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EC02-106 Nebraska Grain Sorghum Hybrid Tests, 2002

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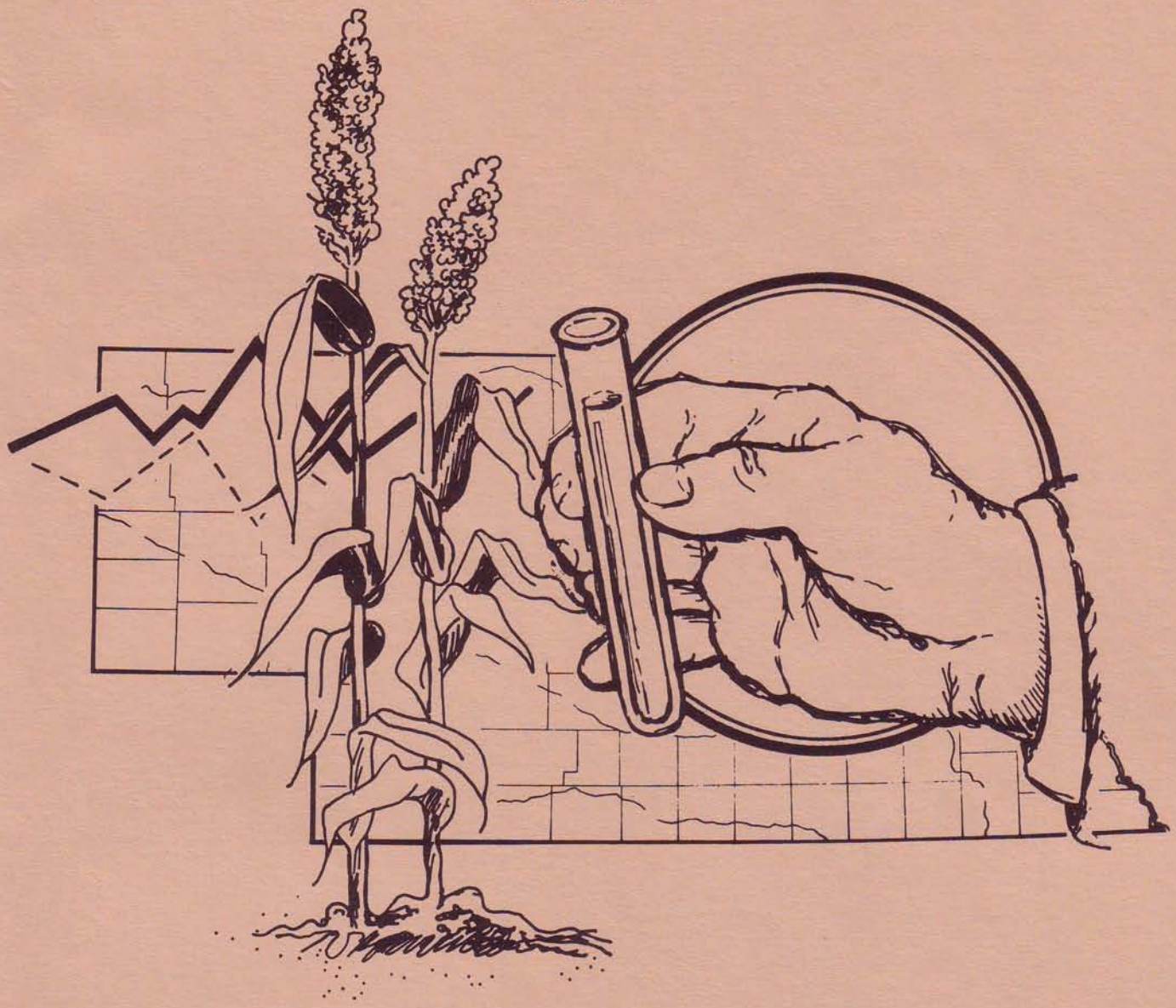
NEBRASKA GRAIN SORGHUM HYBRID TESTS 2002



University of Nebraska–Lincoln
Institute of Agriculture and Natural Resources
Agricultural Research Division
Cooperative Extension

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EXTENSION CIRCULAR 02-106

NEBRASKA GRAIN SORGHUM HYBRID TESTS

January 2003

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ACKNOWLEDGMENTS

This circular is a progress report of grain sorghum trials conducted to obtain yield and other information for some of the hybrids being marketed. The 2002 season was the 45th year that private hybrids were included in these trials. Seed producers supported tests through fee payments.

Cooperating were the Agronomy Department and the South Central, West Central and Panhandle Research and Extension Centers. Acknowledgment is made to Extension Educators and others who assisted in these tests. Special acknowledgment is made to farmers who furnished land for the trials.

Conduct of experiments and publication of results is a joint effort of the Agricultural Research Division and the Cooperative Extension Service.

We want to acknowledge the State Climate Program at the University of Nebraska-Lincoln for providing the climate data used in this report. The reports of temperature and rainfall conditions at the various locations are found on pages 20-21.

We also wish to acknowledge the Nebraska Agricultural Statistics Service for data on crop acreages. Their data is included in the introduction on page 5.

We want to thank the people who provided technical support for this project, namely John A. Eis, Greg Dorn, Jeff Golus, Jim Pavelka, Glen Frickel, Ralph Klein and Bekele Abeyo.

