

**SORGHUM  
HYBRID  
PERFORMANCE  
TESTS  
IN COLORADO  
1981**

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## SORGHUM HYBRID PERFORMANCE TESTS IN COLORADO, 1981

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### INTRODUCTION

The grain sorghum crop in Colorado for 1981 was estimated at 14,430,000 bushels. This production is 15 percent above the grain sorghum produced in the state in 1980. The 1981 crop was harvested from 390,000 acres. Yield per acre at 37 bushels, was four bushels more than last season's average yield. Forage sorghum production for silage, at 190,000 tons is slightly higher than the 1980 production. Total acres of sorghum planted in Colorado in 1981 at 520,000 was 12 percent above last year's planted acreage.

This bulletin is a progress report of the sorghum trials conducted by the Department of Agronomy, Colorado State University Experiment Station as well as the CSU Extension Service. Grain and forage sorghum hybrid yield trials were conducted at Akron, Rocky Ford, Springfield, and Walsh. Grain tests were conducted at Burlington, Fruita, and Holly. Acknowledgement is made to those who have assisted in the trials. The authors also acknowledge the cover photo by Gary Bennett of the University Communications staff.

Tests are financed in part by entry fees paid by commercial firms. Seedsmen interested in becoming a part of this program are invited to write to the Department of Agronomy, Colorado State University, Fort Collins, for further details. Names and addresses of the firms submitting entries in 1981 are shown in Table 1. These firms selected entries for testing and furnished seed for the tests. Selected open-pedigree hybrids, and in some cases, common varieties, were included by the Experiment Station as checks or standards of comparison for each test. Closed-pedigree corn checks included in the forage sorghum trials were sponsored by the Experiment Station.

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Table 1.--Entrants in the Colorado Sorghum Performance Tests, 1981.

Brand	Entered by:
ACCO PAYMASTER	Acco Paymaster Seeds, Inc., Box 307, Belmond, IA 50421
ASGROW	Asgrow Seed Co., 7000 Portage Road, Kalamazoo, MI 49001
BUFFALO	Sharp Bros. Seed Co., Healy, KS 67850
CARGILL SEEDS	Cargill Seeds, Box 5645, Minneapolis, MN 55440
CONLEE	Conlee Seed Co., Box 7247, Waco, TX 76710
DEKALB	Dekalb AgResearch, Inc., Route 2, Lubbock, Tx 79415
FERRY MORSE	Ferry Morse Seed Co., Drawer 7274, Mountain View, California 94042
GOLDEN ACRES	Taylor-Evans Seed Co., P. O. Box 68, Tulia, TX 79088
GROWERS	Growers Seed Association, Box 1656, Lubbock, TX 79408
MIGRO	Migro, Box 2955, Mission, KS 66201
MOEWS	Moews, 319 Oak, Burlington, CO 80807
NC+	NC+ Hybrids, 3820 No 56th St., Lincoln, NE 68504
NK	Northrup King Co., Box 370, Richardson, TX 75080
ORO	R. C. Young Seed & Grain Co., 624-27th, Lubbock, TX 79404
O'S GOLD	O'S Gold Seed Co., Box 460, Parkersburg, Iowa 50665
PAG	PAG Seeds, P. O. Box 9480, Minneapolis, MN 55440
PFIZER GENETICS	Pfizer Genetics, Drawer K, Doniphan, NE 68832
PIONEER	Garst & Thomas Hybrid Corn Co., 615 Main, Coon Rapids, Iowa 50058
STAUFFER SEEDS	Stauffer Seeds, Box 125, Phillips, NE 68865
Seedtec	Seedtec International, Inc. Box 1367, Hereford, TX 79045
TEXAS TRIUMPH	Texas Triumph Seed Co. Inc., Box 1050, Ralls, TX 79357
WARNER	George Warner Seed Co., Box 1448, Hereford, TX 79045
WILSON	Wilson Hybrids, Inc., Box 391, Harlan, IA 51537

Colorado State University Experiment Station entered the following checks: CK-60, NK and DEKALB brand corn checks, Fremont, Martin, Coes, and NB and RS hybrids.

### TEST LOCATIONS

Akron: The northeastern Colorado dryland tests were planted on summer-fallowed land on the Central Great Plains Research Station east of Akron. Information relative to the climatic and cultural conditions at Akron as well as other test locations are summarized in Tables 2 and 3.

The grain and forage tests were seeded on May 26. Soil moisture was excellent at time of planting and the tests were established under favorable growing conditions for the season. Rainfall was adequate throughout the growing season.

Burlington: The irrigated grain sorghum varieties performance tests were planted on the Edgar Pratt farm located one-half mile north of Burlington. The plots were planted with Almaco fluted planter using approximately six pounds of seed per acre. Normal seasonal rainfall plus two irrigations were all the plot received. Forty-eight pounds of anhydrous ammonia were applied during the growing season. A heavy application of feedlot manure was applied to the previous crop. For the herbicide treatment 2,4-D was used. Two applications of insecticide were applied to control green bugs. A KEM combine fitted with Hesston heads was used for plot harvest.

Eads: A forage sorghum test was planted on the Ivan Brenton farm. The soil is a sandy loam. The plots were established using the farmer's lister at a planting rate of five pounds per acre. Harvest was by hand.

Fruita: The irrigated grain sorghum performance tests were planted on the Fruita Research Center. The plots were planted with a wheat planter. The plots received an application of Banvel for broadleaf weed control. Good control of weeds was achieved with this treatment

Holly: A grain sorghum test was planted on June 4th on the Dale Seuffer Farm. The soil is a Rocky Ford clay loam. Rate of planting was six pounds per acre. The field was irrigated on July 7 and again in early August. Poor stands and high greenbug populations caused damage to the plots.

Rocky Ford: Irrigated sorghum performance tests were located at the Arkansas Valley Research Center near Rocky Ford. The plots were seeded on May 18. Emergence and early plant development was excellent. Hot temperatures in early June boosted sorghum growth. The plot areas were treated with a preplant application of 3 pounds of propachlor and 1.5 pounds of bifenox per acre for weed control. Troublesome annual weeds were satisfactorily controlled. On July 16 the plot area was sprayed with Comite for mite control at the rate of 1.64 pounds AI per acre. On July 24 Parathion was sprayed on the plot area to control an infestation of greenbugs. The plot area was irrigated in January and three times during the growing season.

Table 2.--Elevation and climatic conditions at sorghum test sites in Colorado, 1981.

Test Location	Elevation (Ft)	1981 Frost Dates (32°)		1981	Average Frost Dates (32°)		Frost-free Period (Days)	Precipitation	
		Last Spring	First Fall	free	Last Spring	First Fall		1981 <sup>1/</sup>	Annual Average
		Frost (Date)	Frost (Date)	Period (Days)	Frost (Date)	Frost (Date)			
Akron	4560	May 19	Sept 17	119	May 11	Sept 28	140	19.53	16.40
Burlington	4165	May 10	Oct 19	162	May 5	Oct 5	153	12.75	13.75
Eads	4215	May 14	Oct 17	156	--	--	--	13.27	--
Fruita	4525	May 9	Oct 20	166	May 10	Sept 30	145	8.89	11.20
Holly	4075	May 8	Oct 19	164	--	--	--	16.98	--
Rocky Ford	4200	May 10	Oct 17	160	May 1	Oct 6	158	6.79	11.02
Springfield	4550	May 10	Oct 21	164	May 5	Oct 9	157	15.43	15.38
Walsh	3975	May 20	Oct 23	153	May 2	Oct 13	164	18.09	16.78

<sup>1/</sup> Ten-month period, January through October

Table 3.--Cultural conditions at sorghum test sites in Colorado, 1981.

