4335	4570	4795
RS 610	3825	3620	4145	4000
SD 441	4285	4220	4270	4455
SD 451	4730	4520	4785	5060
SD 503	4370	4360	4565	4275

TABLE 16. 1970 GRAIN SORGHUM PERFORMANCE TRIAL, AREA E, SOUTHEAST EXPERIMENTAL FARM, BERESFORD

Brand and Variety	Percent lodging, 9/30/70	Height, inches	Date headed	Percent moisture, 9/23/70	Test wt. lb/B	Yield, lb/A
Northrup-King 265		39	7/26	16.5	60.0	6080
RS 633		41	7/26	16.0	60.0	5750
DeKalb C-42a		38	7/25	19.3	59.0	5440
ACCO R 1029		42	7/27	18.0	59.0	5400
ACCO R 1019		39	7/28	19.1	59.0	5360
Northrup-King X3016		42	7/23	15.6	58.0	5220
Pioneer 866	2	42	7/25	17.9	58.0	5160
ACCO R 1010	2	44	7/19	15.2	61.0	5120
SD 503		46	7/19	15.7	58.0	5100
DeKalb B-36		39	7/20	15.0	59.0	5040
Curry's XM-536		37	7/26	16.3	58.0	5000
Coop SG-20		39	7/23	15.4	60.0	4990
Curry's M-530		41	7/23	15.9	60.0	4930
SD 25265	15	46	7/17	16.5	57.5	4810
Northrup-King 222		40	7/24	15.6	60.0	4660
RS 610		39	7/26	16.4	57.0	4630
ACCO R 1050		40	7/27	16.4	60.0	4410
Barzan GS 43	2	42	7/24	14.6	59.0	4400
Northrup-King 133A		38	7/22	16.0	59.0	4390
Pioneer 883		40	7/24	15.6	57.0	4210
SD 451		44	7/14	16.5	56.0	4210
Curry's XM-534		39	7/27	15.0	58.0	3960
					Mean Yield	4920

C.V. = 9.8%

TABLE 17. TWO-, THREE-, FOUR-, AND FIVE-YEAR AVERAGE YIELDS OF GRAIN SORGHUM HYBRIDS ENTERED AT BERESFORD, 1966-1970

Brand and Variety	Average yield, pounds per acre			
	1966-70	1967-70	1968-70	1969-70
ACCO R 1029				6360
ACCO R 1050			5720	5765
Curry's M-530			6195	6125
DeKalb C-42a				6305
Northrup-King 222	5430	5755	5760	5755
Northrup-King 265			6475	6640
Pioneer 866		6310	6565	6265
Pioneer 883		5645	5610	5355
RS 610	6365	6210	6255	6125
RS 633				6840
SD 451	5615	5505	5200	5230
SD 503	5625	5795	5730	5715

TABLE 18. ENTRIES SUBMITTED FOR THE 1970 GRAIN SORGHUM PERFORMANCE TRIALS AND THE TABLES WHERE THE RESULTS APPEAR

Company & Brand	Variety	Tables	Company & Brand	Variety	Tables
ACCO Seeds	R 920	4,5,6,7,8,9,10	Midwest Research Associates "Weathermaster"	GS-30A	6
	R 1010	4,6,7,10,16		GS-30B	6
	R 1019	6,7,16		GS-31Y	6
	R 1029	10,11,16,17		Grazor Grain I	6
	R 1050	10,11,16,17			
			Northrup-King, & Co.	NK 120	4,5,6,7,8,9,12,13,14,15
Barzan of Minneapolis, Inc.	GS 25	7		NK 125	4,5,14,15
	GS 33	10,11		NK 222	10,11,16,17
	GS 43	16		NK 127	7,9,14
				NK 265	7,10,16,17
Curry Hybrids	M-530	10,11,16,17		Mini-Milo 54BR	4,6,12,14
	XM-534	10,16		NK 133A	7,14,16
	XM-536	10,16		NK X3016	7,10,14,16
DeKalb Ag Research Inc.	A-25	4,5,6,7,8,9,12,13,14,15	Pioneer Hi-Bred Corn Co.	885	7,9,10,11
	B-32a	4,5,6,7,8,9,12,13,14,15		866	7,9,10,11,16,17
	C-42a	7,10,11,16,17		883	6,7,8,9,10,11,14,15,16,17
	B-36	4,6,7,10,12,14,16		894	4,5,6,7,8,9,12,13,14,15
Farmland Industries, Inc.	Coop SG-10	6,7,8,14	Pride Seed Co.	P-200	6
	Coop Sg-20	7,14,16		P-500A	6,10
				P-550BR	6,10
Frontier Hybrids Inc.	400C	10,11		P-800Y	10
	Super 400A	6,10			
	GX 410	6	South Dakota Agricultural Experiment Station	RS 610	6,7,8,9,10,11,12,13,14,15,16,17
	388A	4,5,6		RS 633	6,7,8,9,10,11,16,17
	Grassy Grain I	6,7,8,9		SD 441	4,5,12,13,14,15
	G380X	10		SD 451	4,5,6,7,8,9,12,13,14,15,16,17
	GX 389	6		SD 503	4,5,6,7,8,9,10,11,12,13,14,15,16,17
				SD 25265	4,6,7,10,12,14,16