CONTENTS

METRIC EQUIVALENTS

1 centimeter = 0.394 inches	cm = inches x 2.54
1 hectare = 2.471 acres	ha = acres x 0.405
1 kilogram = 2.205 pounds	kg = pounds x 0.454
1 hectoliter = 2.838 bushels	hl = bushels x 0.352

Kilogram/hectoliter = lb/bu x 1.287
Kilograms/hectare = bu/A x 62.78 (56# bu)

NEBRASKA GRAIN SORGHUM HYBRID TESTS
2002

Recent grain sorghum acreage and yields for Nebraska were as follows:

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Yield bu/A	98.0	54.0	95.0	83.0	98.0	89.0	73.0	84.0	49.0
Acres Harvested(000)	1,250	980	1,030	800	700	450	470	450	310

Total grain sorghum planted in state was 420,000 acres. The following are the statewide growing conditions for grain sorghum. By June 16, sorghum was virtually all planted with 97% emerged, ahead of last year at 94% but same as average. Emergence was at 88% of the acreage, ahead of last year at 79% and 86% average. Condition of the crop rated as 1% very poor, 11% poor, 40% fair, 40% good, and 8% excellent. July 14, temperatures averaged from three degrees below normals to three degrees above normal across the State. Precipitation was very light and limited to the northern Panhandle and the eastern third of the State. Sorghum condition declined and rated 8% very poor, 27 % poor, 48% fair, 17% good. Two percent of the acreage was headed. September 22, sorghum condition rated 36% very poor, 32% poor, 27% fair, 5% good, well below last year and average. The crop had turned color on 90% of the acreage behind last year at 94% and average at 96%. Sixty-three percent was mature, ahead of last year at 51% and average at 54%. October 13, sorghum was ninety-six percent mature, ahead of last at 94% and average at 95%. Forty-two percent had been harvested, ahead of last year at 33% but behind average at 43%.

PROCEDURE

Locations of trials are shown on the map (page 12). Names of cooperators are shown in Table A. Entrants and entries are shown in Tables B and C, respectively.

Seed for testing was furnished by the entrant. Seeding rates varied with location as shown in Table D. All seed not sent with a safener was treated with Concep. Seeding was accomplished with cone or air units mounted on commonly used row planters. Two-row or 4-row plots, 20 to 30 feet long were used.

Data on one-half bloom were obtained at three of the sites by visiting plots on alternate days during the flowering period. Grain moisture determinations were made at harvest at a time when differences between entries were relatively high. This gives an indication of relative grain drying rates.

Plant height and head exsertion readings were made at harvest. Lodging readings were taken at harvest. Reported yields are based on 56 pounds per bushel and 14 percent grain moisture.

Maturity of a hybrid is an important consideration in its adaptation to a given location. Entries were listed in data tables in order of decreasing yields. Maturity of a hybrid was recorded as plant bloom days or days from planting to half bloom. Variations do occur in maturity among trials and over years data. In analyzing yield evaluations, hybrids should be compared with those having similar maturities.

Variations in soil fertility, moisture conditions and other factors are found in each test area. This makes it impossible to measure yielding ability of hybrids with absolute accuracy. For this reason, small yield

differences have little meaning. A statistical measure of differences required for significance is given in each table. These differences were computed at the 5 percent levels of significance. At the 5 percent level a difference of that magnitude would be expected once in twenty trials through chance alone. This is the fourth year of using a statistical procedure for minimizing spatial variability on the plot area.

RESULTS

The average performance of all entries at each 2002 test location is shown in Table D. All tests were machine harvested this year.

The average performance of hybrids included in trials over a three-year period is shown in Table E. This data indicates the effect of seasonal growing conditions on the characters measured. Stalk lodging data are included only for experiments where differentials among hybrids were observed.

Southeast (Page 13-15)

Twenty eight entries were planted at two locations excluding farmer entries. Saline County farm entries were Asgrow Pulsar @ 86.8 bu/a, and Midland 4818 @ 124.7 bu/a. Average for all entries were 112.8 bu/a. Adjacent corn strips were hand picked by the Extension Educator and the producer. The yields of these commercial corn hybrids were Asgrow 718 @ 84 bu/a and Asgrow 740 @ 162 bu/a. These two corn varieties were not replicated or randomized but were a representative average of the field next to the test plot. Gage County farmer entries were Asgrow Pulsar @ 34.2 bu/a, and Midland 4818 @ 27.7 bu/a. Average for all entries was 31.3 bu/a. This test was planted in the same field as the South East Dryland Corn Hybrid trial which was lost because of heavy rain after planting and severe drought conditions during growing season. The farmers corn field around the grain sorghum plot averaged 12 bu/a. Gage county grain sorghum test will be put into test by itself and will not be used in over the years data due to severe drought condition and very low yields.

South Central (Pages 16-17)

Planted at Clay and Harlan Counties had 17 entries, 4 replications, 4 rows, 30 inch rows and 24 ft. long. Plots were harvested using the center two rows. Clay County was gravity irrigated at the SCREC near Clay Center. Field preparation: Took top off of the ridges before planting. The average yield at Clay County was 151.8 bu/a. The average moisture was 17.1%. The Harlan County dryland grain sorghum trial was planted in the same field as the South Central Dryland Corn Hybrid trial. Slot planted with 4 row Kinze planter. Seventeen sorghum hybrids were included. Average sorghum yield was 63.3 bu/a. The average moisture was 18.8%. The dryland corn trial and the dryland milo trial were planted in the same field. Harlan dryland corn hybrid test average for all entries were 13 bu/a.

West (Page 18-19)

Sixteen entries were tested in two Cheyenne and Deuel Counties. The Deuel County test averaged 1.0 bu/a. The Cheyenne County test averaged 4.2 bu/a. Very poor growing and drought conditions prevailed as indicated by the extremely low yields. These tests will not be included in future over years data.

Cultural Practices

Gage (dryland): No-till. Crop history: 2001 soybeans. Fertilizer: Preplant 120 lbs/a N. Herbicide: 2 qts/a Micro-Tech, 1.3 lbs/a Atrazine. Insecticide: None. Hand hoed plot. Test was under a lot of stress because of heavy rain after planting, and severe drought later. Coordinates: N 40.22 W 96.87

Saline (dryland): No-till. Crop history: 2001 soybeans. Fertilizer: 120 lbs/a N as anhydrous ammonia. Herbicide: 2 qts/a Micro-Tech, 1.3 lbs/a Atrazine. Insecticide: None. Coordinates: N 40.48 W 96.95

Clay (gravity irrigated): Crop history: Soybeans 2001 and corn 2000. Fertilizer: 160 lbs/a. Herbicide: 4.5 Pints/a Guardsman, 1 quart/a Roundup. Insecticide: None. Coordinates: N 40.58 W 98.14

