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1980 Grain Sorghum Performance Trials

Circular 236
January 1981

Agricultural Experiment Station
South Dakota State University
Brookings

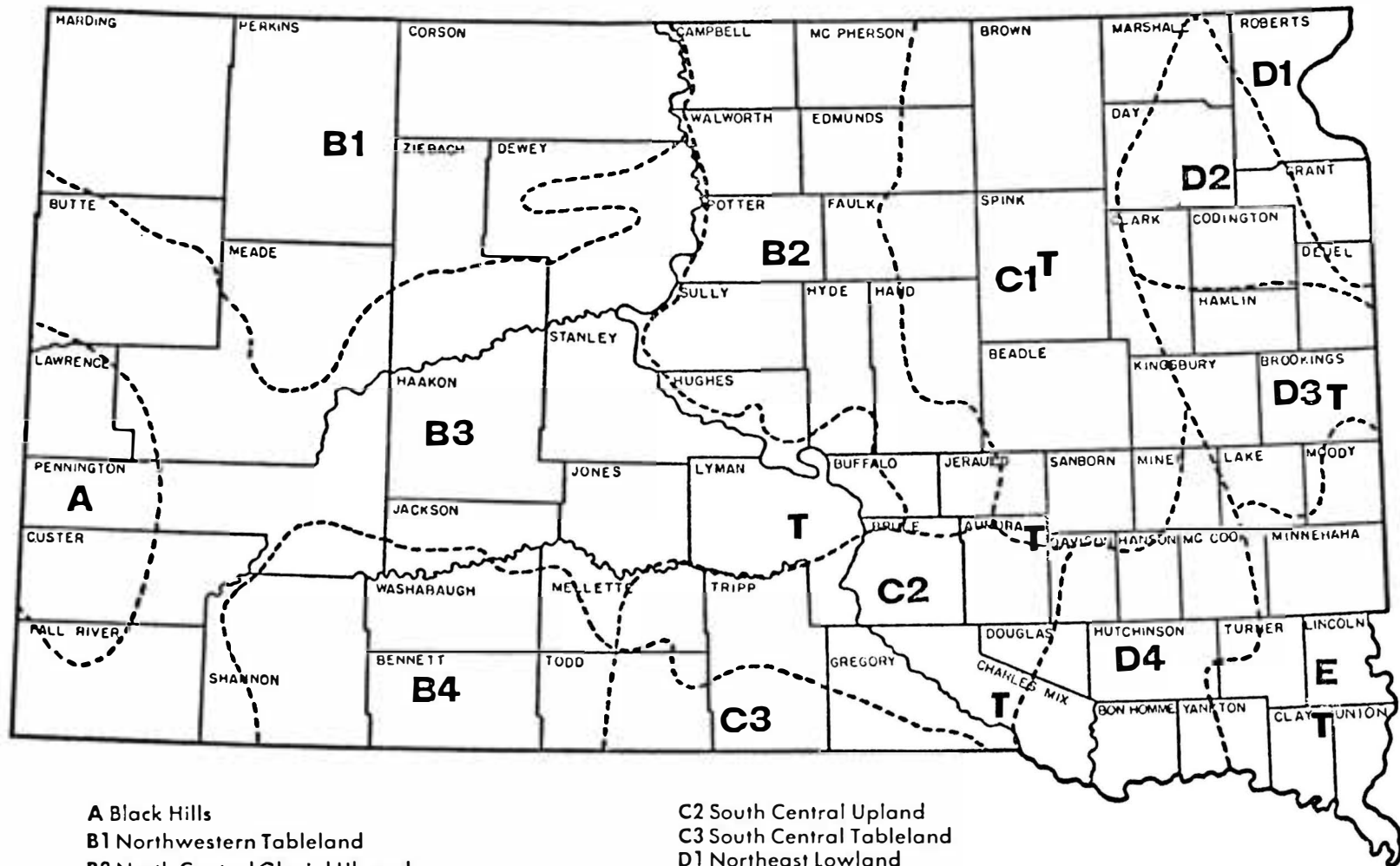


Listing of Tables

Table No.	Contents	Page No.
1	Location of Trials	6
2	Soil Classification and Laboratory Analysis	6
3	Climatic Data	7
4	1980 Area C2 Performance Trial (Geddes)	10
5	1980 Area B3 Performance Trial (Kennebec)	11
6	1980 Area C1 (dryland) Performance Trial (Letcher)	12
7	1980 Area C1 (irrigated) Performance Trial (Redfield)	13
8	1980 Area D3 Performance Trial (Brookings)	14
9	Area C1 (irrigated) Averages	15
10	Area D3 Averages	15
11	1980 Area E Performance Trials (Centerville)	16
12	Area E Averages	17
13	Listing of all entries harvested	18

