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1981 Grain Sorghum Performance Trials

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South Dakota State University

Grain Sorghum Performance Trials for 1981

C 238
January 1982

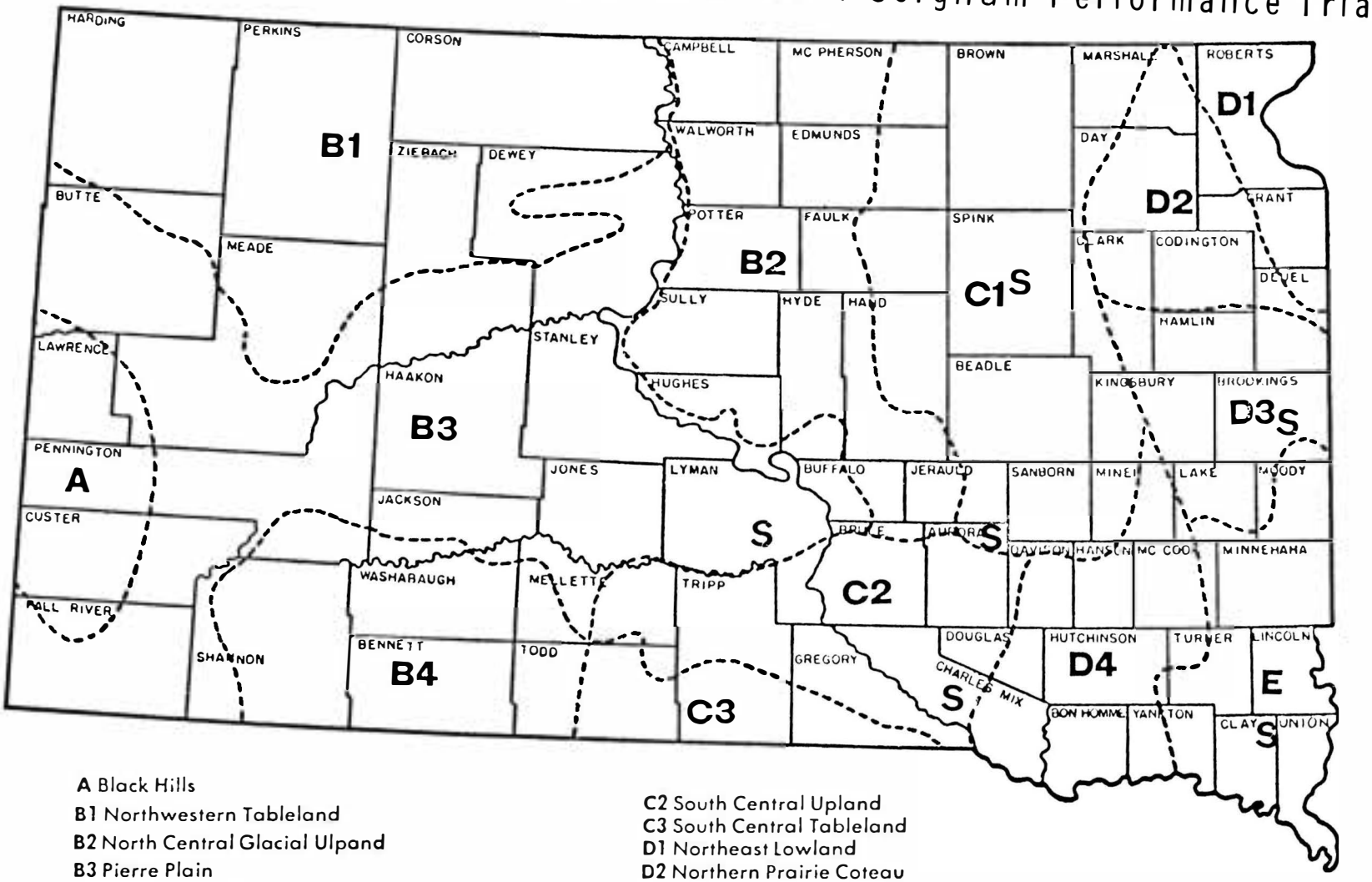
Agricultural Experiment Station
South Dakota State University
Brookings