Harlan (dryland): Crop history: summer fallow 2001, wheat in 2000. Fertilizer: 100 lbs/a N pre-plant, 5 lb/a N and 10 lb/a P at planting. Insecticides: 4 oz /1000 ft Force 3G. Insecticide was Counter CR 6 oz/1000 ft. in 7 inches band. Herbicide: 2 quart/a Bicep and 3/4 lb/a Atrazine in summer of 2001. Coordinate: N 40.15 W 99.33

Red Willow (No till): No-till. Crop history: fallow 2000, wheat 2001. Fertilizer: 80 N/a pre-plant as 32-0-0, 5 gal/a 10-34-0 at planting. Herbicide: 1.5 qt/a Bicep II Magnum + 1.5 oz/a Balance PRE. There was Balance injury early after emergence. Insecticide: Lorsban at 8 oz/1000 ft. Coordinates: N 40.26 W 100.69

Hayes (No till): Crop history: 2000 wheat, 2001 wheat. Fertilizer: 60 N + 0 P +10 S/a at planting. Herbicides: 2 qts/a Bicep II Magnum PRE on May 30. Insecticides: Lorsban 8 oz/1000ft. Coordinates: N 40.57 W 101.02

Deuel (Fallow): Crop history: 2001 wheat. Fertilizer: 100 lb/a N pre-plant, starter of 7 lb N, 24 lb P +0.75 lb/a Zn. Side dress 40 lb/a N. Herbicide: Atrazine and Dual. Insecticide: None. Coordinates: N 41.23 W 102.99

Cheyenne (No-Till): No till. Crop history: Planted no-till into winter wheat. Fertilizer: 50 lb/a N pre- plant, starter of 7 lb N, 24 lb P +0.75 lb/a Zn. Herbicide: Atrazine and Dual. Insecticide: None. Coordinates: N 41.22 W 102.99

Table A. Location and Cooperators 2002 Nebraska Grain Sorghum Performance Tests.

Location	Soil Type/Herbicide	Cooperator
Southeast		
Gage (dryland)	Crete silt loam Micro-Tech + Atrazine	Larry Thimm Beatrice
Saline (dryland)	Hobbs Micro-Tech + Atrazine	Steve Mills, Wilber Co-op Elevator Co.
South Central		
Clay (irrigated)	Hastings silt loam Guardsman, Roundup	SCREC Clay Center
Harlan (dryland)	Holdrege Silt Loam Bicep, Atrazine	Terry Woollen Alma
Southwest		
Red Willow (no-till)	Holdrege & Keith silt loam Bicep II Magnum, Balance	Randy Peters McCook
Hayes (no-till)	McCash very fine sandy loam Bicep II Magnum	Tim Lawsen Hayes Center
West		
Deuel (fallow)	K' ..h loam Atrazine, Dual	High Plains Ag. Lab. Sidney
Cheyenne (no-till)	Keith loam Atrazine, Dual	High Plains Ag. Lab. Sidney

Table B. Entrants. Nebraska Grain Sorghum Performance Tests. 2002

Brand	Company	Address
-----	Agricultural Research Div.,UNL	Lincoln, NE 68583
DeKalb/Asgrow	Monsanto	7159 N. 247 W., Mt.Hope, KS. 67108
Garst	Garst Seed Company	1104 W 18th Rd, Aurora, NE 68818
Midland	Midland Genetics	Phillips Seed Farms, Inc. 980 Highway 15, Hope, Kansas 67451-9366
Sorghum Partners	Sorghum Partners, Inc.	P. O. Box 189, New Deal, TX 79350
Triumph	Triumph Seed Co., Inc.	P. O. Box 1050, Ralls, TX 79357

Table C. Grain Sorghum entries and zones entered in 2002

Brand	Hybrid	Zone *				Brand	Hybrid	Zone *			
Dekalb/Asgrow	Eclipse	.	.	B	.	Triumph	TR461	A	I	.	.
Dekalb/Asgrow	Asgrow Orbit	.	.	B	.	Triumph	TR465	.	I	B	.
Dekalb/Asgrow	Asgrow Pulsar	.	.	B	.	UNL	1808 X N312R	A	.	.	.
Dekalb/Asgrow	DXS36-00	.	.	B	.	UNL	N122A X N398R	A	.	.	.
DeKalb/Asgrow	DK53	A	.	.	.	UNL	N123A X N248R	.	.	.	D
Dekalb/Asgrow	Asgrow Missile	A	.	.	.	UNL	N123A X 681R	.	.	.	D
DeKalb/Asgrow	DKS54-00	A	I	.	.	UNL	N250A X N248R	.	.	.	D
DeKalb/Asgrow	DKS44-41	.	I	.	.	UNL	N250A X N249R	.	.	.	D
DeKalb/Asgrow	DKS42-20	.	I	.	.	UNL	N250A X 1038R	.	.	.	D
DeKalb/Asgrow	A571	A	I	.	.	UNL	N250A X N398R	.	.	.	D
DeKalb/Asgrow	Monsanto X126	A	.	.	.	UNL	N251A X 1038R	.	.	.	D
DeKalb/Asgrow	Monsanto X129	A	.	.	.	UNL	N252A X 1038R	.	.	.	D
Garst	5515	A	I	B		UNL	N252A X N398R	A	.	.	D
Garst	5616	A	I	.	.	UNL	N290 X N417R	A	.	.	.
Midland Genetics	M-4774	.	I	.	.	UNL	N349A X N398R	A	.	.	.
Midland Genetics	M-4818	.	I	.	.	UNL	N290A X N432-1R	A	.	.	.
Sorghum Partners	KS585	A	I	B	D	UNL	N369A X NN432-1R	A	.	.	.
Sorghum Partners	K73-J6	A	I	B	D	UNL	TX631 X NSS3-32	A	.	.	.
Sorghum Partners	K59-Y2	A	I	B	D	UNL	TX631 X 22808-9	A	.	.	.
Sorghum Partners	KS711Y	A	I	B	D	UNL	TX631 X N581R	A	.	.	.
Sorghum Partners	X828	A	I	B	D	UNL	TX631 X N580	A	.	.	.
Sorghum Partners	X654	A	I	B	D						
Sorghum Partners	X633	A	I	B	D						

* Zone A = Southeast, Zone I = South Central, Zone B = West Central, Zone D = West Dryland