CROP ADAPTATION AREAS OF SOUTH DAKOTA

T - INDICATES SITE OF 1980 GRAIN SORGHUM PERFORMANCE TRIAL



A Black Hills
 B1 Northwestern Tableland
 B2 North Central Glacial Upland
 B3 Pierre Plain
 B4 Southwestern Tableland
 C1 Northern James Valley

C2 South Central Upland
 C3 South Central Tableland
 D1 Northeast Lowland
 D2 Northern Prairie Coteau
 D3 Central Prairie Coteau
 D4 Southern James Flatland
 E Southeast Prairie Upland

1980 Grain Sorghum Performance Trials

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The relative performance of grain sorghum cultivars grown under similar environmental conditions is evaluated in this report for the 1980 crop season. Performance records of all entries harvested in 1980 and available two through five-year averages are presented. The trials were conducted under the Plant Science Department program in Crop Performance Testing, Agricultural Experiment Station, South Dakota State University.

Location of the 1980 Trials

For adequate performance evaluation, all entries must be grown under similar environmental conditions. Crop adaptation areas in which the trials are conducted are based upon soil type, elevation, temperature, rainfall and other physical differences. The exact location of each trial, row spacing and dates of seeding and harvesting are included in Table 1. Soil classification and data from soil samples taken, cultural practices and fertilizer applications are shown in Table 2.

Weather and Climatic Conditions

Climatic data for the 1980 grain sorghum year (Table 3) are based upon U.S. Monthly Climatological Data. Data is not available from the Geddes and Letcher sites so information from Armour, a reporting station between the two sites, is included for reference. Precipitation was below normal at all sites except Brookings from May until about August 10. Seed germination varied from location to location as the seedbed was frequently quite loose and dry. It was so dry during May that the cooperators delayed seeding at Kennebec and Letcher until they had received adequate precipitation to insure germination.

Temperatures during June, July and August were above 90°F for many days at a time at these locations (Table 3). Stands were thin at Geddes, Kennebec and Letcher and plants were short and somewhat stunted by the time the beneficial rains occurred in August. Depending upon the stage of maturity some of the hybrids put forth new tillers or shoots and more heads formed. These were often 8-10 inches higher than the original heads and matured only because a killing frost did not occur until early October. These additional shoots caused additional variability to trials already adversely affected by the dry, hot weather.

Despite the lack of moisture and abnormally high temperatures, the yields produced by adapted hybrids were good, and, the later maturing hybrids did very

The assistance of the following individuals is acknowledged: G. W. Erion and Q. S. Kingsley of the Plant Science Department; farmer-cooperators William Fijala, Harlan Halverson and Oscar Thompson; and Station personnel A. C. Dittman, B. E. Lawrensen, Herb Lund, Lucian Edler and Kevin Kirby.

Table 1. Location of Trials, Dates of Seeding and Harvesting of Grain Sorghum Performance Trials, South Dakota, 1980

County	Location and Post Office	Row Spacing	Dates	
			Seeded	Harvested
Aurora	Oscar Thompson Farm, Letcher	36"	June 4	Sept. 25
Brookings	Plant Science Farm, Brookings	36"	May 23	Oct. 10
Charles Mix	William Fijala Farm, Geddes	40"	May 19	Sept. 25
Clay	Southeast Experiment Farm, Beresford	36"	May 22	Sept. 23
Lyman	Harlon Halverson Farm, Kennebec	31"	June 9	Sept. 24
Spink	James Valley Research Farm, Redfield	36"	May 28	Oct. 7

well. This was aided by August rains, a warm, dry September and the lack of killing temperatures until mid-October. The test weight and seed quality of most hybrids was very good. The trials at Centerville produced quite well and show the ability of sorghums to recover from an early hailstorm that badly damaged corn and soybean fields in adjacent plot areas. The roots put forth new tillers and the plants caught up with the season. With the aid of warmer temperatures, the sorghum headed only about 7-10 days later than normal. The delay was beneficial for the 1980 crop year as a second hailstorm in late August found most of the kernels still in a dough stage and most hybrids were still able to produce over 2500 lb/A (45 B/A) of good quality grain (Table 11). The very early varieties suffered the most shattering loss from the hailstorm.