Listing of Tables

CROP ADAPTATION AREAS OF

SOUTH DAKOTA

S - Indicates Site of 1981 Grain Sorghum Performance Trial



A Black Hills
B1 Northwestern Tableland
B2 North Central Glacial Ulpand
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

1981 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 1981 crop season. Performance records of all entries harvested in 1981 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 1981 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 1981 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. Total precipitation was below normal for the months May-October 1981 at all but the Centerville station. Precipitation in early June was adequate to insure uniform germination and stands, though seeding was delayed at Letcher and Kennebec until adequate soil moisture was available. Favorable rainfall which fell at nearly all locations during the last half of July and the early part of August ensured grain sorghum yields at most sites. The trial at Redfield received only limited rainfall and irrigation water was also restricted; however, yields were better than average.

Temperatures were below normal at most locations during much of the summer except early July and September. After the favorable precipitation began the temperatures dropped and only a few days with temperatures above 90° were recorded through August, retarding growth. However, the grain sorghum benefitted from the combination of above normal temperatures and very limited precipitation in September. The cooler temperatures earlier had delayed many of the medium and later maturing entries and the September weather with no severe killing frost helped mature this sorghum. The first hard freeze did not occur until late October.

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, 1981.

County	Location and Post Office	Row Spacing	Dates Seeded	Dates Harvested
Aurora	Oscar Thompson Farm, Letcher	36"	June 3	October 2
Brookings	Plant Science Farm, Brookings	36"	May 27	October 6
Charles Mix	Wm. Fijala Farm, Geddes	40"	May 20	Sept. 29
Clay	Southeast Experiment Farm, Beresford	36"	May 22	October 7
Lyman	Harlon Halverson Farm, Kennebec	38"	June 3	October 1
Spink	James Valley Research Farm, Redfield	36"	May 29	October 15

Growing conditions did not always seem favorable for sorghum in 1981 but the yields produced ranged from good to excellent. In spite of the cooler than usual summer, the absence of a hard, killing frost permitted entries considered adapted plus some later maturing entries to produce sound grain at most locations. Test weights were poorest at Brookings and Kennebec. At Brookings many entries were still immature at harvest as the cooler mid-summer temperatures delayed flowering. The warmer weather in July and lack of precipitation had some effect upon yield and test weight at Kennebec. Moisture in the grain was high at Brookings, Centerville and Redfield when moisture samples were taken at time of normal first frost in September.

Hybrid Entry Procedure

Only grain sorghums offered for sale in South Dakota or being produced for 1982 distribution were eligible for entry. A closed-pedigree hybrid was entered by the name and number under which it was sold by the participating company. All entries maintained a minimum laboratory germination of 80% as required by South Dakota Certification Standards. A nominal fee was charged for each entry in each area. Proprietary entries included are the choice of the participating companies.

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-planted 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

Table 2. Soil Sample Analysis and Cultural Practices of 1981 Grain Sorghum Sites.

County and crop adaptation areas	Soil Classification	Laboratory analysis Org. mat. %	P lbs/A	K lbs/A	pH	Field Preparations Methods	Fert. lb/A N	P	K
Lyman, B2	Pierre clay	2.7	98	1000	6.4	Sweeps fall & Spring	Gr. stubble		
Aurora, C1	Hou. Pros. SiL	2.3	36	700	6.5	Disced and harrow	Man. on stubble		
Spink C1 (irr)	Beotia SiCl	2.9	65	910	7.1	Plowed & disced	45	20	0
Chas. Mix. C2	Highmore SiCl	2.6	32	950	7.5	Plowed & disced	Gr. stubble		
Clay, E	Egan SiCl	2.9	54	920	6.2	Plowed & disced	80	30	20

Table 3. Temperature and Precipitation Data for the 1981 Grain Sorghum Growing Season in South Dakota.[a]