Table D. Grain Sorghum. Average performance at each test location. 2002

Location	Planted	Harvested	Grain yield bu/A	Planting to bloom days	Plant height inches	Head exsertion inches	Test weight lb/bu
Southeast							
Gage (dryland)	June 3	Sept. 30	31	68	39	2.8	50.5
Saline (dryland)	June 3	Sept. 30	113	65	47	4.2	59.3
Average 2 tests	---	---	72	66	43	3.5	54.9
South Central							
Clay (irrigated)	May 30	Nov. 6	152	65	52	6.7	---
Harlan (dryland)	May 31	Nov. 8	63	---	32	0.7	---
Average 2 tests	---	---	108	65	42	3.7	---
West Central							
Red Willow	June 3	Not harvested	---	---	---	---	---
Hayes	June 3	Not harvested	---	---	---	---	---
Average 2 tests	---	---	---	---	---	---	---
West							
Deuel (fallow)	June 3	Oct. 12	1	---	29	---	---
Cheyenne (no-till)	June 7	Oct. 12	4	---	29	---	---
Average 2 tests	---	---	3	---	29	---	---

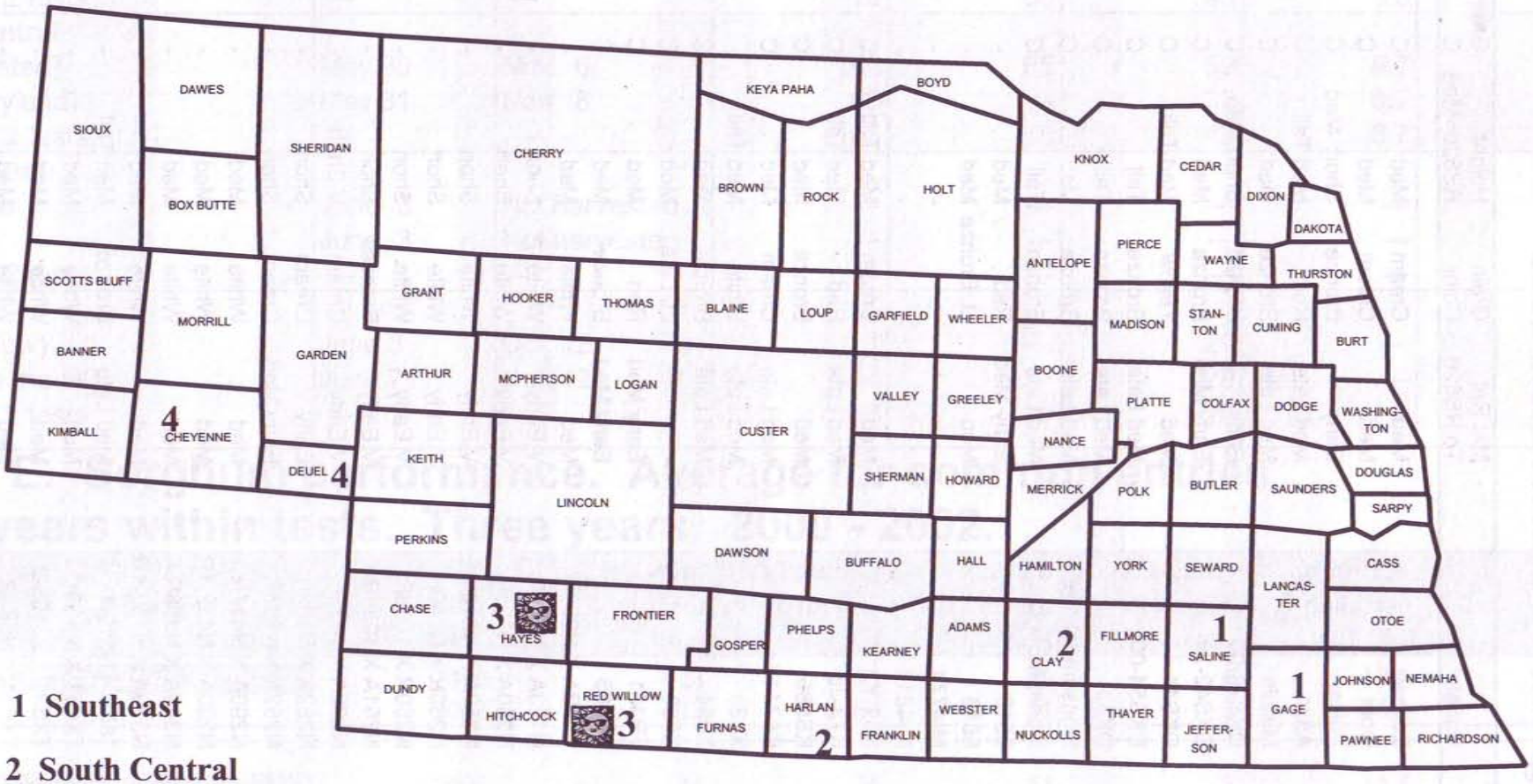
Table E. Sorghum performance. Average for common entries over years within tests. Three years. 2000 - 2002.

Test	Year	Grain yield bu/a	Planting to bloom days	Plant height inches	Head exsertion inches	Early-grain moisture %	Test weight lbs/bu
Southeast (5 entries)	2000	123	73	49	6	19.2	58.9
	2002	113	64	51	3	16.1	59.7
South Central (3 entries)	2000	131	76	51	5	14.5	60.3
	2001	146	73	53	4	14.9	60.7
	2002	113	68	53	5	15.8	60.0
West Central (2 entries)	2000	26	--	36	--	12.1	55.3
	2001	77	--	45	--	12.6	56.9
	2002	--	--	--	--	--	--
West (5 entries)	2000	60	--	30	--	20.9	46.5
	2001	94	--	35	--	16.9	43.5
	2002	4.5	--	26	--	--	--