Hybrid Entry Procedure

Only grain sorghums offered for sale in South Dakota or being produced for 1981 distribution were eligible for entry. A closed-pedigree hybrid was entered by the name and number under which it was sold by the parent company. All entries maintained a minimum laboratory germination of 80% as required by the South Dakota Certification Standards. A nominal fee was charged for each entry in each area, except for the grain sorghum entries developed by the State and Federal Experiment Stations and entered by the South Dakota Agricultural Experiment Station.

Table 2. Soil sample analysis and cultural practices of 1980 Grain Sorghum Sites

County and crop adaptation areas	Soil Classification	Laboratory analysis				Field Preparations			
		Org. mat. %	P lb/A	K lb/A	pH	Methods	Fert. N	P	K lb/A
Lyman, B2	Pierre clay	2.6	10	1000	7.1	Sweeps fall & spring,	Gr.	stubble	
Aurora, C1	Hou. Pros. SiL	2.3	36	700	6.5	Disked and harrowed			
Spink, C1(irr.)	Beotia Si C1	3.2	34	760	7.3	Plowed and disked	80	40	0
Chas. Mix, C2	Highmore SiC1	3.8	200	1000	7.1	Plowed and disked	26	13	6
Clay, E	Egan SiC1	3.4	32	730	6.8	Plowed and disked	80	40	20

Table 3. Temperature and Precipitation Data for the 1980 Grain Sorghum Growing Season in South Dakota^a

District	Month	Temperature, Degrees F				Precipitation, inches		
		Mean av.	Departure from normal	Av. departure	Days 90 ^o +	Month total	Departure from normal	Total departure
Armour C2	May	60.9	+1.1		0	1.41	-1.47	
	June	72.3	+3.2		10	2.45	-1.82	
	July	79.5	+4.0		25	0.64	-2.05	
	August	74.4	+0.3		14	5.95	+3.20	
	Sept.	66.2	+2.9		6	0.18	-2.06	
	Oct.	49.5	-2.8	+1.5	2	1.99	+0.53	-3.67
First freeze	10/3	- 27 ^o				12.62		
Brookings 2 NE D3	May	56.8	+0.6		0	1.09	-2.11	
	June	65.7	0.0		0	9.28	+4.70	
	July	70.4	-0.7		6	2.58	-0.26	
	August	67.9	-1.7		1	3.93	+1.07	
	Sept.	59.7	+0.7		2	0.42	-1.82	
	Oct.	43.9	-4.8	-0.9	0	0.84	-0.63	+0.95
First freeze	9/26	- 27 ^o				18.14		
Centerville 6 SE E	May	60.5	-0.2		2	2.17	-1.31	
	June	69.3	-0.9		5	2.12	-2.58	
	July	75.8	+0.5		19	1.25	-1.86	
	August	71.6	-2.3		6	6.49	+3.45	
	Sept.	62.7	-1.0		4	0.86	-1.82	
	Oct.	45.8	-7.4	-1.9	-	0.18	-0.47	-4.59
First freeze	10/3	- 25 ^o				14.07		
Redfield 6 E C1(irr.)	May	58.6	b		2	1.85	b	
	June	66.0			2	4.74		
	July	73.2			14	3.20		
	August	69.7			10	3.88		
	Sept.	60.6			2	0.50		
	Oct.	45.6			1	1.19		
First freeze	10/3	- 30 ^o				15.36		
Kennebec B3	May	62.4	+4.3		6	0.66	-2.03	
	June	73.3	+5.8		14	3.36	-0.17	
	July	79.7	+4.8		28	1.05	-1.00	
	August	76.2	+2.3		18	4.15	+1.81	
	Sept.	65.5	+2.7		7	0.17	-1.35	
	Oct.	49.5	-1.7	+3.1	3	3.26	+2.33	-0.51
First freeze	10/11	- 29 ^o				12.65		

^a - Based upon reports of Monthly Climatological Data, National Climatic Center, Ashville, NC.