Test Location	Previous Crop	Soil Type	Fertilizer per Acre			Irrigations
			N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
			(Lbs)	(Lbs)	(Lbs)	(No)
<u>Dryland</u>						
Akron	Fallow	Weld Silt Loam	0	0	0	--
Springfield	Fallow	Campo Loam	40	0	0	--
Eads	Sorghum	Sandy Loam	40	0	0	--
<u>Irrigated</u>						
Burlington	Sudangrass	Keith Loam	48	0	0	2
Fruita	Alfalfa	Clay Loam	140	40	20	7
Rocky Ford	Melons	Rocky Ford Clay Loam	175	50	0	Pre + 3
Holly	Alfalfa	Rocky Ford Clay Loam	0	0	0	2
Walsh	Sorghum	Ulysses-Norka Silt Loam	100	0	0	2

Springfield: Dryland sorghum testing was carried on at the Southeastern Colorado Research Center at a location six miles south and eight miles west of Springfield. The tests were planted on May 12 but had to be replanted on May 22 due to severe crusting of the soil. Growing conditions were good throughout the season. Bird damage was moderate on earliest varieties such as RS-626. Greenbug infestation was almost non-existent. A field combine and ensilage harvester were used to harvest the tests.

Walsh: Irrigated performance tests were located approximately three miles west and three miles north of Walsh on a new location acquired by the Plainsman Agri-Search Foundation. The forage test was planted on May 12 and the grain test on May 21. Plot configuration was two rows per bed with 60-inch spacing between irrigation furrows. Rows were oriented east-west. A severe greenbug infestation in late August caused extremely severe damage to the tests before it was possible to control the pests. Weed control was not optimal, but infestation was only nominal.

EXPERIMENTAL METHODS

All 1981 sorghum hybrid performance tests were planted in randomized complete blocks. Details of the grain sorghum tests at the six locations are given in Table 4.

Table 4. --Information relative to grain sorghum hybrid performance tests in Colorado, 1981.

Test Location	Entries (No)	Row Spacing (In)	Seeding Rate (Lbs)	Plot Size (No) (Ft)	Date Seeded	Date Harvested
Akron	23	30	3	4 50	5-21	10-25
Fruita	12	30	7	2 30	5-19	12-2,3
Holly	29	26	6	2 30	6-4	10-22
Rocky Ford	58	30	7	2 30	5-18	10-23
Springfield	43	30	3	2 50	5-22	11-6
Walsh	58	30	4	2 32	5-21	10-28

The date of one-half bloom was determined by visiting the plots on alternate days during the blooming period. The statistic is helpful in measuring the maturity of a hybrid in terms of the number of days lapse between planting date and the day when half the heads have nearly half the florets in bloom. Plant height is the distance in inches from the soil surface to the upper tip of the main head. Measurements were taken just prior to harvest. Maturity notes were taken as black layer formed denoting physiological maturity. Where lodging was noted, the data reflect either broken basal stems or broken peduncles. Grain yields, in all cases, were computed on a



14-percent moisture basis. Test weight per bushel, a reflection of plumpness in sorghum grain, was determined on the threshed grain of each variety.

Details of the forage sorghum performance trials at the four locations are given in Table 5. The date of half-bloom was taken on all tests. Additional notes taken included plant height and the date of maturity or the stage of the seed at the time of harvest. Lodging was noted and reported where varieties were differently affected. Forage yields were computed as tons per acre of forage on an oven-dry basis.

Table 5. --Information relative to the forage sorghum hybrid performance tests in Colorado, 1981

Test Location	Entries (No)	Row Spacing (In)	Seeding Rate (Lbs)	Plot Size (No) (Ft)	Date Seeded	Date Harvested
Akron	15	30	4	4 50	5-26	8-31
Eads	12	30	5	2 35	6-9	9-3
Rocky Ford	18	30	8	2 30	5-13	8-28
Springfield	15	30	3	2 50	5-12	8-25
Walsh	17	30	7	2 35	5-12	8-26

A statistical procedure called the analysis of variance was applied to the results to help make valid comparisons utilizing the L.S.D., least significant difference. Special planting techniques, including replication or the repeating of whole sets of entries and randomization, leaving the position of the entries within a replication to chance, make it possible to sort yield variability in a test into several categories. The most important category to the sorghum grower is the variability due to the genetic differences in yielding ability. The LSD, given in bushels as well as pounds per acre for the grain tests, and in tons per acre in forage tests, simply states how much one hybrid must differ from another in yield for one to be reasonably certain that one hybrid is superior to another.

Yields are converted to percentages of the test average to speed recognition of the highest yielding hybrids at all yield levels. One should assume the test average to be 100%. Hybrids consistently yielding more than the test average year after year usually merit consideration.

It should be noted that many hybrids in these experiments appear to have essentially the same yielding ability. Small yield differences thus are meaningless for they may be from chance environmental variations that have no relation to the true yield potentials. Unless the difference in yield of two entries is greater than the difference required



for significance, the final selection of a variety will be dependent on factors other than yield.

Summary data for the grain sorghum performance tests at Akron, Springfield, Rocky Ford, and Walsh are given in Tables 7, 9, 11 and 13. The inclusion of a hybrid in the tests for a number of years is a valuable criterion which can be employed in choosing a variety for planting. The data for the preceding three years are presented for each location where these data are available. In addition to yield, certain other agronomic information is important in the evaluation of grain sorghum hybrids. The period from date of planting to date of half-bloom is a good criterion of maturity. Low test weight per bushel indicates possible immaturity at the time of the first fall frost, or at the time the soil moisture was exhausted.

Yield of the forage sorghum hybrid performance tests conducted at Akron, Springfield, Rocky Ford, and Walsh are given in Tables 17, 18, 22, and 23. Yield summaries for the forage hybrids, as was true with the grain hybrids, are more reliable than the results of a one year test because the environmental conditions for sorghum production in Colorado vary greatly in different years. Sugar content of the stem at the time of harvest was determined by the use of a hand refractometer. Fiber and protein percentages were determined on forage samples by the Weld County Agricultural Laboratory of Greeley.

HERE'S ANOTHER PUBLICATION IN WHICH YOU MAY BE INTERESTED:

Performance of Greenbug Resistant Sorghum Hybrids

in the Arkansas Valley, 1981

Bulletin 1006

Write for a copy: Dr. Vern Youngman  
Department of Agronomy  
Colorado State University  
Fort Collins, CO 80523

Table 6. --Grain Sorghum Hybrid Performance Test at Akron, 1981<sup>1/</sup>

Brand	Hybrid	Days to	Plant	Grain Yield		Yield as % of
		Bloom	Ht	Per	Acres	Test Average
		(No)	(In)	(Bu)	(Lbs)	(%)
NK	2030	71	38	77.4	4335	125
NK	2222	71	30	73.8	4135	120
NK	2018	68	38	72.1	4035	117
GROWERS	SG10	66	40	71.4	4000	116
STAUFFER SEEDS	PV 599GR	71	44	71.3	3990	116
STAUFFER SEEDS	PV 535GR	71	46	68.6	3840	111
DEKALB	DK-38	64	42	68.5	3835	111
PIONEER	8855	68	36	67.0	3750	109
DEKALB	A-28+	64	38	66.6	3730	108
PIONEER	8790	72	36	63.1	3535	102
GROWERS	SG 17GBR	64	40	61.9	3465	100
GOLDEN ACRES	T-E Y-44-R	75	34	61.8	3460	100
STAUFFER SEEDS	PV 515GR	68	30	61.3	3435	99
NK	1210	63	38	60.3	3375	98
GOLDEN ACRES	T-E Y-45-G	70	40	57.7	3230	93
CARGILL	30	71	40	56.9	3185	92
ASGROW	Corral	70	38	56.2	3145	91
	NB 505	68	38	54.5	3050	88
GOLDEN ACRES	T-E Y-45	70	41	54.3	3040	88
FERRY MORSE	Gold Tag 335	71	42	53.3	2985	86
FERRY MORSE	Gold Tag 370	71	42	53.0	2970	86
TEXAS TRIUMPH	Two 52yG	70	39	49.4	2765	80
	Coes	63	52	38.7	2165	63
Average				61.7	3455	
L.S.D. (0.05)				8.5	480	
C.V. = 15%						

<sup>1/</sup> Seeded, May 26; harvested October 28-29.

Table 7.--SUMMARY: Grain Sorghum Hybrid Performance Tests at Akron, 1979-81.