Grain Sorghum Characteristics 2002

Brand	Variety	Mat Rel To RS626	Grain Color	Height RS626=Med	Greenbug Resistance C	E	I
DEKALB/Asgrow	Eclipse	Med	Cream	Med	C	E	-
DEKALB/Asgrow	Oribt	Med	Cream	Med	C	E	-
DEKALB/Asgrow	Pulsar	Early	Bronze	Short Med	C	E	I
DEKALB/Asgrow	A571	Med Late	Red	Med Tall	-	-	-
DEKALB/Asgrow	Missile	Med Late	Bronze	Med	C	E	-
DEKALB/Asgrow	DKS36-00	Early	Bronze	Short Med	C	E	I
DEKALB/Asgrow	DKS42-20	Early Med	Bronze	Med	C	E	-
DEKALB/Asgrow	DKS44-41	Med	Yellow	Med Tall	C	E	-
DEKALB/Asgrow	DKS54-00	Med Late	Bronze	Tall	C	E	I
DEKALB/Asgrow	DK53	Med Late	Bronze	Tall	C	E	-
DEKALB/Asgrow	Monsanto X126	Med Late	Bronze	Med	C	E	I
DEKALB/Asgrow	Monsanto X129	Med Late	Bronze	Tall	C	-	-
Garst	5515	Early Med	Red	Med	-	-	-
Garst	5616	Med	Lt. Bronze	Med	-	-	-
Midland Genetics	M-4774	-	-	-	-	-	-
Midland Genetics	M-4818	-	-	-	-	-	-
Sorghum Partners	K59-Y2	Med	Cream	Med Tall	C	E	-
Sorghum Partners	K73-J6	Med Late	Red	Med Tall	C	E	-
Sorghum Partners	KS585	Med	Bronze	Med	C	E	-
Sorghum Partners	KS711Y	Med Late	Cream	Med	C	E	-
Sorghum Partners	X828	Med Late	White	Med Tall	-	-	-
Sorghum Partners	X654	Med Late	Bronze	Med	C	E	-
Sorghum Partners	X633	-	Lt. Late	Med	C	E	-
TRIUMPH	TR461	Early Med	Red	Med	C	E	-
TRIUMPH	TR465	Early Med	Bronze	Med	C	E	I
UNL	N122A X N398R	Med	White	Med	-	-	-
UNL	N123A X N248R	V.Early	White	Short	-	-	-
UNL	N250A X N398R	V.Early	White	Short	-	-	-
UNL	N250A X N248R	V.Early	White	Short	-	-	-
UNL	N250R X N249R	V.Early	White	Short	-	-	-
UNL	N250R X 1038R	V.Early	White	Short	-	-	-
UNL	N251A X 1038R	V.Early	Bronze	Short	-	-	-
UNL	N252A X 1038R	V.Early	Cream	V.Short	-	-	-
UNL	N252A X N398R	Early	Cream	Short	-	-	-
UNL	N252A X N398R	Early Med	Cream	Short	-	-	-
UNL	N290A X N417R	Med	White	Med	-	-	-
UNL	N290A X N432-1R	Med	White	Med	-	-	-
UNL	N349A X N398R	Med	White	Med	-	-	-
UNL	N369A X N432-1R	Med	White	Med	-	-	-
UNL	1808 X N312R	Med Late	Bronze	Med Tall	-	-	-
UNL	TX631 X NSS3-32	Med	White	Med	-	-	-
UNL	TX631 X 22808-9	Med	White	Med	-	-	-
UNL	TX631 X N581R	Med	White	Med	-	-	-
UNL	TX631 X N580R	Med	White	Med	-	-	-

Locations of 2002 Grain Sorghum Tests



1 Southeast

2 South Central

3 West Central

4 West

Not harvested due to drought

Gage County Grain Sorghum Hybrid Test - 2002

Brand	Hybrid	Grain yield bu/a	Days to bloom	Bushel weight lb/bu	Plant height inches	Head exsertion inches	Grain moisture pct	Seeds per pound
Gage County Grain Sorghum Test - Reps 1 and 2 only								
SORGHUM PARTNER	NK X654	72.1	65	59.5	37	2	16.3	14266
-----	1808 X N312R	56.2	68	57.0	44	3	18.5	13852
SORGHUM PARTNER	NK KS711Y	54.6	64	60.7	32	2	12.4	17380
SORGHUM PARTNER	NK K73-J6	53.9	65	56.6	39	3	18.4	14383
ASGROW	A571	52.9	68	56.4	37	2	17.7	13822
SORGHUM PARTNER	NK KS585	46.0	59	59.4	34	4	12.6	14552
DEKALB Genetics	DKS54-00	41.6	72	48.2	43	3	29.9	13619
SORGHUM PARTNER	NK K59-Y2	37.5	65	56.7	40	3	12.8	16434
-----	N122A X N398R	35.2	66	55.4	38	2	20.8	12713
TRIUMPH	TR 461	35.1	68	54.3	41	2	16.4	16605
-----	N252A X N398R	34.5	65	54.3	41	3	14.7	13077
-----	N349A X N398R	33.6	67	51.6	42	7	22.7	13066
ASGROW	Pulsar	32.2	61	50.4	34	3	14.6	14078
GARST	5515	27.6	64	44.2	40	3	15.8	13653
-----	N290A X N417R	27.2	69	49.7	40	5	18.0	14092
-----	TX631 X NSS3-32	26.4	70	52.3	40	2	18.0	14722
-----	TX631 X N580	25.3	70	51.7	45	2	24.6	13870
-----	N290A X N432-1R	25.1	71	49.1	42	3	18.6	13193
MONSANTO	X129	23.0	70	47.2	36	1	19.8	13919
-----	TX631 X 22808-9	21.9	65	49.5	43	1	16.3	12766
DEKALB Genetics	DK-53	21.7	72	52.2	37	3	24.8	12608
GARST	5616	19.5	65	52.3	35	3	14.6	14047
MONSANTO	X126	19.1	70	56.8	39	3	14.7	12757
ASGROW	Missile	18.2	69	48.8	38	1	17.5	11442
-----	TX631 X N581R	17.9	72	45.5	46	2	20.6	14659
SORGHUM PARTNER	NK X828	14.8	73	29.9	38	2	23.6	16296
-----	N369A X N432-1R	13.3	71	26.7	39	3	15.8	14097
SORGHUM PARTNER	NK X633	11.7	69	38.2	31	3	13.8	15949
Average all entries		31.3	68	50.5	39	3	18.2	14087
Difference req. for sig.	5%	16.8	3	10.0	6	3	7.2	2800