^b - Departures are figures from 30 years data. This station has not been in operation for that period of time.

Experimental Procedure

Each trial consisted of four replications of two-row plots. Each plot was randomly located within each replication. All trials were seeded with a 31-cell cone-seeder mounted above flexi-planter units. A recommended herbicide for grassy weed control and an insecticide for greenbug control were banded over the row at seeding time. The row spacings used are indicated in Table 1 and plot lengths were dependent upon the area available at each location. Seeding rates were adequate, under normal conditions, to achieve an average of 2 and 3 plants per foot of row in the central and eastern areas of the state, respectively. The trials at Redfield were irrigated twice by the gravity method.

Moisture determinations were made the third or fourth week in September; the time of normal date of killing frost. These are usually more reliable and informative than determinations made at harvest, generally after a freeze. Moisture and test weight of the grain realistically indicate relative maturity. Grain samples for moisture determinations were taken from all observation plots at all locations during the period of September 17 to 22. Ten to twelve heads, 400-500 grams, were cut from each entry, placed in a polyethelene bag, tagged and sealed. The samples were threshed, cleaned and moisture percentages determined with an electronic moisture meter. The upper limits of the meter are 35% and the material reported above this level, recorded as 35.+ in the tables, would generally indicate lines of late maturity for the area.

The harvested grain was cut from a 10-foot section of each row for 20 linear feet in each individual plot. The heads were bagged at harvest, tagged and tied, and returned to Brookings for drying and threshing. Yields are reported in pounds per acre ($\times 1.121$ for kg/ha) with three or four replications harvested for yield and one left for observational purposes.

Discussion of Results

Generally, trial yields were good to exceptional for the better entries in each of the trials. In many of the trials the entries were high in kernel moisture when sampled. In a normal season of cooler fall temperatures and earlier killing frosts the yield, test weight and quality of these entries would probably have been poorer. The warm, dry conditions during September 1980 permitted nearly all varieties to reach physiological maturity. The long-term averages give a better indication over several years environments.

The moisture samples were indicative of moisture content in mid-September and had a killing frost occurred soon thereafter it would have been necessary to use a dryer for many of the entries to ensure safe storage. Some drying is favored by many growers as they combine before frost, at 17-18% moisture to avoid excessive lodging problems that often occur once the stalks are frozen. In most of the 1980 trials not very many of the entries had matured enough to be at even the 20% level by September 20 and drying would have been costly.

Greenbugs were noticed at some sites even though an insecticide was applied for their control. Levels of infestations were not high enough to warrant treatments for insect control again.

Lodging was not a serious problem at any site. Most of the 1980 trials were harvested before a killing freeze had affected the stalks. The trial at Brookings was not cleaned up after harvest to permit late evaluation of lodging. Even after several occurrences of a killing freeze and many days of strong wind, some excessively so, only about a maximum of 20% lodging occurred in some varieties (Table 8). Bird damage was very limited at all sites. Yields, quality and test weight were affected by the stage of growth when the rains or high temperatures occurred.

Bird damage, especially from sparrows, was very limited in 1980. The trials located within larger fields of farmer-cooperators were not subject to concentrated pecking as in smaller fields.

Measurements of Performance

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

Yields for 1980 and other agronomic data are reported in Tables 4 through 11. Separate tables with two- to five-year averages are reported in Tables 9, 10 and 12.

Table 5. 1980 Grain Sorghum Performance Trial, Area B3, Harlon Halverson Farm, Kennebec, Lyman County, South Dakota