Brand	Hybrid	Grain Yield per Acre					Yield as % of		
		1979	1980	1981	2-Year Avg	3-Year Avg	Test Average		
		(Bu)	(Bu)	(Bu)	(Bu)	(Bu)	(%)	(%)	(%)
ASGROW	Corral	80.0	34.2	56.2	45.2	56.8	130	85	91
DEKALB	Dekalb A-28+	62.7	48.6	66.6	57.6	59.3	102	121	108
GOLDEN ACRES	T-E Y-45	55.7	43.8	54.3	49.0	51.3	90	109	93
GOLDEN ACRES	T-E Y-44-R	69.3	45.4	61.8	53.6	58.8	113	113	100
GROWERS	SG 17GBR	84.5	35.4	61.9	48.6	60.6	137	88	100
GROWERS	SG 10	--	48.7	71.4	60.0	--	--	121	116
NK	2018	61.8	43.6	72.1	57.8	59.2	100	108	117
NK	2030	55.2	44.2	77.4	60.8	58.9	90	110	125
NK	2222	--	38.1	73.8	56.0	--	--	95	120
PIONEER	8790	75.0	53.8	63.1	58.4	64.0	122	134	102
STAUFFER SEEDS	PV535GR	73.6	34.1	68.6	51.3	58.8	119	85	111
STAUFFER SEEDS	PV515GR	57.3	48.4	61.3	54.8	55.7	93	120	99
Average Test Yield		61.6	40.3	61.7					

ARE YOU INTERESTED IN THE SUMMARY OF THE CORN TESTS IN COLORADO IN 1981? IF SO, REQUEST A COPY OF BULLETIN 1008 FROM:

Mr. Robert Croissant  
 Agronomy -- Extension  
 251 16th St.  
 Burlington, CO 80807

Table 8.--Grain Sorghum Hybrid Performance Test at Springfield, 1981.<sup>1/</sup>

Brand	Hybrid	Days to:		Plant Ht	Lodg- ing	Test Wt	Grain Yield Per Acre	Yield as %		
		Flower	Mature					(Bu)	(Lbs)	Average
STAUFFER SEEDS	PV 708GR	94	162	45	5	58	88.7	4965	130	
GOLDEN ACRES	T-E Y-101-G	93	165	41	5	57	87.9	4925	128	
WARNER	W-839A	93	159	42	5	58	85.0	4760	124	
CONLEE	Top Hand	90	164	39	5	54	84.6	4740	124	
STAUFFER SEEDS	PV 677GR	93	159	38	-	58	81.9	4585	120	
PIONEER	8451	80	150	42	15	56	80.3	4500	117	
GROWERS	1212	97	159	43	10	58	79.7	4465	116	
Seedtec	WAC 692G	92	160	38	-	58	79.3	4440	116	
PIONEER	8585	83	145	40	5	60	76.3	4270	111	
CONLEE	Pronto	89	148	43	15	60	75.0	4200	110	
STAUFFER SEEDS	PV 734GR	95	161	40	-	57	74.7	4185	109	
WARNER	W-655 T	82	143	44	15	60	74.6	4175	109	
GOLDEN ACRES	T-E Y-101-R	87	149	40	-	56	74.2	4155	108	
	RS633	80	143	40	10	57	74.1	4150	108	
Seedtec	WAC 652G	81	145	45	10	59	73.9	4140	108	
TEXAS TRIUMPH	Two 54yG	85	148	44	15	60	73.3	4105	107	
NK	2030	86	146	38	5	58	72.9	4085	107	
PIONEER	8680	80	143	40	10	60	71.2	3985	104	
ACCO	108	92	156	36	-	56	69.6	3900	102	
	CK-60	84	145	40	10	58	69.6	3900	102	
ASGROW	Corral	83	143	42	10	60	69.5	3890	101	
DEKALB	DK-42	78	139	39	5	60	68.9	3860	101	
DEKALB	DK-57	86	147	42	15	59	67.6	3785	99	
ORO	G	88	157	39	-	56	67.1	3760	98	
FERRY MORSE	Gold Tag 475	81	143	39	5	60	67.0	3755	98	
	RS 671	85	153	42	10	57	67.0	3755	98	
ORO	G Xtra	95	164	38	5	56	66.2	3705	97	
PAG	5514	90	148	39	5	57	66.2	3705	97	
PIONEER	8515	86	147	42	20	60	65.6	3675	96	
ACCO	1089	83	145	38	10	55	64.2	3595	94	
GROWERS	SG 17GBR	83	145	39	15	58	62.7	3510	92	
PIONEER	8272	90	148	39	5	55	61.7	3455	90	
ACCO	1030	87	146	36	5	57	61.3	3435	90	
GOLDEN ACRES	T-E 44-R	78	139	38	10	59	61.3	3430	89	
NK	2222	88	150	40	10	58	61.0	3415	89	
DEKALB	Dk-42y	84	145	40	5	59	59.5	3330	87	
TEXAS TRIUMPH	Two 52yG	80	138	38	10	58	57.9	3240	84	
ACCO	1018	83	146	38	5	58	57.3	3210	84	
PAG	4433	79	138	43	30	58	56.8	3180	83	
Seedtec	WAC 651 DR	78	135	40	20	58	53.2	2950	77	
NK	1210	74	131	38	5	58	50.4	2820	74	
NK	2018	75	136	38	20	59	44.5	2490	65	
GROWERS	SG10	76	132	38	30	59	44.0	2465	65	
Average							68.5	3835		
L.S.D. (0.05)							5.0	280		
C.V. = 17%										

<sup>1/</sup> Seeded, May 12; harvested, November 6

Table 9.--SUMMARY: Grain Sorghum Hybrid Performance Tests at Springfield, 1980-81.

Brand	Hybrid	Grain Yield per Acre			Yield as % of	
		1980 (Bu)	1981 (Bu)	Two-year Average (Bu)	1980 (%)	1981 (%)
ACCO PAYMASTER	GR1018	26.9	57.3	42.1	114	84
ASGROW	Corral	22.4	69.5	46.0	95	101
DEKALB	DK-57	27.3	67.6	47.5	116	99
DEKALB	DK-42y	19.4	59.5	39.5	82	87
GOLDEN ACRES	T-E Y-101-R	24.9	74.2	45.6	106	108
GOLDEN ACRES	T-E Y-44-R	25.0	61.3	43.2	106	89
GROWERS	1212	17.4	79.7	48.5	74	116
GROWERS	SG 17GBR	22.2	62.7	42.5	94	92
NK	2222	20.5	61.0	40.8	87	89
ORO	G XTRA	32.3	66.2	49.3	137	97
PAG	4433	17.2	56.8	37.0	73	83
PAG	5514	18.0	66.2	42.1	77	97
PIONEER	8272	31.5	61.7	46.6	134	90
TEXAS TRIUMPH	Two 52yG	19.9	57.9	38.9	85	84
TEXAS TRIUMPH	Two 54yG	22.5	73.3	47.9	95	107
WARNER	W-839A	15.6	85.0	50.3	130	109
	RS-633	26.4	74.1	50.3	112	108
	CK-60	15.5	69.6	42.6	66	102
Average Test Yield		23.6	68.5			

Table 10.--Grain Sorghum Hybrid Performance Test at Rocky Ford, 1981.<sup>1/</sup>