District	Month	Temperature Degrees F				Precipitation, inches		
		Mean Ave.	Departure from normal	Ave. departure	Days 90°+	Month total	Departure from normal	Total departure
Armour	May	58.5	-1.2		2	2.25	-0.63	
	June	71.2	+2.1		8	2.34	-1.93	
C2	July	75.4	-0.1		15	3.56	+0.87	
	August	71.7	-2.4		8	1.66	-1.09	
	Sept.	65.3	+2.0		6	1.42	-0.85	
	Oct.	50.8	+1.5	+0.3	0	1.69	+0.23	-3.40
	First Freeze	31° - 9/17				12.92		
Brookings	May	53.7	-2.5		0	0.71	-2.49	
2 NE	June	65.7	0		1	2.89	-1.69	
	July	70.4	-0.7		3	4.01	+1.17	
D3	August	68.4	-2.2		1	3.69	+0.83	
	Sept.	59.1	+0.1		2	0.74	-1.50	
	Oct.	45.2	-3.5	-1.5	0	2.86	+1.39	-2.29
	First freeze	32° - 9/18				14.90		
Centerville	May	56.3	-4.4		0	1.66	-1.82	
6 SE	June	68.7	-1.5		3	5.09	+0.39	
	July	71.6	-3.7		6	5.76	+2.65	
E	August	67.7	-6.2		0	3.77	+0.73	
	Sept.	61.7	-2.0		3	1.26	-1.42	
	Oct.	48.4	-4.8	-3.7	0	1.34	+0.69	+1.22
	First freeze	28° - 9/17				18.88		
Redfield	May	55.1	b		0	1.12	b	
6 E	June	66.4			3	2.63		
	July	74.2			15	1.19		
C1-(irr.)	August	71.1			6	2.16		
	Sept.	61.9			4	0.71		
	Oct.	46.4			0	0.80		
	First freeze	28° - 9/17				9.73		
Kennebec	May	57.6	-0.5		1	2.05	-0.64	
	June	69.3	+1.8		5	1.53	-2.00	
B 3	July	77.0	+2.1		22	3.72	+1.67	
	August	72.9	-1.0		9	1.96	-0.38	
	Sept.	65.7	+2.9		5	0.24	-1.28	
	Oct.	50.8	-0.5	+0.8	0	1.27	+0.34	-2.29
	First freeze	27° - 9/17				10.77		

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.

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 and fourth weeks 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 23. 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. All entries in the trials at Brookings and Redfield were above 35% moisture and the moisture percentages are not reported for these two tables.

Harvesting was done before the severe killing frost of late October because the hazard of an early snowstorm and total crop loss is too critical to delay harvest beyond early October. 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 (x 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 with top hundred-weight (cwt.) yields in the 40's at Brookings and Kennebec, in the 50's at Geddes, Letcher and Redfield and the upper 60's at Centerville. 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 1981 permitted nearly all varieties to reach physiological maturity, except at Brookings. The long-term averages give a better indication over several years' environments.

The moisture samples were indicative of moisture content in the kernels in mid-September and had a killing frost occurred about that time it would have been necessary to use a dryer to ensure safe moisture levels for storage. Some drying used to be favored by many growers as they could combine before frost, at 17-18% moisture, avoiding excessive lodging problems that often occurred once the stalks were frozen. As the cost of energy used for drying has risen sharply the need for more hybrids to be at moisture levels safe for storage by late September should increase. Not many hybrids were below 20% moisture by mid-September 1981, even in the major areas of South Dakota.

Lodging was not a serious problem at any site. Most of the 1981 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 killing freeze and numerous days of strong winds, only about 5% lodging occurred in a few entries. Bird damage, especially from

sparrows, was quite limited in 1981. Only at Brookings was some selective feeding noted and then in limited amounts. The trials located within fields of farmer-cooperators were not as subject to concentrated picking as in smaller fields. Yields, quality and test weight were affected by the stage of growth when rains and/or high temperatures occurred. Greenbugs were not a serious problem.

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 1981 and other agronomic data are reported in Tables 4 through 8 and Table 11. Separate tables with two- to four- or five-year averages are reported in Tables 9, 11 and 12. A listing of all entries is given in Table 13.

Table 4. 1981 Grain Sorghum Performance Trial, Area C2, Wm. Fijala Farm, Charles Mix County, South Dakota.