Saline County Grain Sorghum Hybrid Test - 2002

Brand	Hybrid	Grain yield bu/a	Days to bloom	Bushel weight lb/bu	Plant height inches	Head exsertion inches	Grain moisture pct	Seeds per pound
MONSANTO	X126	139.4	66	60.1	47	3	16.9	12200
SORGHUM PARTNER	NK K73-J6	135.5	62	61.3	48	5	14.8	13700
SORGHUM PARTNER	NK K59-Y2	135.2	61	60.2	49	5	12.6	16200
ASGROW	A571	135.0	64	59.9	47	5	14.2	14300
MONSANTO	X129	132.7	65	59.4	44	1	16.7	13400
SORGHUM PARTNER	NK X654	129.5	63	60.3	45	3	15.9	13500
TRIUMPH	TR 461	127.7	64	61.4	48	4	13.4	15100
DEKALB Genetics	DK-53	121.6	65	58.0	47	3	17.9	11500
SORGHUM PARTNER	NK KS585	119.4	60	62.4	43	5	13.2	16100
ASGROW	Missile	118.1	64	59.7	45	3	16.8	12900
DEKALB Genetics	DKS54-00	115.9	66	58.9	49	6	17.7	13800
SORGHUM PARTNER	NK KS711Y	115.2	65	62.4	41	5	14.4	19100
SORGHUM PARTNER	NK X633	113.6	65	59.7	43	5	15.5	15700
N349A X N398R		111.3	64	59.3	45	6	17.7	15200
GARST	5616	109.5	63	61.2	44	5	12.6	14000
1808 X N312R		105.8	67	58.6	55	6	17.5	15200
TX631 X NSS3-32		99.5	68	56.5	52	3	21.8	13800
N290A X N432-1R		98.5	67	58.6	50	4	17.7	12900
GARST	5515	95.1	63	58.9	43	5	13.9	14300
SORGHUM PARTNER	NK 8828	93.0	71	58.2	50	4	19.3	15700
N122A X N398R		92.8	67	58.9	45	3	18.2	15500
N369A X N432-1R		92.2	67	57.7	50	3	17.5	12900
N252A X N398R		88.3	65	59.2	45	5	14.2	16800
ASGROW	Pulsar	88.1	59	60.5	40	6	11.6	16000
N290A X N417R		81.5	68	58.7	46	5	16.4	14400
TX631 X 22808-9		67.0	63	57.9	55	2	13.1	12100
Average all entries		112.8	65	59.3	47	4	15.9	14354
Difference req. for sig.	5%	20.8	2	2.4	4	2	2.7	1500

Southeast Grain Sorghum Hybrid Test 2000 - 2002

IANR

Brand	Hybrid	Grain Yield bu/a	Days to bloom	Bushel weight lb/bu	Plant height inches	Head exsertion inches	Grain moisture pct	Seeds per pound
				2 Year Averages				
TRIUMPH	TR 461	134.9	64	61.3	50	3	14.0	16100
DEKALB Genetics	DKS54-00	131.5	66	59.3	51	5	17.3	14100
ASGROW	A571	126.0	65	59.3	48	4	14.5	14700
-----	1808 X N312R	119.4	68	58.6	58	5	17.5	15300
DEKALB Genetics	DK-53	118.3	65	58.9	49	3	17.7	12100
ASGROW	Missile	113.1	65	59.8	47	3	16.5	13100
GARST	5515	110.6	62	58.9	45	4	14.3	15200
SORGHUM PARTNER	NK 8828	108.5	70	58.5	51	4	17.4	16900
-----	N122A X N398R	107.4	66	59.2	47	3	17.1	15800
-----	N252A X N398R	97.7	64	58.9	47	4	14.3	17500
-----	TX631 X NSS3-32	96.8	68	56.8	54	3	21.0	13900
Average all entries		114.9	65	59.0	49	4	16.5	14941
Difference req. for sig. 5%		NS	1	0.4	1	1	0.9	634
				3 Year Averages				
ASGROW	A571	126.3	71	58.9	48	4	15.6	15400
DEKALB Genetics	DK-53	121.9	71	58.8	49	3	18.7	13100
ASGROW	Missile	115.0	70	59.5	47	2	16.8	14800
-----	N122A X N398R	113.6	70	59.3	47	4	16.7	15900
GARST	5515	111.0	67	59.2	45	5	14.6	16200
Average all entries		117.6	70	59.1	47	4	16.5	15093
Difference req. for sig. 5%		NS	1	NS	1	NS	0.7	896

South Central Grain Sorghum Hybrid Test - 2002

Brand	Hybrid	Yield			Days to bloom	Plant height inches	Head exsertion inches	Grain moisture pct
		Average bu/a	Clay bu/a	Harlan bu/a				
DEKALB Genetics	DKS54-00	121.6	160.2	84.1	70	49	6	18.3
TRIUMPH	TR 461	115.1	161.9	67.5	66	48	3	17.7
SORGHUM PARTNER	NK K59-Y2	113.2	147.7	65.9	66	46	5	16.6
GARST	5515	112.1	161.6	62.6	64	41	4	18.0
DEKALB Genetics	DKS42-20	111.4	144.5	74.9	59	40	4	17.4
ASGROW	A571	111.3	145.7	67.4	69	43	4	20.2
TRIUMPH	TR 465	110.7	166.9	56.4	66	41	3	18.7
SORGHUM PARTNER	NK X654	110.5	158.4	61.2	64	42	4	16.2
SORGHUM PARTNER	NK K73-J6	110.0	154.2	64.9	65	44	4	17.5
SORGHUM PARTNER	NK X633	109.6	150.0	70.4	66	41	5	17.7
SORGHUM PARTNER	NK 8828	108.4	152.6	55.2	71	43	3	18.9
DEKALB Genetics	DKS44-41	106.8	142.6	69.5	63	43	3	18.0
MIDLAND	M-4774	105.6	150.2	62.0	64	43	6	17.2
SORGHUM PARTNER	NK KS711Y	104.1	148.1	59.2	65	39	3	18.6
MIDLAND	M-4818	103.8	151.0	59.9	67	42	3	19.4
GARST	5616	97.3	152.4	45.4	63	38	4	17.9
SORGHUM PARTNER	NK KS585	92.1	132.1	48.8	58	40	4	17.1
Average all entries		108.4	151.8	63.3	65	42	4	17.9
Difference req. for sig. 5%		NS	NS	8.3	2	4	NS	NS