Brand	Hybrid	Days to:		Plant Ht (In)	Bird Dmg (%)	Test Wt (Lbs)	Grain per Acre (Bu)	Yield (Lbs)	Yield as %
		Bloom (No)	Mature (No)						of Test Average (%)
STAUFFER SEEDS	PV 708GR	71	122	48	0	58	160.1	8965	121
GOLDEN ACRES	T-E Y101-R	68	117	41	T	55	153.2	8580	116
DEKALB	DK-58	66	115	43	T	58	152.9	8565	116
PAG	5550	67	120	45	T	54	152.5	8540	116
DEKALB	DK-59	73	122	48	T	55	151.7	8495	115
ACCO PAYMASTER	GR <sup>2</sup> 1100	73	122	48	0	58	150.4	8420	114
WARNER	W-851DR	69	122	43	0	57	147.1	8240	112
CARGILL	60	65	117	42	15	59	146.8	8220	111
GROWERS	1212	70	124	52	T	58	146.4	8200	111
Seedtec	WAC D701G	69	122	48	0	59	145.9	8170	111
ASGROW	Corral	63	112	44	15	57	145.0	8120	110
O'S GOLD	GS712	69	120	43	T	57	144.6	8095	110
MIGRO	TEK 14R	64	114	48	20	57	142.9	8005	108
ACCO PAYMASTER	GR 1138	73	132	48	0	58	142.3	7970	108
GOLDEN ACRES	T-E Dinero-R	69	124	44	0	57	142.0	7950	108
WARNER	W-839A	68	117	44	5	58	139.6	7820	106
CONLEE	Top Hand	67	120	47	5	56	139.6	7820	106
MIGRO	TEK 1055R	62	112	44	15	56	139.4	7805	106
GOLDEN ACRES	T-E Y101-G	71	132	44	5	58	139.3	7800	106
ASGROW	Double TX	69	120	54	10	58	139.2	7795	106
TEXAS TRIUMPH	TWO 80-D	70	126	48	0	57	138.3	7745	105
PIONEER	8515	65	114	44	5	54	137.9	7720	105
PIONEER	8272	69	118	42	5	54	137.4	7695	104
Seedtec	WAC 692G	69	122	44	0	57	137.4	7695	104
ORO	G Xtra	69	120	50	5	56	136.5	7645	104
TEXAS TRIUMPH	TWO 62y	66	117	42	5	56	135.1	7570	102
DEKALB	DK-57	64	113	42	10	57	135.1	7570	102
NK	2222	65	115	50	10	56	133.8	7495	101
ASGROW	Mustang	70	126	44	0	58	132.1	7395	100
GROWERS	SG 40GBR	67	121	41	5	56	132.0	7390	100
GROWERS	SG 39DMR	69	119	42	0	56	130.1	7285	99
PAG	4474	66	117	43	5	54	129.8	7270	98
NK	X4156	66	118	48	10	55	129.4	7245	98
NK	2778	71	123	50	0	56	128.5	7195	97
CARGILL	70	70	127	47	0	58	128.5	7195	97

Table 10. (Continued)

Brand	Hybrid	Days to:		Plant Ht (In)	Bird Dmg (%)	Test Wt (Lbs)	Grain per Acres (Bu)	Yield per Acres (Lbs)	Yield as %
		Bloom	Mature						of Test
		(No)	(No)						Average
CONLEE	Pronto	64	117	42	20	57	127.2	7125	96
GOLDEN ACRES	T-E Dinero	67	117	46	5	58	126.9	7105	96
PIONEER	8501	64	116	47	5	59	126.7	7095	96
STAUFFER SEEDS	PV 734GR	70	127	42	0	58	126.7	7095	96
WARNER	W-655T	64	112	46	5	58	123.7	6925	94
ACCO PAYMASTER	DG 1195	70	127	44	0	57	123.2	6900	93
GROWERS	1310A	69	122	42	T	56	123.2	6900	93
PIONEER	8680	62	112	39	10	58	122.8	6875	93
PAG	5514	66	117	44	10	57	122.3	6850	93
Seedtec	WAC 651DR	62	112	50	35	56	122.3	6850	93
ACCO PAYMASTER	GR 108	67	122	41	5	56	121.9	6825	92
STAUFFER SEEDS	PV 677GR	70	121	41	0	57	121.4	6800	92
PIONEER	8451	66	117	43	T	56	120.0	6725	91
TEXAS TRIUMPH	TWO 64yG	69	121	42	0	58	118.8	6650	90
MIGRO	TEK 1094R	70	127	47	T	56	118.5	6635	90
	RS 633	64	112	42	15	55	118.0	6610	90
CARGILL	50	63	112	38	15	55	116.5	6525	88
Seedtec	WAC 652G	74	112	42	25	56	115.4	6460	87
	RS 671	67	117	42	10	56	115.2	6450	87
MIGRO	TEK 1021R	64	112	42	15	58	111.7	6255	85
GOLDEN ACRES	T-E Exp8037	71	128	43	0	58	104.6	5860	79
	Martin	65	113	36	15	55	102.9	5760	78
	RS 626	61	102	45	30	54	111.3	5670	77
Average							132.0	7390	
L.S.D. (0.05)							20.0	1120	
C.V. = 15%									

1/ Seeded, May 18; harvested, October 23



Table 11.--SUMMARY: Grain Sorghum Hybrid Performance Tests at Rocky Ford, 1979-81.

Brand	Hybrid	Grain Yield per Acre					Yield as % of		
		1979	1980	1981	2-Year Avg	3-Year Avg	Test Average		
		(Bu)	(Bu)	(Bu)	(Bu)	(Bu)	1979 (%)	1980 (%)	1981 (%)
ACCO PAYMASTER	GR 108	143	103	122	113	123	100	105	92
ACCO PAYMASTER	GR 1089	140	92	--	116	--	97	93	--
ACCO PAYMASTER	GR <sup>2</sup> 1100	142	--	150	146	--	99	--	114
ACCO PAYMASTER	GR 1138	129	--	142	136	--	90	--	108
ACCO PAYMASTER	DG 1195	--	98	123	111	--	--	99	93
ASGROW	Corral	155	81	145	113	127	107	82	110
ASGROW	Double TX	167	100	139	120	136	117	101	106
DEKALB	DK-57	156	109	135	122	134	109	110	102
DEKALB	DK-58	--	92	153	122	--	--	93	116
CARGILL	50	--	78	117	97	--	--	79	88
CARGILL	60	--	90	147	118	--	--	92	111
CARGILL	70	--	127	129	128	--	--	128	97
GOLDEN ACRES	T-E Y-101-R	139	100	153	127	131	96	101	116
GOLDEN ACRES	T-E Dinero-R	--	114	142	128	--	--	116	108
GOLDEN ACRES	T-E Dinero	141	112	127	120	127	98	113	96
GROWERS	1310A	--	126	123	125	--	--	127	93
GROWERS	SG 40GBR	143	99	132	116	125	99	100	100
MIGRO	TEK 1094R	--	125	119	122	--	--	126	90
MIGRO	TEK 14R	--	78	143	111	--	--	79	108
MIGRO	TEK 1055R	159	79	139	109	126	111	80	106
NK	2778	162	85	129	107	125	113	86	97
ORO	G Xtra	112	127	137	132	145	119	129	124
PAG	5514	--	119	122	120	--	--	120	93
PAG	4474	--	99	130	114	--	--	100	98
PIONEER	8272	141	119	137	128	132	98	120	104
PIONEER	8451	152	102	120	110	125	106	103	91
PIONEER	8501	145	109	127	118	127	101	110	96
STAUFFER SEEDS	PV677GR	149	115	121	118	128	103	116	92
STAUFFER SEEDS	PV708GR	172	112	160	136	148	119	113	121
STAUFFER SEEDS	PV734GR	136	105	127	116	122	94	106	96
TEXAS TRIUMPH	TWO 64yG	--	109	119	114	--	--	110	90
WARNER	W-839A	--	114	140	127	--	--	115	106
WARNER	W-655T	149	78	124	101	117	103	79	94
	RS-633	139	76	118	97	99	96	77	90
	RS-671	144	93	115	104	112	100	94	87
	Martin	109	47	103	75	77	76	47	78
Average Test Yield		143	99	132					