Brand & Variety	Yields, pounds per acre				Test Wt. lb/B	Height, inches	Percent Moisture 9/18/80
	1980	1977-80	1978-80	1979-80			
ACCO R 1014	5090	4030	3720	4525	59	33	35.+
Funks G499GBR	4980				59	34	31.9
Western WS-206	4945		3795	4645	61	34	31.9
Pfizer PGI M548G	4685				59	36	33.0
ACCO R 920	4565	3655	3605	4265	57	36	24.2
Sigco 252 YG	4395				61	34	30.8
DeKalb A-25a+	4290	3635	3535	4315	59	30	23.6
Northrup King 180A	4210	3895	3395	4030	58	33	29.2
Cargill 30	4190				57	36	35.+
Funks G261	4185				61	31	27.7
P-A-G 4433	4180				59	35	33.5
Warner W-564T	4140			3650	56	37	35.+
Sigco Ex86	4070				59	34	35.+
DeKalb B-38+	4035		3130	3660	59	37	32.2
Pride P151GB	3945				60	32	29.8
Warner W-655T	3910			3745	56	36	35.+
Sigco 254 YG	3900				56	41	35.+
Northrup King 121A	3895				58	32	28.0
Sigco Ex85	3850				58	39	35.+
Prairie Valley 515GR	3830				60	29	28.5
Northrup King Brand 1210	3790				60	32	28.4
DeKalb A-28+	3785	3470	3190	3910	59	34	31.0
Western WS-203	3760				60	35	33.5
Pfizer PGI M518G	3665				61	31	29.5
ACCO R 980	3605		3045	3555	60	33	31.4
P-A-G 354	3565				59	30	30.3
Cenex 224T	3300				58	32	35.+
Funks HS 1769	3240				60	35	32.4
Pioneer Brand 894	3070				59	28	25.5
Warner W-545T	3065			3275	59	31	34.8
SDAES SD 104	3050	2605	2570	3185	58	37	21.4
Cenex 310T	3130			3520	56	40	35.+
Cenex 228T	2890			3355	58	35	31.8
Sigco 8710K	775				55	34	23.5
Means	3820				60	34	24.7
LSD (.05)	1185				C.V. - % = 15.5		

Table 6. 1980 Grain Sorghum Performance Trial, Area C1, Oscar Thompson Farm, Letcher, Aurora County, South Dakota

Brand & Variety	Yields, pounds per acre				Test Wt. lb/B	Height, inches	Percent Moisture 9/18/80
	1980	1977-80	1978-80	1979-80			
Sigco 254 YG	3540				59	37	35.+
DeKalb A-28+	3490	3270	3175	3375	61	31	29.9
Cenex 310T	3170			3255	59	34	35.0
Cenex 224T	3135				60	29	30.4
Funks G261	3060				60	34	27.1
Warner W-564T	3020			3020	60	34	35.+
Disco 204R	2975				59	34	35.+
P-A-G 4433	2920				59	31	30.2
Warner W-655T	2890			3690	59	35	35.+
Pfizer PGI M548G	2890				61	33	29.2
Cenex 228T	2865			3525	60	32	30.3
Asgrow Dorado E	2835			3820	61	30	29.9
Pride P151GB	2835				60	29	22.0
Prairie Valley 515GR	2790				60	29	27.6
Young Oro Recio	2780				61	30	28.7
Cargill 30	2760				59	33	32.1
ACCO R920	2750	2590	2865	3230	58	35	21.5
Funks G499GBR	2705				59	30	31.4
ACCO R 1014	2675	2795	2780	2880	59	29	32.7
Asgrow Bug-Off E	2655		2770	2945	59	35	33.4
Pride P508GB	2655	3135	3035	2655	60	31	27.5
Funks HW 1769	2650				61	34	28.9
Northrup King Brand 2018	2575			3110	61	31	26.4
Western WS-203	2555				60	32	24.9
Asgrow Corral	2525		3380	3330	58	34	35.+
DeKalb B-38+	2525	3295	3245	3140	59	34	35.+
Pioneer Brand 894	2500				60	27	14.9
Northrup King 180A	2475			3290	58	32	24.2
Pfizer PGI M518G	2475				59	29	26.4
Warner W-545T	2470			2925	60	29	25.3
Northrup King Brand 2030	2265			3085	56	33	35.+
P-A-G 354	2260				59	29	25.8
ACCO R 980	2165		2470	2575	61	29	29.3
Disco 200R	2160			2750	56	35	34.4
Disco 202	1790				49	41	35.+
SDAES SD 104	990	1580	1730	1715	58	35	18.0
Means	2660				59	32	29.4
LSD (.05)	715				C.V. - % = 16.6		

Table 7. 1980 Grain Sorghum Performance Trial, Area C1 (irrigated), James Valley Research Center, Redfield, Spink County, South Dakota