South Central Grain Sorghum Hybrid Test 2000 - 2002

IANR

Brand	Hybrid	Grain Yield bu/a	Days to bloom	Bushel weight lb/bu	Plant height inches	Head exsertion inches	Grain moisture pct
		2 Year Averages					
DEKALB Genetics	DKS54-00	133.8	72	59.7	54	6	17.3
TRIUMPH	TR 461	132.0	67	60.4	52	4	16.1
MIDLAND	M-4774	131.3	65	59.7	48	6	15.3
SORGHUM PARTNER	NK 8828	130.2	73	59.3	49	4	16.7
GARST	5515	129.6	64	59.7	45	4	17.3
TRIUMPH	TR 465	129.3	67	61.0	48	5	16.6
ASGROW	A571	126.2	71	58.9	51	6	17.2
Average all entries		130.0	68	59.8	49	5	16.7
Difference req. for sig. 5%		NS	1	NS	1	NS	NS
		3 Year Averages					
TRIUMPH	TR 461	134.4	69	60.5	52	4	15.3
GARST	5515	128.7	67	60.0	46	5	16.1
ASGROW	A571	126.8	72	59.3	50	5	16.6
Average all entries		130.0	69	59.9	49	5	16.0
Difference req. for sig. 5%		NS	1	NS	NS	NS	NS

West Grain Sorghum Hybrid Test - 2002

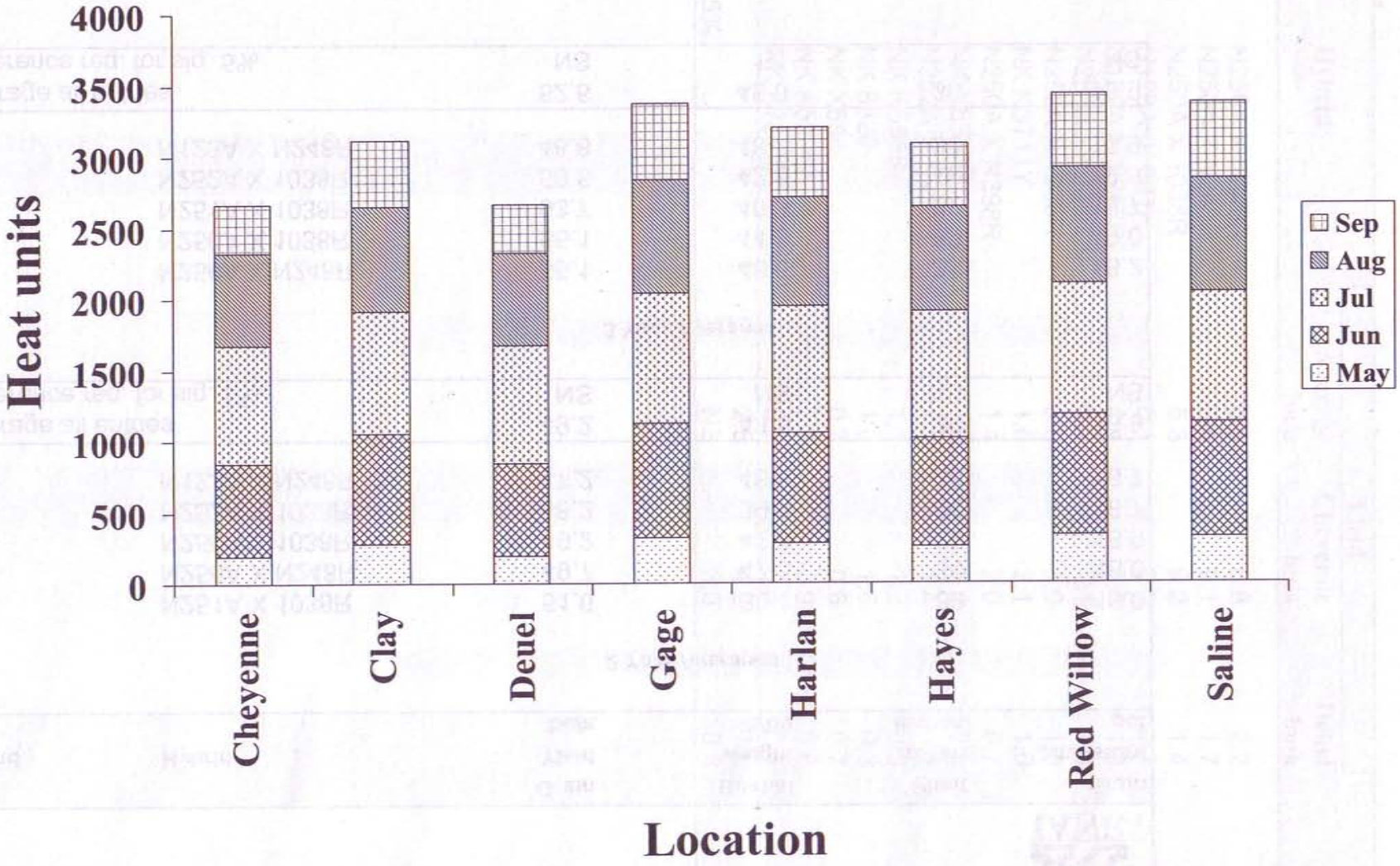
Brand	Hybrid	Yield			Plant height inches
		Average bu/a	Cheyenne bu/a	Deuel bu/a	
-----	N250A X N249R	5.5	8.8	2.2	28
-----	N250A X N248R	5.4	9.1	1.7	26
-----	N250A X 1038R	5.3	9.2	1.4	25
-----	N123A X 681R	5.1	9.0	1.1	25
-----	N123A X N248R	4.4	6.9	1.8	27
-----	N251A X 1038R	4.2	7.1	1.3	29
-----	N252A X 1038R	3.5	5.9	1.0	24
SORGHUM PARTNER	NK KS711Y	1.6	2.1	1.0	33
-----	N250A X N398R	1.4	2.0	0.7	31
SORGHUM PARTNER	NK X633	1.2	1.4	0.9	32
-----	N252A X N398R	1.1	1.4	0.8	31
SORGHUM PARTNER	NK KS585	1.1	1.2	0.9	30
SORGHUM PARTNER	NK 8828	1.0	1.6	0.3	34
SORGHUM PARTNER	NK X654	0.7	0.6	0.7	32
SORGHUM PARTNER	NK K59-Y2	0.7	0.9	0.5	29
SORGHUM PARTNER	NK K73-J6	0.2	0.3	0.1	33
Averagae all entries		2.6	4.2	1.0	29
Difference req. for sig. 5%		NS	3.0	0.8	4