Table 12--Grain Sorghum Hybrid Performance Test at Walsh, 1981<sup>1/</sup>

Brand	Hybrid	Days to:		Plant Ht (In)	Lodg- ing (%)	GB <sup>2/</sup> DMG (No)	Test Wt (Lbs)	Grain Yield Per Acre (Bu)	Yield (Lbs)	Yield as % of Test Average (%)
		Bloom (No)	Mature (No)							
DEKALB	DK-59	89	149	44	5	1.5	55	77.1	4320	134
DEKALB	DK-61	88	147	51	15	2.5	56	77.1	4320	134
GROWERS	1212	87	144	47	15	1.5	56	75.9	4250	132
GROWERS	SG-39DMR	84	138	46	10	1.0	55	74.9	4195	131
STAUFFER SEEDS	PV734GR	88	147	42	15	1.5	55	73.0	4085	127
GOLDEN ACRES	T-E Y-101-G	87	143	43	5	1.7	57	72.8	4080	127
NK	2778	84	144	48	15	2.0	56	72.1	4040	126
FERRY MORSE	Gold Tag 585	90	151	46	20	2.0	56	71.8	4025	125
GOLDEN ACRES	Dinero	87	150	44	15	1.5	54	67.7	3790	118
ACCO PAYMASTER	GR <sup>2</sup> 1100	88	143	42	5	2.0	55	67.6	3785	118
ORO	G Xtra	89	148	48	30	2.5	54	66.6	3730	116
PIONEER	8501	81	137	41	15	2.3	53	66.4	3720	116
Seedtec	WAC D701G	87	149	45	25	2.0	55	66.4	3720	116
ASGROW	Mustang	86	145	42	25	2.0	53	66.0	3700	115
MIGRO	TEK 1055R	76	131	51	10	1.0	55	65.8	3685	115
STAUFFER SEEDS	PV677GR	86	147	44	10	2.0	55	64.4	3605	112
MIGRO	TEK 1021R	78	136	50	20	2.2	54	64.2	3600	112
PAG	4474	82	140	45	15	2.0	55	63.4	3550	110
FERRY MORSE	Gold Tag 565	86	142	42	10	2.0	56	62.9	3520	109
	RS633	79	137	49	10	2.5	53	62.7	3510	109
STAUFFER SEEDS	PV 708GR	88	147	46	25	2.7	54	62.1	3475	108
CARGILL	70	86	146	42	20	2.0	53	61.8	3460	108
ACCO PAYMASTER	GR108	86	142	40	10	2.0	54	61.3	3435	107
DEKALB	DK-57	80	141	48	15	1.7	56	57.5	3220	100
ACCO PAYMASTER	GR1030	86	139	44	10	2.0	54	57.4	3215	100
GROWERS	1310A	86	139	43	25	2.0	55	57.1	3200	100
TEXAS TRIUMPH	Two 64yG	86	144	42	20	2.0	55	56.3	3155	98
	RS671	86	139	48	10	1.5	54	55.6	3115	98
TEXAS TRIUMPH	Two 80-D	87	147	46	35	2.0	55	54.9	3075	96
PIONEER	8680	75	131	44	10	2.5	54	54.5	3050	95
Seedtec	WAC 692G	82	139	44	15	1.8	55	54.5	3050	95
	CK-60	89	150	46	5	1.0	56	54.2	3035	94
WARNER	W-839A	86	144	43	2-	2.7	55	54.0	3025	94
CARGILL	50	76	135	47	15	2.7	55	53.8	3010	94
PIONEER	8515	77	140	50	25	2.7	53	53.7	3005	93
GOLDEN ACRES	Dinero-R	87	148	44	25	2.0	54	53.5	2995	93
GROWERS	SG 40GBR	84	141	44	20	2.7	53	53.2	2980	93
PAG	5514	87	147	46	20	2.0	54	53.0	2970	92
MIGRO	TEK 1094R	82	141	43	15	1.7	56	52.2	2925	91
STAUFFER SEEDS	PV535GR	77	129	49	30	3.0	55	52.2	2925	91
GOLDEN ACRES	T-E Exp8037	87	148	43	15	2.5	56	52.1	2920	91
NK	X4156	74	136	47	20	1.5	56	51.3	2870	89
GOLDEN ACRES	T-E Y101-R	86	141	42	15	2.7	53	51.1	2860	89
PIONEER	8272	89	148	47	20	2.0	53	50.8	2845	89

Table 12. (Continued)

Brand	Hybrid	Days to:		Plant Ht (In)	Lodg- ing (%)	<sup>2/</sup> Gb <sup>-</sup> Test		Grain Yield Per Acre (Bu)	Yield (Lbs)	Yield as % of Test Average (%)
		Bloom (No)	Mature (No)			DMG (No)	Wt (Lbs)			
ASGROW	Corral	86	146	46	20	2.0	53	50.3	2815	88
PAG	5550	87	146	42	15	2.0	54	49.9	2795	87
PIONEER	8451	82	138	49	15	2.0	54	49.5	2770	86
TEXAS TRIUMPH	Two 62y	87	148	44	25	2.7	53	49.5	2770	86
ORO	G	82	146	43	20	2.7	52	48.6	2720	85
ACCO PAYMASTER	GR1138	86	138	44	15	2.7	55	48.4	2710	84
CARGILL	60	82	137	43	25	2.5	54	48.0	2685	84
ACCO PAYMASTER	GR1089	82	141	47	15	1.5	54	46.7	2615	81
WARNER	W-655T	76	134	50	35	3.0	51	46.5	2605	81
NK	2222	80	134	47	20	2.0	56	45.7	2560	80
Seedtec	WAC 652G	74	132	48	30	2.7	55	43.0	2410	75
Seedtec	WAC 651DR	77	135	50	40	3.0	54	37.6	2110	66
	RS626	74	127	40	35	3.0	54	36.7	2065	64
ACCO PAYMASTER	GR1018	86	141	42	15	2.0	55	35.2	1970	61
Average								57.4	3218	
L.S.D. (0.05)								8.5	475	

<sup>1/</sup> Seeded, May 18, harvested, October 28.

<sup>2/</sup> Greenbug damage rated at time of harvest: 1.0, light; 2.0, moderate; 3.0, severe.

Table 13.--SUMMARY: Grain Sorghum Hybrid Performance Tests at Walsh, 1979-81.

Brand	Hybrid	Grain Yield per Acre					Yield as % of		
		1979	1980	1981	2-Year Avg	3-Year Avg	Test Average		
		(Bu)	(Bu)	(Bu)	(Bu)	(Bu)	1979 (%)	1980 (%)	1981 (%)
ACCO PAYMASTER	GR 1089	110	64	47	55	74	102	99	81
ACCO PAYMASTER	GR 108	--	55	61	58	--	--	86	107
ASGROW	Corral	109	63	50	56	74	101	97	88
CARGILL	50	--	50	54	52	--	--	78	94
CARGILL	60	--	73	48	60	--	--	113	84
CARGILL	70	--	72	62	67	--	--	112	108
GROWERS	1212	--	56	76	66	--	--	86	132
DEKALB	DK-57	110	74	58	66	81	102	116	100
GOLDEN ACRES	T-E Y-101-R	120	69	51	60	80	111	107	89
GOLDEN ACRES	T-E Dinero	127	--	68	97	--	118	--	118
MIGRO	TEK 1094R	--	68	52	60	--	--	105	91
MIGRO	TEK 1055R	93	65	66	66	75	86	102	115
NK	2778	131	65	72	69	89	121	101	126
ORO	G	102	56	49	52	69	94	87	85
ORO	G Xtra	121	--	67	94	--	112	--	116
PIONEER	8272	112	63	51	57	76	104	98	89
PIONEER	8451	112	65	50	57	76	104	100	86
PIONEER	8501	121	71	66	69	86	112	109	116
STAUFFER SEEDS	PV535GR	107	65	52	59	75	99	101	91
STAUFFER SEEDS	PV677GR	113	70	64	67	82	104	108	112
STAUFFER SEEDS	PV708GR	137	72	62	67	90	126	112	108
TEXAS TRIUMPH	TWO 64yG	--	72	56	64	--	--	112	98
WARNER	W-839A	--	72	54	63	--	--	112	94
WARNER	W-655T	95	60	47	53	70	88	92	81
	RS-626	77	66	37	51	60	71	102	64
	RS-633	111	59	63	61	78	103	91	109
	RS-671	115	57	56	56	76	107	88	98
	CK-60	83	29	54	42	55	76	44	94
Average Test Yield		108	64	55					