Brand and Hybrid	Percent Moisture 9/21/81	Height inches	Test Weight lb/B	Yields, Pounds Per Acre 1981	1977-81	1978-81	1979-81	1980-81
PAG Ex 91008	18.8	42	60	5365				
SeedTec 624G	19.7	50	61	5140				
Stauffer Seeds PV535	21.5	46	61	5060				4805
Asgrow Corral	19.4	42	61	5030		5225	4585	4735
Cenex 310T	18.5	44	60	5000			4865	4795
DeKalb DK-38	21.2	45	60	4930				
SeedTec 652G	19.8	44	61	4880				
Sigco 254YG	21.5	45	61	4865				4375
Western WS-212	17.0	47	61	4775				
DeKalb DK-42	21.0	39	60	4700				4750
Sigco X9220	16.8	43	60	4695				
Barzan Rancher 30Y	14.0	42	61	4675				
Pioneer Brand 8515	18.2	47	61	4665				
Northrup King Brand 2030	14.5	36	61	4655			4110	3855
Northrup King Brand 2222	15.2	43	60	4650				4480
Cenex 228T	20.7	42	60	4635			3950	4045
Pfizer Genetics M550G	18.9	47	60	4630				
Cargill 30	18.3	41	59	4615			4310	4395
Migro TEK 1021R	21.0	44	60	4580				
DeKalb A-28+	15.9	41	61	4550	3980	4420	4130	3840
Warner W-655T	18.6	44	60	4545			4320	4225
DeKalb B-38+	15.4	41	61	4515	4245	4715	4430	4310
Stauffer Seeds PV515GR	15.6	33	61	4505				4270
Asgrw Dorado E	14.5	42	61	4480	3960	4335	3860	3815
Northrup King Brand 2018	12.8	40	62	4475			3905	3655
SeedTec 651DR	21.6	50	60	4460				
Funks G-261	13.0	38	60	4425				3855
Migro TEK 14R	20.1	50	61	4385				
Migro TEK 1011R	18.2	39	61	4360				
PAG 4433	19.0	41	59	4355			4060	4160
Pfizer Genetics M548G	16.5	43	60	4335				3745
Sigco 252YG	17.1	40	61	4330				
Funks G499GBR	19.4	37	59	4270				4605
Pride P812GB	18.7	42	60	4250				
Warner W-564T	15.7	43	60	4230			4055	3965
Golden Acres T-E Y44R	13.7	38	61	4225				
Stauffer Seeds PV530GR	21.9	43	60	4220				2280
Western WS-206	13.7	42	61	4210				
Warner W-545T	15.4	33	61	3945			4245	4130
Cenex 224T	14.5	35	60	3915				4080
PAG 354	14.2	39	59	3610			3505	3610
Cargill Ex 91002	14.1	37	61	3530				
Means	17.5	42	60	4515				
C.V. - % =	10.6	LSD (.05)		780				

Table 5. 1981 Grain Sorghum Performance Trial, Area B3, Harlon Halverson Farm, Kennebec, Lyman County, South Dakota.

Brand and Hybrid	Percent Moisture 9/21/81	Height inches	Test Weight lb/B	Yields, Pounds Per Acre 1981	1977-81	1978-81	1979-81	1980-81
Western WS-205	23.0	50	58	3825				
Northrup King Brand 1210	26.0	44	58	3795				3790
DeKalb A-28+	22.2	46	56	3575	3490	3285	3880	3680
Funks G-261	18.6	49	58	3435				3810
Pride P151GB	19.5	45	57	3410				3675
Northrup King Brand 1580	21.9	46	57	3380				
Stauffer Seeds PV515GR	20.3	40	56	3305				3565
Barzan Rancher 30Y	26.9	48	57	3300				
SeedTec 624G	27.6	55	56	3300				
Western WS-203	20.2	49	57	3280				3520
Warner W-545T	18.7	40	56	3275			3275	3170
Northrup King NK 180	26.0	48	55	3240	3765	3355	3765	3725
Western WS-206	24.5	46	56	3165		3635	4150	4055
Sigco 252YG	26.5	47	55	3150				3775
Pfizer Genetics M548G	27.4	45	56	3150				3915
DeKalb DK-38	27.9	52	57	3115				
Cenex 310T	29.8	51	55	3115			3385	3820
Northrup King NK 121A	20.9	43	55	3075				3485
Pioneer Brand 8790	18.6	44	57	3045				
SeedTec 651DR	30.9	53	56	3035				
Pfizer Genetics M518G	22.9	42	57	2980				3325
Stauffer Seeds PV535	28.5	52	55	2975				
Western WS-212	30.4	51	54	2935				
Sigco X9220	28.0	51	55	2870				
Cenex 228T	30.6	50	55	2820			3175	2855
Warner W-655T	29.3	50	56	2820			3435	3865
Cenex 224T	20.8	40	56	2805				3050
Funks G499GBR	29.6	41	55	2765				3875
SeedTec 652 G	28.2	49	56	2730				
Sigco 254YG	30.4	50	55	2515				3205
Means	25.2	47	56	3140				