Brand & Variety	Yield, lb/A	Test Wt. lb/B	Height, inches	Percent Moisture 9/17/80	Date Headed
Asgrow Dorado E	5965	60	45	34.3	8/4
ACCO R 1014	5595	59	45	34.7	8/5
Asgrow Corral	5315	59	48	35.+	8/7
Western WS-203	5135	60	48	30.1	8/4
Cenex 228T	5045	60	46	34.4	8/4
DeKalb A-28+	5000	60	42	30.3	8/1
Western WS-206	4995	59	46	31.8	8/6
Cargill 30	4830	59	45	33.2	8/6
Pride P508GB	4815	60	44	29.6	8/3
Warner W-655T	4810	59	50	35.+	8/7
Warner W-545T	4780	60	39	31.9	8/2
Northrup King Brand 2222	4780	58	45	35.+	8/9
Northrup King 180A	4710	59	45	33.2	8/1
Sigco 254 YG	4680	59	48	35.+	8/6
Prairie Valley 515GR	4600	60	40	33.0	8/3
P-A-G 4433	4520	58	48	35.+	8/6
Northrup King Brand 2018	4490	60	44	31.5	8/3
P-A-G 354	4420	58	41	27.5	8/4
Cenex 310T	4420	59	50	35.+	8/8
ACCO GR 1018	4410	59	43	35.+	8/6
Asgrow Bug-Off E	4320	59	47	35.+	8/7
Cenex 224T	4310	60	38	31.5	8/3
ACCO R 920	4295	58	45	27.4	7/25
ACCO R 980	4255	61	40	30.3	8/5
Pioneer Brand 894	4185	59	38	27.5	7/29
ACCO GR 1020	4160	57	45	35.+	8/11
Warner W-564T	4140	58	45	35.+	8/8
Northrup King Brand 2030	4110	58	42	34.9	8/8
SDAES SD 104	3660	59	38	28.5	7/25
Means	4645	59	44	32.9	8/4
LSD (.05)	945			CV - % = 12.5	

Table 8. 1980 Grain Sorghum Performance Trial, Area D3, Plant Science Farm, Brookings, Brookings County, South Dakota

Brand & Variety	Yield, lb/A	Test Wt. lb/B	Height, inches	Percent Moisture 9/22/80	Date Headed	% Erect Plants 11/19/80
Western WS-203	5900	58	47	35.+	8/2	82
Cenex 228T	5070	56	44	35.+	8/6	96
Northrup King 121A	5020	55	40	35.+	8/2	92
Western WS-206	4985	57	46	35.+	8/7	92
Prairie Valley 515GR	4960	56	39	35.+	8/4	94
Northrup King 180A	4935	55	44	35.+	8/3	90
Northrup King Brand 1210	4925	57	41	29.3	7/31	87
Warner W-545T	4925	56	38	35.+	8/4	94
Cenex 224T	4900	56	37	35.+	8/4	93
ACCO R 1014	4895	54	44	35.+	8/9	92
P-A-G 354	4780	55	41	35.+	8/5	95
Warner W-655T	4755	54	47	35.+	8/8	92
Cenex 310T	4710	54	49	35.+	8/9	89
Sigco 254 YG	4590	54	48	35.+	8/10	92
Northrup King Brand 1580	4440	56	42	35.+	8/7	95
Cargill 30	4315	50	46	35.+	8/9	97
Warner W-564T	4220	53	44	35.+	8/11	94
ACCO R 920	4040	56	47	28.6	7/27	87
DeKalb A-28+	3935	58	42	35.0	8/3	88
SDAES SD104	3930	58	39	28.7	7/24	85
ACCO R 980	3850	56	42	34.7	8/7	96
Means	4670	55	43	34.1	8/5	92
LSD (.05)	550			C.V. - % = 7.2		

Table 9. Two-, Three-, Four-, and Five-Year Average Yields of Grain Sorghum Hybrids Entered at Redfield, South Dakota, 1976-1980.