Table 14. Grain Sorghum Hybrid Performance Test at Burlington<sup>1/</sup>

Brand	Hybrid	Plant Ht (In)	Test Wt (Lbs)	Grain Yield per Acres (Bu)	Yield as % of Test Average (%)	
PIONEER	8515	46	57.8	148.1	8295	121
MIGRO	TEK 1021R	44	58.9	139.0	7785	114
FERRY MORSE	Gold Tag 475	46	58.3	137.3	7685	112
WILSON	617G	47	58.4	137.0	7670	112
NC+	160	45	58.6	136.5	7645	112
STAUFFER SEEDS	PV530GR	44	58.6	134.0	7500	110
PIONEER	8626	40	58.0	133.9	7500	110
Seedtec	WAC 652G	46	58.3	133.8	7490	110
MIGRO	TEK 1055R	45	59.4	132.4	7415	108
MOEWS	121T	44	58.8	132.1	7400	108
PFIZER GENETICS	M550G	48	58.4	131.8	7380	108
WILSON	614G	48	59.3	131.4	7360	108
ACCO PAYMASTER	GR1018	42	56.5	131.2	7350	107
NORTHRUP KING	2244	46	56.3	130.8	7325	107
NORTHRUP KING	2030	42	55.7	130.5	7305	107
DEKALB	DK42	41	57.7	130.4	7300	107
STAUFFER SEEDS	PV535GR	46	58.4	130.3	7296	107
ASGROW	Corral	45	58.4	129.9	7275	106
MIGRO	TEK 14R	52	58.2	128.8	7210	106
GOLDEN ACRES	T-E Y-45-G	46	58.3	128.1	7175	105
O'S GOLD	GS709	46	58.2	127.8	7155	105
MOEWS	200T	47	56.2	127.0	7110	104
DEKALB	DK42Y	43	58.0	125.6	7035	103
CARGILL	60	44	54.0	125.3	7020	103
GOLDEN ACRES	T-E Y-101-R	43	53.4	125.2	7010	103
GOLDEN ACRES	T-E Y-45	49	56.6	125.1	7005	102
Seedtec	WAC D701G	51	54.7	124.2	6955	102
O'S GOLD	GS707	51	58.9	124.0	6945	102
GOLDEN ACRES	T-E Y-44-R	42	58.6	123.6	6920	101
NC+	55X	44	58.7	121.0	6775	99
MOEWS	222T	47	55.2	121.0	6775	99
GROWERS	SG10	45	58.6	120.9	6770	99
Seedtec	WAC 651DR	51	58.0	120.3	6735	99
CARGILL	50	47	55.8	119.7	6700	98
DEKALB	DK57	47	58.1	119.5	6690	98
GROWERS	SG 17GBR	45	56.9	119.3	6680	98
ACCO PAYMASTER	GR1030	45	55.8	119.0	6665	97
PIONEER	8680	40	57.1	119.0	6665	97
PAG	5514	43	54.0	118.0	6610	97
CARGILL	30	45	57.8	116.6	6530	96
GROWERS	SG 39DMR	47	54.5	116.2	6505	95
PIONEER	8855	42	58.7	115.2	6450	94
FERRY MORSE	Gold Tag 370	46	55.0	114.2	6395	94
STAUFFER SEEDS	PV708GR	48	55.5	113.6	6360	93
PFIZER GENETICS	M568G	45	53.8	113.3	6345	93
NORTHRUP KING	2456Y	45	55.4	110.0	6160	90
NORTHRUP KING	2018	44	59.4	109.7	6145	90
GOLDEN ACRES	T-E Y-101-G	43	54.9	108.2	6060	89
FERRY MORSE	Gold Tag 335	47	56.3	108.1	6050	89
MIGRO	TEK 1094R	43	54.1	107.0	5990	88
Seedtec	WAC 692G	43	55.4	107.0	5990	88
GROWERS	1212	47	55.4	105.5	5905	86
O'S GOLD	GS712	49	52.4	103.9	5820	85
PAG	5550	44	53.4	100.1	5605	82
MIGRO	TEK 35R	42	53.5	98.4	5510	81
NORTHRUP KING	1210	39	57.5	97.1	5435	80
Average				122.1	6835	
L.S.D. (0.05)				13.2	740	

<sup>1/</sup> Seeded, June 10; harvested, November 21.

Table 15.- Grain Sorghum Hybrid Performance Test at Fruita<sup>1/</sup>

Brand	Hybrid	Plant Ht (In)	Test Wt (Lbs)	Grain Yield Per Acre (Bu)	Grain Yield (Lbs)	Yield as % of Test Average (%)
GOLDEN ACRES	T-E Y-101-R	47	56	136.9	7665	108
GOLDEN ACRES	T-E Y-101-G	46	55	136.8	7660	108
GOLDEN ACRES	T-E Y-45	53	58	133.7	7485	105
CARGILL	60	48	53	133.4	7470	105
GROWERS	1212	51	57	132.7	7430	105
	RS633	50	56	129.9	7270	102
CARGILL	70	48	56	127.8	7155	101
DEKALB	DK-57	50	58	126.6	7090	99
GROWERS	SG 10	49	58	126.6	7090	99
GROWERS	SG 17GBR	51	58	121.5	6805	96
DEKALB	DK-42y	44	56	110.9	6210	87
FERRY MORSE	Gold Tag 335	48	56	105.6	5915	83
Average				126.8	7100	
L.S.D.				11.4	640	
C.V. = 9%						

<sup>1/</sup> Seeded, May 19; harvested, December 3

Table 16. Grain Sorghum Hybrid Performance Test at Holly<sup>1/</sup>

Brand	Hybrid	Days to Bloom (No)	Plant Ht (In)	Lodging (%)	Bird Dmg (%)	Test Wt (Lbs)	Grain Yield Per Acre (Bu)	Yield % of Test Average (%)	
GROWERS	1212	65	48	10	-	59	64.4	3605	130
DEKALB	DK-57	64	44	-	-	56	62.5	3500	127
DEKALB	DK-42y	63	43	-	-	59	61.7	3455	125
GROWERS	SG 39DMR	65	44	5	-	55	59.6	3335	121
WARNER	W-655T	63	45	-	20	59	59.4	3325	120
NK	2030	62	39	-	20	54	57.4	3215	116
Seedtec	WAC 651DR	63	51	10	-	58	57.1	3195	116
WARNER	W-839A	64	43	20	-	57	56.4	3155	114
CARGILL	70	69	41	-	-	57	56.1	3140	114
CARGILL	60	68	40	-	-	55	55.1	3085	112
NK	2244	63	43	-	5	56	55.0	3080	111
Seedtec	WAC 652G	62	47	-	-	58	54.5	3050	110
STAUFFER SEEDS	PV 708GR	68	48	-	-	58	52.3	2925	106
STAUFFER SEEDS	PV 734GR	68	40	-	-	57	51.7	2895	105
Seedtec	WAC 710DR	66	42	-	-	56	51.4	2875	104
ASGROW	Corral	62	47	-	-	59	50.6	2835	102
GROWERS	1310A	67	44	20	-	57	46.4	2600	94
CARGILL	50	64	45	-	-	55	45.1	2635	91
Seedtec	WAC 715DR	67	53	20	-	58	44.8	2505	91
GOLDEN ACRES	T-E Y-101-G	68	39	-	-	57	43.8	2450	89
GOLDEN ACRES	T-E Y-45-G	62	48	-	-	58	43.2	2420	87
Seedtec	WAC 692G	68	42	-	-	56	43.0	2405	87
ASGROW	Mustang	69	42	-	-	57	43.0	2405	87
WARNER	W-564T	63	42	-	15	58	42.3	2370	86
Seedtec	WAC 694G	66	52	-	-	58	41.2	2305	83
NK	2018	59	40	-	30	57	41.0	2295	83
STAUFFER	PV 535GR	63	45	-	-	58	39.6	2215	80
GOLDEN ACRES	T-E Y-101-R	64	40	-	-	55	28.0	1570	57
NK	1210	57	35	-	60	53	25.3	1415	51
Average							49.4	2765	
L.S.D. (0.05)							17.2		
C.V. = 25%									

Seeded, June 4; harvested, October 22.