C.V. - % = 9.1 LSD (.05) 465

Table 6. 1981 Grain Sorghum Performance Trial, Area C1, Oscar Thompson Farm, Letcher, Aurora County, South Dakota.

Brand and Hybrid	Percent Moisture 9/22/81	Height inches	Test Weight lb/B	Yields, Pounds Per Acre 1981	1977-81	1978-81	1979-81	1980-81
SeedTec 651DR	30.5	47	59	5395				
SeedTec 652G	28.7	43	59	5390				
DeKalb DK-38	23.7	44	60	5100				
Warner W-655T	28.2	44	59	5045			4140	3965
Stauffer Seeds PV535	28.9	44	59	4900				
Warner W-564T	21.9	42	60	4855			3630	3935
Cenex 228T	23.3	42	60	4820			3955	3840
Asgrow Corral	28.9	43	59	4750		3720	3805	3635
Western WS-212	28.3	43	58	4715				
SeedTec 624G	25.4	47	60	4660				
Sigco 254YG	31.0	45	59	4510				4025
Cenex 310T	29.3	42	59	4375			3630	3770
Northrup King NK 180A	25.3	41	58	4370			3650	3420
Western WS-206	19.2	40	60	4300				
DeKalb A-28+	23.3	42	60	4245	3465	3440	3665	3865
DeKalb B-38+	20.4	43	59	4210	3480	3485	3495	3365
Funks G499GBR	25.4	36	58	4110				3405
Northrup King Brand 2030	21.3	38	60	4100			3425	3180
Stauffer Seeds PV515GR	25.6	34	60	4055				3420
Asgrow Dorado E	18.8	40	59	4035			3890	3435
Northrup King Brand 2018	17.2	41	60	3980			3400	3280
Cargill 30	21.2	40	59	3960				3360
Warner W-545T	18.6	36	60	3935			3260	3200
Cenex 224T	23.4	34	60	3905				3520
PAG EX 91008	29.1	41	59	3900				
Cargill Ex 91002	18.1	38	60	3900				
PAG 4433	19.1	40	57	3835				3375
Price P508GB	16.9	40	61	3725	3255	3210	3010	3190
Barzan Rancher 30Y	22.6	40	59	3725				
Pioneer Brand 8790	17.9	38	60	3560				
Price R151GB	17.8	37	59	3545				3190
PAG 354	19.2	38	59	3395				2825
Funks G-261	16.3	38	62	3215				3140
Means	23.1	41	59	4260				

C.V. - % = 9.8 LSD (.05) 680

Table 7. 1981 Grain Sorghum Performance Trial, Area D3, Plant Science Farm, Brookings, Brookings County, South Dakota.