West Grain Sorghum Hybrid Test 2000 - 2002

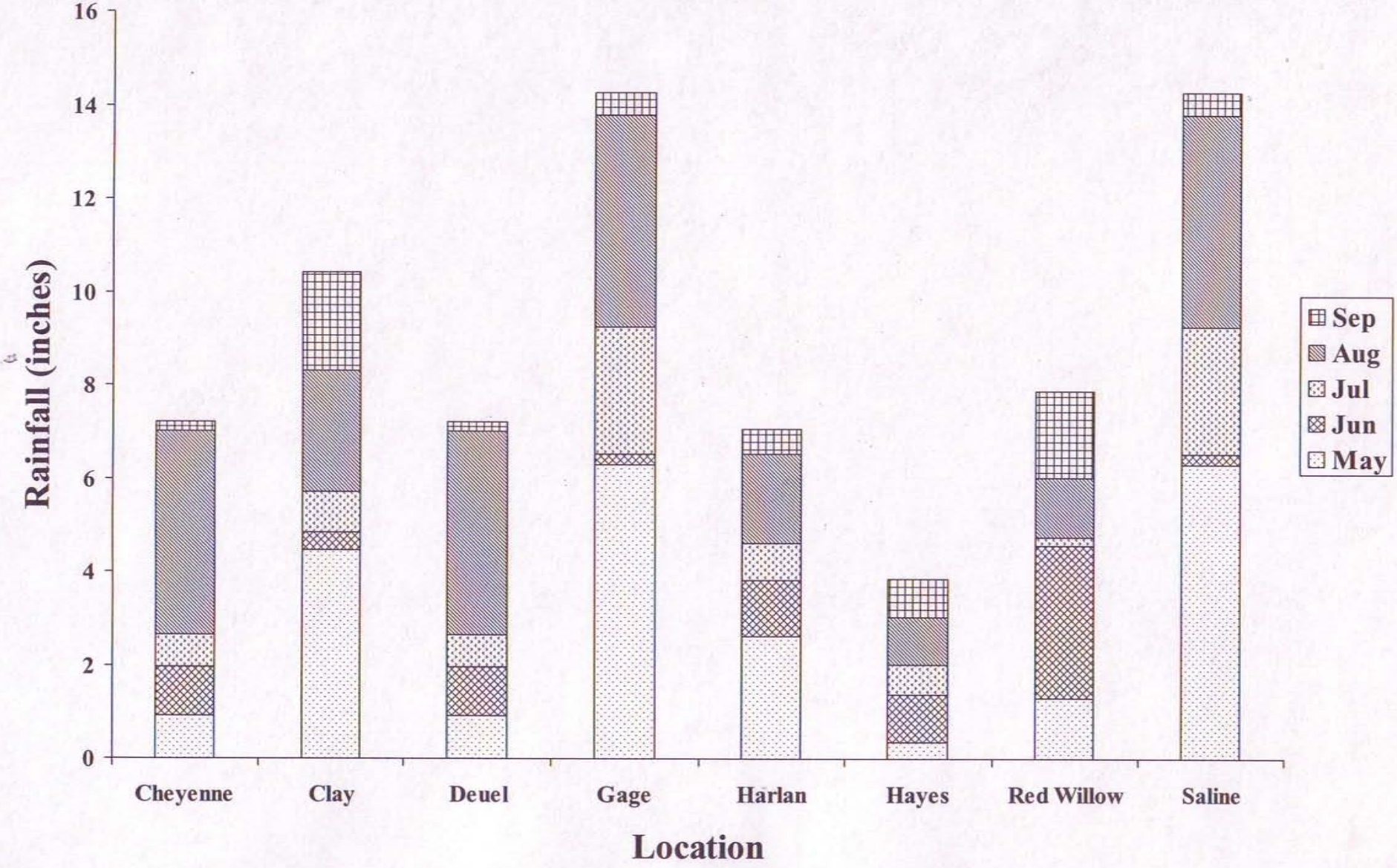
IANR

Brand	Hybrid	Grain Yield bu/a	Bushel weight lb/bu	Plant height inches	Grain moisture pct
		2 Year Averages			
-----	N251A X 1038R	51.6	39.1	32	16.0
-----	N250A X N248R	49.7	47.5	30	18.0
-----	N250A X 1038R	49.2	42.0	29	16.9
-----	N252A X 1038R	48.2	39.9	30	16.7
-----	N123A X N248R	47.2	48.8	30	16.7
Average all entries		49.2	43.5	30	16.9
Difference req. for sig. 5%		NS	NS	NS	NS
		3 Year Averages			
-----	N250A X N248R	55.1	48.6	30	18.2
-----	N250A X 1038R	55.1	44.8	29	19.0
-----	N251A X 1038R	53.7	40.3	32	19.7
-----	N252A X 1038R	50.5	42.6	29	19.8
-----	N123A X N248R	48.8	48.7	30	17.9
Average all entries		52.6	45.0	30	18.9
Difference req. for sig. 5%		NS	1.1	1	NS

Heat units in 2002 grain sorghum test sites



Rainfall in 2002 grain sorghum test sites



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