Table 17.--Forage Sorghum Hybrid Performance Test at Akron, 1981.<sup>1/</sup>

Brand	Hybrid	Days	Stage <sup>2/</sup>		Stem Sugar Content (%)	Protein Content (%)	Fiber Content (%)	Dry Yield as %	
		to Bloom (No)	Plant Ht (In)	at Harvest (No)				Matter Yield (T)	of Test Average (%)
DEKALB	FS-4	90	80	4.3	15	6.3	31.2	2.90	126
STAUFFER SEEDS	Hi-Kane	95	76	4.1	11	3.5	33.5	2.89	125
BUFFALO	Canex	82	81	5.2	15	7.2	35.6	2.80	121
STAUFFER SEEDS	PV 345F	74	76	5.9	15	4.6	36.3	2.76	120
MIGRO	Sumax	80	70	5.7	17	4.2	34.2	2.58	112
WARNER	Sweet Bee	--	53	3.8	13	4.2	33.7	2.55	110
GOLDEN ACRES	Yieldmaker	75	71	5.8	11	4.5	35.5	2.51	109
GOLDEN ACRES	Silomaker	75	63	6.0	16	5.9	30.9	2.25	97
DEKALB	XL 55A (corn)	70	68	6.0	15	6.8	35.4	2.16	94
WARNER	Sucrose S-1	78	73	5.9	16	7.1	31.5	2.10	91
GROWERS	NB 305F	93	68	4.2	17	7.7	35.3	2.01	87
	SSF 55	--	58	3.0	11	4.5	35.6	1.96	85
	NB 280S	72	80	6.5	15	7.4	24.0	1.88	81
PAG	Si-Chow	97	51	4.0	13	7.4	39.0	1.86	81
	Fremont	72	63	6.5	13	5.3	32.7	1.52	66

Average

2.31

L. S. D. (0.05)

0.35

C. V. = 10.6%

<sup>1/</sup> Seeded, May 26; harvested, August 31

<sup>2/</sup> 3, boot; 4, flowering; 5, soft dough; 6, hard dough; 7, mature

Table 18.--Forage Sorghum Hybrid Performance Test at Springfield, 1981.<sup>1/</sup>

Brand	Hybrid	Days	Stage <sup>2/</sup>		Stem Sugar	Protein Content	Fiber Content	Dry Yield as %	
		to Bloom	Plant Ht	at Harvest				Matter of Test	Yield Average
		(No)	(In)	(No)	(%)	(%)	(%)	(T)	(%)
STAUFFER SEEDS	PV 330F	--	87	3.7	8.3	9.5	40.6	4.56	128
STAUFFER SEEDS	PV 345F	97	100	4.2	16.0	6.9	38.9	4.44	124
MIGRO	Sumax	86	81	5.0	17.2	8.4	32.3	3.79	106
DEKALB	FS-25a+	--	86	3.0	13.5	7.6	44.4	3.75	105
GROWERS	SSF 55	--	98	3.2	9.2	7.8	42.7	3.59	100
GOLDEN ACRES	T-E Gold-maker-T	89	78	5.5	16.8	8.4	34.0	3.59	100
BUFFALO	Canex	88	96	5.1	15.7	7.0	30.8	3.58	100
PIONEER	947	--	70	4.1	13.1	7.6	34.1	3.58	100
	NB 280S	85	98	5.8	15.5	7.6	38.2	3.56	100
DEKALB	FS-4	90	92	5.4	16.3	7.9	33.8	3.50	98
PAG	Si-Chow	--	68	3.0	9.0	8.0	38.1	3.46	97
WARNER	Sucrose S-1	87	95	5.5	8.0	7.9	37.7	3.43	96
WARNER	Sweet Bee	89	98	5.5	10.0	6.9	35.4	3.28	92
	NB 305F	96	77	4.7	16.2	7.8	36.4	3.28	92
NORTHRUP KING	NK PX95 (corn)	78	68	5.6	13.8	9.5	28.7	2.27	63

Average 3.58

L. S. D. (0.05) 0.53

C. V. = 14.6%

<sup>1/</sup> Seeded, May 12; harvested, August 25

<sup>2/</sup> 3, boot; 4, flowering; 5, soft dough; 6, hard dough

Table 19.--SUMMARY: Forage Sorghum Hybrid Performance Tests at Akron, 1979-81.

Brand	Hybrid	Forage Yield per Acre					Yield as % of		
		1979	1980	1981	2-Year Avg	3-Year Avg	Test Average		
		(T)	(T)	(T)	(T)	(T)	1979 (%)	1980 (%)	1981 (%)
BUFFALO	Canex	4.16	2.68	2.80	2.74	3.21	109	103	121
DEKALB	FS-4	4.18	2.61	2.90	2.76	3.23	111	100	126
GOLDEN ACRES	T-E Silomaker	4.86	2.34	2.26	2.30	3.15	128	90	97
GOLDEN ACRES	T-E Yieldmaker	3.08	2.31	2.51	2.41	2.63	81	89	109
GROWERS	SSF-55	4.74	2.29	1.96	2.13	3.00	125	88	85
MIGRO	Sumax	4.81	2.79	2.58	2.69	3.39	127	107	112
STAUFFER SEEDS	PV 345F	3.84	3.31	2.76	3.04	3.30	101	127	120
STAUFFER SEEDS	Hi-Kane	4.15	3.11	2.89	3.00	3.38	109	120	125
WARNER	Sucrosse S-1	3.12	--	2.10	2.61	--	81	--	91
WARNER	Sweet Bee	3.67	--	2.55	3.11	--	97	--	110
	NB 305F	4.06	2.21	2.01	2.11	2.76	107	85	87
	NB 280S	3.23	2.75	1.88	2.32	2.62	85	106	81
	Fremont	2.36	3.20	1.52	2.36	2.36	62	123	66
Average Test Yield		3.80	2.60	2.31					

Table 20.--SUMMARY: Forage Sorghum Hybrid Performance Tests at Springfield, 1979-81.

Brand	Hybrid	Forage Yield per Acre					Yield as % of		
		1979	1980	1981	2-Year Avg	3-Year Avg	Test Average		
		(T)	(T)	(T)	(T)	(T)	1979 (%)	1980 (%)	1981 (%)
BUFFALO	Canex	1.75	1.03	3.58	2.31	2.12	96	117	100
DEKALB	FS-4	1.35	0.82	3.50	2.16	1.89	68	93	98
GOLDEN ACRES	T-E Goldmaker-T	--	0.91	3.59	2.25	--	--	103	100
MIGRO	Sumax	1.82	0.83	3.79	2.31	2.15	100	94	106
PIONEER	947	1.54	1.00	3.58	2.29	2.04	84	114	100
STAUFFER SEEDS	PV 330F	1.96	0.74	4.56	2.65	2.42	107	84	128
STAUFFER SEEDS	PV 345F	2.96	0.87	4.44	2.66	2.76	162	99	124
WARNER	Sucrosse S-1	1.50	0.84	3.43	2.14	1.92	82	96	96
WARNER	Sweet Bee	2.09	1.12	3.28	2.20	2.16	114	127	92
	NB 280S	1.98	0.82	3.56	2.19	2.12	108	92	100
Average Test Yield		1.83	0.88	3.58					

Table 21. -- Forage Sorghum Hybrid Test at Eads 1981.

Brand	Hybrid	Plant Ht	Protein Content	Fiber Content	Dry Matter Yield	Yield as % of Test Average
		(In)	(%)	(%)	(T)	(%)
DEKALB	DEKALB FS-25a	72	7.5	45.7	4.8	126
GOLDEN ACRES	T-E Haygrazer II	90	8.2	45.2	4.6	121
STAUFFER SEEDS	Hi-Kane	88	6.5	44.9	4.4	116
WARNER	Sweet Bee	99	6.3	47.9	4.2	111
STAUFFER SEEDS	PV 345F	71	4.7	51.4	4.2	111
GROWERS	SSF 55	98	6.8	47.8	4.1	108
BUFFALO	Canex	99	5.5	39.8	4.1	108
GOLDEN ACRES	T-E Goldmaker-T	88	5.1	48.8	4.1	108
	Fremont	77	6.7	44.8	3.1	82
WARNER	Sucrosse S-1	105	5.8	42.4	3.0	80
	Sweet Stalk	66	7.1	41.9	2.9	76
	Coes	56	9.0	37.4	1.9	50
Average					3.8	
L.S.D. (0.05)					1.1	
C.V. = 21%						

Table 22.--Forage Sorghum Hybrid Performance Test at Rocky Ford, 1981.<sup>1/</sup>