Brand and Hybrid	Yield lb/A	Test Weight lb/B	Height inches	Date Headed
Western WS-205	4360	58	46	8/5
Western WS-203	4275	57	47	8/6
Northrup King NK180	4080	53	41	8/9
Northrup King Brand 1580	4060	56	41	8/10
Funks G-261	4040	56	40	8/10
PAG 354	3915	52	44	8/9
Northrup King NK 121	3890	56	45	8/4
Pioneer Brand 8790	3825	56	44	8/11
Warner W-564T	3800	54	38	8/12
Northrup King Brand 1210	3785	57	38	8/3
Warner W-545T	3780	53	38	8/10
Cenex 228T	3770	53	44	8/12
Cargill Ex 91002	3665	52	46	8/9
Warner W-655T	3640	53	47	8/3
Migro TEK 1011R	3625	53	42	8/13
Migro TEK 1021 R	3550	52	42	8/15
DeKalb A-28+	3525	56	42	8/6
DeKalb DK-38	3525	56	50	8/10
Stauffer Seeds PV535	3445	51	45	8/13
Stauffer Seeds PV515GR	3435	51	43	8/11
Barzan Rancher 30Y	3430	55	53	8/11
Cenex 224T	3390	53	39	8/12
Western WS-212	3385	52	47	8/12
Sigco 252YG	3195	54	45	8/12
Cenex 310T	2895	50	44	8/14
Migro TEK 14R	2765	52	50	8/16
Cargill 30	2575	51	47	8/13
Means	3615	54	44	8/10
LSD (.05)	675	C.V. - % = 11.4		

Table 8. 1981 Grain Sorghum Performance Trial, Area C1 (Irrigated), James Valley Research Center, Redfield, Spink County, South Dakota.

Brand and Hybrid	Yield lb/A 1981	Test Weight lb/B	Height inches	Date Headed
Northrup King Brand 180	5575	57	43	8/12
Asgrow Corral	5220	58	46	8/13
Sigco X9220	5175	60	46	8/5
Sigco 254 YG	5150	57	45	8/15
Warner W-655T	5130	58	47	8/14
SeedTec 652G	5100	57	45	8/14
Warner W-545T	5065	59	38	8/5
Western W-212	5065	58	45	8/13
SeedTec 624G	5045	60	52	8/11
Stauffer Seeds PV535	4945	57	46	8/15
Pride P508GB	4920	61	43	8/4
Northrup King Brand 2030	4810	58	42	8/8
Cenex 228T	4795	59	45	8/10
DeKalb DK-38	4750	59	51	8/8
Northrup King Brand 2018	4695	61	42	8/4
Western WS-203	4685	60	45	8/6
Cenex 224T	4655	59	38	8/4
Cenex 310T	4625	57	46	8/14
Northrup King Brand 2222	4620	54	46	8/17
Stauffer Seeds PV515GR	4615	60	38	8/6
Cargill Ex 91002	4590	59	41	8/4
Cargill 30	4585	57	46	8/14
Barzan Rancher 30Y	4540	59	44	8/13
SeedTec 651DR	4490	58	51	8/13
PAG 4433	4480	56	42	8/12
DeKalb A-28+	4405	59	45	8/8
Asgrow Dorado E	4380	59	44	8/11
Sigco 252 YG	4360	58	41	8/12
Pioneer Brand 8790	4330	59	40	8/7
PAG 354	4290	57	39	8/5
PAG Ex 91008	4210	57	44	8/17
Means	4750	58	44	8/10

LSD (.05) N.S. C.V. % = 11.4

Table 9. Two-, Three-, Four-, and Five-Year Average Yields of Grain Sorghum Hybrids Entered at Brookings, South Dakota, 1977-1981.

Brand and Hybrid	Average Yields, Pounds Per Acre			
	1977-81	1978-81	1979-81	1980-81
Cargill 30				3445
Cenex 224T				4145
Cenex 228T			4555	4420
Cenex 310T				3800
DeKalb A-28+	3960	3970	3955	3730
Northrup King Brand 1210				4355
Northrup King Brand 1580	4085	4590	4440	4250
PAG 354				4345
Stauffer Seeds 515GR				4195
Warner W-545T			4460	4350
Warner W-564T			4260	4010
Warner W-655T				4195
Western WS-203				5085

Table 10. Two-, Three-, Four-, and Five-Year Average Yields of Grain Sorghum Hybrids Entered at Redfield, South Dakota 1977-1981.