Brand & Variety	Average Yield, pounds per acre			
	1976-80	1977-80	1978-80	1979-80
ACCO R 920	3900	3790	3460	3050
ACCO R 980				3015
ACCO R 1014	4290	4020	3705	3660
ACCO GR 1018		3415	3305	2855
Asgrow Bug-Off E				2900
Asgrow Corral			4025	3655
Asgrow Dorado E	4570	4185	4110	3905
Cenex 228T				3345
Cenex 310T				3170
DeKalb A-28+		3985	3675	3440
Northrup King Brand 2018				3415
Northrup King Brand 2030				2850
Pride P508GB				3480
SDAES SD 104		2735	2770	2450
Warner W-545T				3120
Warner W-564T				3055
Western WS-206				3535

Table 10. Two-, Three-, Four-, and Five-Year Average Yields of Grain Sorghum Hybrids Entered at Brookings, South Dakota, 1976-1980

Brand & Variety	Average Yield, pounds per acre			
	1976-80	1977-80	1978-80	1979-80
ACCO R 920	3905	3875	3850	3960
ACCO R 980			4085	4080
ACCO R 1014	4145	4050	4700	4815
Cenex 228T				4945
DeKalb A28+		3905	4120	4170
Northrup King 121A			5395	5195
Northrup King 180A	4805	4605	4950	4865
Northrup King 1580		4090	4770	4630
SDAES SD 104		4025	4465	4480
Warner W-545T				4800
Warner W-564T				4485

Table 11. 1980 Grain Sorghum Performance Trial, Area E, Southeast Experiment Farm, Centerville, Clay County, South Dakota^a

Brand & Variety	Yield, lb/A	Test Wt. lb/B	Height, inches	Percent Moisture 9/19/80	Date Headed
Cenex 310T	3375	57	46	26.8	7/30
Warner W-564T	3290	58	41	24.5	7/31
Asgrow Corral	3180	56	46	24.8	8/2
Northrup King Brand 2222	3165	57	39	28.3	8/4
Pfizer PGI M550G	3165	57	42	27.2	8/1
Warner W-655T	3125	57	43	26.3	7/30
DeKalb X-030	3120	57	37	22.6	7/26
Disco 204R	3065	52	44	26.0	8/2
ACCO R 1014	3020	56	42	18.6	7/25
Disco 200R	2990	58	45	24.3	8/1
P-A-G 4433	2935	56	41	19.5	7/28
DeKalb C-42A+	2890	55	39	21.4	7/29
Sigco 254 YG	2880	57	43	25.3	8/2
ACCO GR 1018	2860	56	39	20.8	7/27
Prairie Valley 535GR	2845	57	40	27.8	8/3
ACCO GR 1020	2845	58	37	30.2	8/7
Warner W-545T	2765	57	35	19.9	7/27
Disco 202R	2765	59	45	35.+	8/11
Sigco 0515	2730	58	41	32.4	8/8
Funks G499 GBR	2705	55	35	22.2	7/28
Pfizer PGI M56	2705	56	41	25.9	8/4
Cenex 228T	2610	56	38	20.9	7/26
Cargill 30	2530	56	40	23.2	7/29
Prairie Valley 515GR	2490	57	36	20.3	7/25
ACCO GR 1028	2415	56	37	28.2	8/5
Asgrow Bug-Off E	2375	57	41	21.2	7/28
Cenex 224T	2310	56	36	16.5	7/25
Funks HW 1769	2260	57	38	25.4	7/25
Funks G261	2200	58	39	14.3	7/21
DeKalb B-38+	2185	55	43	20.4	7/27
Asgrow Dorado E	2075	58	41	12.8	7/23
ACCO DR 1035	1855	57	40	20.7	7/29
Pfizer PGI M548G	1825	55	37	22.0	7/27
Northrup King Brand 2030	1565	57	36	21.1	7/24
SDAES SD 104	330	56	36	12.0	7/13
Prairie Valley 530GM	240	50	84	35.+	late
Means	2545	56	41	23.7	7/29
LSD(.05)	445			C.V. - % = 10.8	

^a Trial was damaged twice by hail, in early June and late August. Heading was delayed initially and the last storm caused shattering to the earlier maturing varieties.

Table 12. Two-, Three-, Four-, and Five-Year Average Yields of Grain Sorghum Hybrids Entered at Centerville, South Dakota, 1976-1980.