Brand	Hybrid	Days to Bloom	Plant Ht	Stage <sup>2/</sup> at Harvest	Stem Sugar	Protein Content	Fiber Content	Dry Matter	Yield as % of Test Average
		(No)	(In)	(No)	(%)	(%)	(%)	(T)	(%)
PAG	55F	100	130	4.1	12	5.2	42.1	8.58	126
ACCO PAYMASTER	FS 451	100	95	4.1	12	8.2	42.7	7.84	116
PAG	Si-Chow 1	83	100	4.4	12	8.1	45.6	7.72	114
GROWERS	SSF 55	102	144	4.0	9	5.9	43.3	7.55	111
CONLEE	Cow Vittles	90	110	4.2	10	7.2	43.5	7.20	106
STAUFFER SEEDS	PV 345F	90	130	4.2	11	5.7	41.3	7.07	104
BUFFALO	Canex	72	78	6.5	13	7.8	34.1	7.06	104
DEKALB	FS-25a+	100	108	4.1	11	6.5	43.9	6.94	102
WARNER	Sucrose S-1	74	105	6.2	9	8.2	42.7	6.90	102
STAUFFER SEEDS	PV 330F	100	104	4.0	9	7.3	43.5	6.89	102
MIGRO	TEK 805 F	88	120	6.2	10	10.6	41.3	6.86	101
	NB 305F	80	115	6.0	16	9.2	35.4	6.39	94
	NB 280S	68	120	6.8	10	8.7	43.4	6.38	94
GOLDEN ACRES	T-E Silomaker	92	96	5.8	13	7.6	40.1	6.38	94
GOLDEN ACRES	T-E Yield- maker	85	84	4.5	11	7.3	44.0	6.36	94
WARNER	Sweet Bee	72	110	6.5	13	9.3	38.5	6.15	91
PIONEER	947	90	100	4.8	11	8.1	38.9	5.84	86
NORTHRUP KING	NK PX95 (corn)	75	90	5.3	8	6.6	34.6	4.08	60
Average								6.79	
L. S. D. (0.05)								0.71	
C. V. = 11%									

<sup>1/</sup> Seeded, May 13; harvested, August 28

<sup>2/</sup> 4, flowering; 5, soft dough; 6, hard dough; 7, mature

Table 23.--Forage Sorghum Hybrid Performance Test at Walsh, 1981.<sup>1/</sup>

Brand	Hybrid	Days to Bloom	Plant Ht	Stage <sup>2/</sup> at Harvest	Stem Sugar	Protein Content	Fiber Content	Dry Matter Yield	Yield as % of Test Average
		(No)	(In)	(No)	(%)	(%)	(%)	(T)	(%)
GROWERS	SSF 55	--	102	3.6	6	10.7	36.7	5.02	128
STAUFFER SEEDS	PV 330F	--	92	3.5	9	11.5	38.4	4.63	118
ACCO PAYMASTER	FS 451	104	70	4.0	8	10.5	41.0	4.51	115
MIGRO	TEK 805 F	104	84	4.0	8	11.2	41.5	4.46	114
WARNER	Sucrose S-1	84	105	5.5	7	10.6	37.3	4.22	108
	NB 305F	92	85	5.0	15	8.4	38.6	4.12	105
STAUFFER SEEDS	PV 345F	98	96	4.2	8	8.8	38.8	4.08	104
GOLDEN ACRES	T-E Yield- maker	98	86	4.3	9	11.5	39.2	4.05	104
PIONEER	947	100	95	4.1	10	11.2	40.1	3.89	100
BUFFALO	Canex	88	80	5.5	16	11.7	34.5	3.74	96
	NB 280S	84	106	6.0	12	12.4	37.5	3.73	95
ACCO PAYMASTER	FS 461	103	72	4.0	11	9.0	40.4	3.70	95
WARNER	Sweet Bee	88	90	5.2	8	9.8	39.0	3.65	93
DEKALB	FS-25a <sup>4</sup>	--	85	3.2	8	12.1	42.6	3.63	93
NORTHRUP KING	NK PX95 (corn)	79	80	6.0	11	10.8	28.3	3.21	82
GOLDEN ACRES	T-E Silomaker	99	80	4.1	7	7.2	40.7	3.04	78
GOLDEN ACRES	T-E Gold- maker-T	90	85	5.5	12	9.4	40.7	2.78	71

Average

3.91

L. S. D. (0.05)

0.64

C. V. = 17%

<sup>1/</sup> Seeded, May 12; harvested, August 26

<sup>2/</sup> 3, boot; 4, flowering; 5, soft dough; 6, hard dough

Table 24.--SUMMARY: Forage Sorghum Hybrid Performance Tests at Rocky Ford, 1979-81.

Brand	Hybrid	Forage Yield per Acre					Yield as % of		
		1979	1980	1981	2-Year Avg	3-Year Avg	Test Average		
		(T)	(T)	(T)	(T)	(T)	(%)	(%)	(%)
ACCO PAYMASTER	FS 451	--	7.20	7.84	7.52	--	--	93	116
BUFFALO	Canex	7.12	7.85	7.06	7.46	7.34	98	101	104
DEKALB	FS-25a+	6.54	8.94	6.94	7.94	7.47	90	116	102
GOLDEN ACRES	T-E Silomaker	7.24	8.73	6.38	7.56	7.45	106	113	94
GOLDEN ACRES	T-E Yieldmaker	7.41	8.05	6.36	7.21	7.27	102	104	94
GROWERS	SSF-55	5.88	8.87	7.55	8.21	7.43	81	115	111
PAG	55F	--	9.21	8.58	8.90	--	--	119	126
PIONEER	947	6.84	7.50	5.84	6.67	6.73	94	97	86
STAUFFER SEEDS	PV 330F	7.70	7.59	6.89	7.24	7.39	106	98	102
STAUFFER SEEDS	PV 345F	7.00	7.20	7.07	7.14	7.05	96	93	104
WARNER	Sucrosse S-1	7.85	8.33	6.90	7.62	7.69	108	108	102
WARNER	Sweet Bee	8.12	7.23	6.15	6.69	7.17	112	93	91
	NB 305F	7.14	7.00	6.39	6.70	6.84	98	90	94
	NB 280S	8.08	5.30	6.38	5.84	6.59	111	69	94
Average Test Yield		7.28	7.74	6.79					

Table 25.--SUMMARY: Forage Sorghum Hybrid Performance Tests at Walsh, 1979-81.

Brand	Hybrid	Forage Yield per Acre					Yield as % of		
		1979	1980	1981	2-Year Avg	3-Year Avg	Test Average		
		(T)	(T)	(T)	(T)	(T)	(%)	(%)	(%)
ACCO PAYMASTER	FS 451	--	7.02	4.51	5.77	--	--	101	115
ACCO PAYMASTER	FS 461	--	7.16	3.70	5.43	--	--	103	95
BUFFALO	Canex	7.13	6.64	3.74	5.19	5.84	83	95	96
DEKALB	FS-25a+	11.05	7.84	3.63	5.74	7.51	129	113	93
GOLDEN ACRES	T-E Silomaker	8.91	8.12	3.04	5.58	6.69	104	117	78
GOLDEN ACRES	T-E Yieldmaker	8.58	8.32	4.05	6.19	6.98	100	120	104
GOLDEN ACRES	T-E Goldmaker-T	--	5.70	2.78	4.24	--	--	82	71
PIONEER	947	8.75	8.20	3.89	6.05	6.95	102	118	100
STAUFFER SEEDS	PV 330F	11.84	6.78	4.63	5.71	7.75	140	97	118
STAUFFER SEEDS	PV 345F	7.66	8.38	4.08	6.23	6.71	89	120	104
WARNER	Sucrosse S-1	--	5.90	4.22	5.06	--	--	85	108
WARNER	Sweet Bee	7.26	7.78	3.65	5.72	6.23	85	112	93
	NB 305F	8.30	5.92	4.12	5.02	6.08	96	85	106
	NB 280S	6.99	6.02	3.73	4.88	5.58	82	86	95
Average Test Yield		8.58	6.96	3.91					