Brand and Hybrid	Average Yields, Pounds Per Acre			
	1977-81	1978-81	1979-81	1980-81
Asgrow Corral		4325	4175	5265
Asgrow Dorado E	4225	4175	4065	5170
Cargill 30				4710
Cenex 224T				4480
Cenex 228T			3830	4920
Cenex 310T			3655	4520
DeKalb A-28+	4070	3055	3760	4700
Northrup King NK 180				5140
Northrup King Brand 2018			3840	4590
Northrup King Brand 2030			3505	4460
Northrup King Brand 2222				4700
PAG 354				4355
PAG 4433				4500
Pride P508GB			3960	4865
Stauffer Seeds 515GR				4605
Sigco 254YG				4915
Warner W-545T			3770	4920
Warner W-655T				4970
Western WS-203				4910

Table 11. 1981 Grain Sorghum Performance Trial, Area E, Southeast Experiment Farm, Centerville, Clay County, South Dakota.

Brand and Hybrid	Yield lb/A	Test Weight lb/B	Height inches	Date Headed	Percent Moisture 9/17/81[a]
DeKalb DK-38	6900	61	51	8/1	35.0+
Warner W-655T	6620	61	51	8/4	35.0+
Migro TEK 14R	6100	62	57	8/6	35.0+
Migro TEK 1021R	6085	61	52	8/6	35.0+
Asgrow Dorado E	6035	62	49	8/1	35.0+
Northrup King Brand 2030	5945	61	43	7/28	30.7
Migro TEK 1011R	5835	61	45	8/5	35.0+
Warner W-564T	5785	61	48	8/3	35.0+
PAG Ex 91008	5765	61	47	8/6	35.0+
Western WS-212	5745	62	53	8/1	34.4
Asgrow Corral	5715	61	51	8/1	35.0+
Golden Acres T-E Y44R	5625	62	43	7/24	31.7
Warner W-545T	5540	61	39	8/2	35.0+
Cenex 224T	5535	61	38	8/4	33.7
Northrup King Brand 2222	5530	60	45	8/5	35.0+
Cenes 228T	5500	60	47	8/5	35.0+
Cenex 310T	5490	61	52	8/5	35.0+
DeKalb DK-42	5470	59	45	8/4	35.0+
Sigco 254YG	5390	60	48	8/5	35.0+
Stauffer Seeds PV535	5210	61	53	8/5	35.0+
Cargill Ex 91002	5175	61	45	8/1	28.9
Pioneer Brand 8515	5155	61	52	8/7	35.0+
PAG 354	5150	60	48	7/26	29.6
Cargill 30	4910	60	52	8/5	35.0+
Pfizer Genetics M548G	4875	62	47	8/4	29.4
Barzan Rancher 30Y	4875	62	51	8/3	35.0+
PAG 4433	4865	58	50	8/4	35.0+
Stauffer Seeds PV515GR	4685	60	36	8/3	35.0+
Means	5555	61	48	8/3	

LSD (.05) 965 C.V. - % = 10.6

Table 12. Two-, Three- and Four-Year Average Yields of Grain Sorghum Hybrids Entered at Centerville, South Dakota, 1978-1981.

Brand and Hybrid	Average Yield, Pounds Per Acre		
	1978-81	1979-81	1980-81
Asgrow Corral	4935	5225	4440
Asgrow Dorado E		4760	4055
Cargill 30		4570	3720
Cenex 224T			3920
Cenex 228T		4725	4055
Cenex 310T		5275	4430
DeKalb DK-42			4295
Northrup King Brand 2030		4675	3755
Northrup King Brand 2222			4345
PAG 4433		4570	3900
Pfizer Genetics M548G			3350
Stauffer Seeds PV515GR			3585
Stauffer Seeds PV535			4035
Sigco 254YG			4135
Warner W-545T			4150
Warner W-564T		4795	4535
Warner W-655T		5250	4870

Table 13. Entries Submitted for the 1981 Grain Sorghum Performance Trials and Tables Where the Results Appear.