Brand & Variety	Average Yield, pounds per acre			
	1976-80	1977-80	1978-80	1979-80
ACCO R 1014	4365	4770	4330	4830
ACCO GR 1018		4535	4045	4395
ACCO GR 1028		4550	3990	4315
Asgrow Bug-Off E				4490
Asgrow Corral			4675	4980
Asgrow Dorado E				4120
Cargill 30				4400
Cenex 228T				4335
Cenex 310T				5170
DeKalb B-38+	4020	4365	3830	4050
DeKalb C-42A+	4825	5140	4510	4710
Disco 200R				4770
Disco 202R				4795
Northrup King Brand 2030				4040
P-A-G 4433				4420
SDAES SD 104		2900	2285	2010
Warner W-545T				4420
Warner W-564T				4985

Table 13. Entries Submitted for the 1980 Grain Sorghum Performance Trials and Tables where the Results Appear

Company & Brand	Variety	Tables	Company & Brand	Variety	Tables
Asgrow Seed Company 7000 Portage Road Kalamazoo, MI 49001 "Asgrow"	Dorado E Bug Off E Corral	4,6,7,9,11,12 4,6,7,9,11,12 4,6,7,9,11,12	Funks Seeds International 719 26th Street Lubbock, TX 79404 "Funks"	G499GBR G261 HW 1769	4,5,6,11 4,5,6,11 4,5,6,11
DeKalb Ag Research, Inc. Rt. 1, Box 225 Glenvil, NB 68941 "DeKalb"	A-25a+ A-28+ B-38+ C-42a+ X-030	5 4,5,6,7,8,9,10 4,5,7,11,12 4,11,12 4,11	Pfizer Genetics, Inc. P.O. Box 166 Olivia, MN 56277 "Pfizer Genetics"	M56 M518G M548G M550G	4,11 5,6 4,5,6,11 4,11
Disco Seed Co. P.O. Box 640 Mitchell, SD 57301 "Disco"	200R 202 204	4,6,11,12 4,6,11,12 4,6,11	R. C. Young Seed Co. 624 27th Street Lubbock TX 79404	Oro Recio	6
Northrup King Co. P.O. Box 959 Minneapolis, MN 55440 "NK Brand"	121A 180A 1210 1580 2018 2030 2222	5,8,10 5,6,7,8,10 5,8, 9,10 4,6 4,6,7,9 4,7,11	Cenex Seed Co. Box 964 Sioux Falls, SD 57101 "Cenex"	224T 228T 310T	4,5,6,7,8,11 4,5,6,7,8,9,10,11,12 4,5,6,7,8,9,11,12
P-A-G Seeds P.O. Box 9480, Dept. 16 Minneapolis, MN 55440 "P-A-G"	354 4433	4,5,6,7,8 4,5,6,7,11,12	Cargill Seeds P.O. Box 9300, Dept. 16 Minneapolis, MN 55440 "Cargill"	30	4,5,6,7,8,11,12
Pioneer Hi-Bred, Intn'l 1206 Mulberry St. Des Moines, IA 50308 "Pioneer Brand"	894	5,6,7	SIGCO Research, Inc. Box 150 Breckenridge, MN 56520 "Sigco"	0515 252 YG 254 YG 8710K EX 85 EX 86	11 5 4,5,6,7,8,11 5 5 5
Pride Company, Inc. P.O. Box 8 Glen Haven, WI 53810 "Pride"	P151GB P508GB P808GB	5,6 4,6,7,9 4	Prairie Valley, Inc. Box 125 Phillips, NB 68865	PV 515GR PV 530GR PV 535GR	4,5,6,7,8,11 4,11 4,11
			King's Western Seed, Inc. P.O. Box 947 Huron, SD 57350 "King's Western"	WS-203 WS-206	4,5,6,7,8 5,7,8,9

Table 13. 1980 Grain Sorghum Entries (cont.)

Company & Brand	Variety	Tables
ACCO Seed	R 920	5,6,7,8,9,10
P.O. Box 1630	R 980	5,6,7,8,9,10
Plainview, TX 79072	R 1014	5,6,7,8,9,10,11,12
"ACCO"	GR 1018	4,7,9,11,12
	GR 1020	4,7,11
	GR 1028	4,11,12
	DR 1035	4,11
George Warner Seed Co.	W-545T	4,5,6,7,8,9,10,11,12
P.O. Box 1448	W-564T	4,5,6,7,8,9,10,11,12
Hereford, TX 79045	W-655T	4,5,6,7,8,11
"Warner"		
Agr. Exp. Station	SD 104	4,5,6,7,8,9,10,11,12
South Dakota State U.		
Brookings, SD 57007		
"SDAES"		