Company and Brand	Hybrid	Tables	Company and Brand	Hybrid	Tables
Asgrow Seed Company	Corral	4,6,8,10,11,12	Northrup King Co.	NK 121A	5
7000 Portage Road	Dorado E	4,6,8,10,11,12	4124 Quebec Ave. No., #205	NK 180	5,6,7,8
Kalamazoo, MI 49001			New Hope, MN 55427	NK 121	7
"Asgrow"			"NK Brand"	NK 1210	5,7,9
				NK 1580	5,7,9
Barzan of Mpls., Inc.	30Y	4,5,6,7,8,11		NK 2018	4,6,8
P.O. Box 1123				NK 2030	4,6,8,11
Minneapolis, MN 55440				NK 2222	4,8,11
"Rancher"					
Cargill Seeds	30	4,6,7,8,9,10,11,12	PAG Seeds	354	4,6,7,8,9,10,11
P.O. Box 5645	Ex. 91002	4,6,7,8,11	P.O. Box 9480	4433	4,6,8,9,11,12
Minneapolis, MN 55440			Minneapolis, MN 55440	Ex. 91008	4,6,8,11
"Cargill"			"PAG"		
Cenex Seed Plant	224T	4,5,6,7,8,9,10,11,12	Pfizer Genetics, Inc.	M518G	5
P.O. Box 964	228T	4,5,6,7,8,9,10,11,12	P.O. Box 166	M548G	4,5,11,12
Sioux Falls, SD 57101	310T	4,5,6,7,8,9,10,11,12	Olivia, MN 56277	M550G	4
"Cenex"			"Pfizer Genetics"		
Funk Seeds International	G499GBR	4,5,6	Pioneer Hi-Bred Int'l, Inc.	8515	4,7,11
719 26th Street	G-261	4,5,6,7	7000 Pioneer Parkway	8790	5,6,8
Lubbock, TX 79404			Johnston, IA 50131		
"Funk's"			"Pioneer Brand"		
King's Western Seed, Inc.	WS-203	5,7,8,9,10	Pride Company, Inc.	P151GB	5,6
P.O. Box 947	WS-205	5,7	P.O. Box 8	P508GB	6,8,10
Huron, SD 57350	WS-206	5,6,7	Glen Haven, WI 53810	P812GB	4
"Western"	WS-212	4,5,6,7,8,10	"Pride"		
DeKalb Ag Research, Inc.	A-28+	4,5,6,7,8,9,10	SeedTec Int'l, Inc.	624G	4,5,6,8
Rt 1, Box 225	B-38+	4,5	P.O. Box 1367	652G	4,5,6,8
Glenvil, NE 68941	DK-38	4,5,6,7,8,11	Hereford, TX 79045	651DR	4,5,6,8
"DeKalb"	DK-42	4,11,12	"SeedTec"		
NAPB-Migro	TEK 14R	4,7,11	Sigco Research	252 YG	4,5,7,8
P.O. Box 2955	TEK 1011R	4,7,11	P.O. Box 150	254 YG	4,5,6,8,10,11,12
Mission, KS 66201	TEK 1021R	4,7,11	Breckenridge, MN 56520	X9220	4,5,8
"Migro"			"Sigco"		

Table 13. 1981 Grain Sorghum Entries (Continued).

Company and Brand	Hybrid	Tables
Stauffer Seeds P.O. Box 125 Phillips, NB 68865 "Stauffer Seeds"	PV515GR PV530GR PV535	4,5,6,7,8,9,10,11 4 4,5,6,7,8,11,12
Taylor-Evans Seed Co. P.O. Box 68 Tulia, TX 79088 "Golden Acres"	T-E Y-44-R	4,11
Geo. Warner Seed Co. P.O. Box 1448 Hereford, TX 79045 "Warner"	W-545T W-564T W-655T	4,5,6,7,8,9,10,11,12 4,6,7,9,11,12 4,5,6,7,8,9,10,11,12

Published in accordance with an Act passed in 1881 by the 14th Legislative Assembly, Dakota Territory, establishing the Dakota Agricultural College and with the Act of re-organization passed in 1887 by the 17th Legislative Assembly, which established the Agricultural Experiment Station at South Dakota State University. File: 1.4-3.1--3M--2-82mb--826.