

2022 SPRING SEED GUIDE

Brought to you by the
University of Nebraska Variety
Testing Program

- University of Nebraska - Lincoln Extension
- Institute of Agriculture and Natural Resources
- Department of Agronomy & Horticulture

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UNL EXTENSION CIRCULAR 101

SPRING SEED GUIDE

- January 2022 -

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WELCOME TO THE 2022 SPRING SEED GUIDE

The following pages include the results of our variety testing programs for many crop species throughout the state. We hope you find this information useful as you make hybrid and variety decisions for next spring.

Much of the information included in this publication is also available electronically. The individual variety test locations can be accessed at <https://cropwatch.unl.edu/varietytest>. Several NebGuides have been written to help producers to use this information for planting decisions. These are available at <https://extensionpubs.unl.edu/>.

Please visit our web site at <https://cropwatch.unl.edu/varietytest> for all the information you need on variety testing.

Cody Creech

University of Nebraska-Lincoln

ACKNOWLEDGMENTS

This circular is a progress report of variety performance trials conducted by personnel of the Agronomy Department, West Central, and Panhandle Extension Centers, and their associated agricultural laboratories. Conduct of experiments and publication of results is a joint effort of the Agricultural Research Division and the Cooperative Extension Service. Entries include commercial varieties from Nebraska, surrounding states, and private breeders. Fees paid by commercial seed companies partially supported the tests reported in this report.

The authors wish to acknowledge the assistance and support of contributing personnel: Stephen Geu, Bill Struckmeyer, Jake Hansen, Justin Richardson, Greg Teichmeier, Jenny Stebbing, Michael Schlick, and Perry Ridgeway. Their help is vital to this research.

NEBRASKA CORN HYBRID TRIALS

- 2021 -

CROP PRODUCTION SUMMARY

According to the National Agricultural Statistics Service, corn was planted on 9.9 million acres in Nebraska in 2021. There were 9.6 million acres of corn harvested in Nebraska in 2021 producing approximately 1.83 billion bushels of grain. The average corn yield for Nebraska in 2021 was 191 bushels per acre (bu/a). Average corn yields from the previous 10 years are reported below.

Average Nebraska Corn Yield (all practices)

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Yield (bu/a)	160	142	169	179	185	178	181	192	182	180	191
NE Total Production (billion bu)	1.54	1.29	1.61	1.60	1.69	1.70	1.68	1.79	1.79	1.78	1.83

Source: National Agricultural Statistics Service (<http://www.nass.usda.gov>)

Detailed information regarding crop progress and history can be obtained from the National Agricultural Statistics Service available online at <http://www.nass.usda.gov>.

PROCEDURE

Six corn performance trials were planted throughout Nebraska in 2021. Corn trials are conducted to provide yield and other information about corn hybrids available to corn growers in Nebraska. A fee from seed companies covers a portion of the cost of each test. Entry was on a voluntary basis and hybrids were selected by seed producers. Some hybrids are being tested by companies specifically for adaptation and may result in low yields. Cultural practices were adapted to accommodate all entries including several conventional hybrids limiting the use of certain herbicides. In some locations, dry and hot conditions throughout the season limited results.

Individual plots are two rows wide and range from 20 to 35 feet long. Seeding rates varied with location but within each test location, the same number of seeds were planted for all hybrids. The plant population represents the average harvested plant density. Grain yields are expressed on a 15.5% moisture basis. Yields shown are averages of four or more replicated plots at each location. Plots were machine harvested and grain moisture determinations were made with an electronic moisture meter or moisture sensors on the combine.

Variations in soil fertility, moisture conditions, and other factors are found in each test area. We make every effort to remove the variability by blocking and using other experimental design methods. We also use statistical procedures to remove a portion of the spatial variability. However, some variability remains which makes it impossible to measure yielding ability of hybrids with absolute accuracy. For this reason, small yield differences have little meaning. Unless the difference in performance of two varieties is greater than the difference required for least significance difference (LSD) shown in the tables, little confidence can be placed in the superiority of one variety over the other for measured traits in that particular test. These differences are shown at the 10% level, meaning that differences as large or larger could be expected through chance alone in 1 of 10 trials (10%).

In these experiments, many hybrids statistically had the same grain production. Performances of hybrids vary with seasonal conditions. Great care should be used in interpreting the results of a single year test. Earlier maturing hybrids are favored in some seasons while later ones perform best in other years. In addition, some hybrids are able to withstand unfavorable weather conditions better than others which may do well under ideal growing conditions. Performance over a period of years should give a much better measure of adaptation whenever available. Harvest moisture, stalk strength, and resistance to insect and disease also are factors which must be considered in selecting hybrids.

Relative hybrid performance often varies with locations within zones. In zone analysis, the hybrid by location mean square was used to calculate the differences required for significance shown in the tables. Moisture at harvest is an important consideration in hybrid selection as it does affect time of harvest and drying costs.

RESULTS AT INDIVIDUAL LOCATIONS

Site specific management, soil type, and previous crops are shown in Table B.

Southeast and South Central District:

Rainfed tests were planted in Saunders and Clay Counties.

- The Saunders County rainfed test was planted on May 5th and harvested on October 11th, with an average yield of 234 bu/a.
- The Clay County rainfed test was planted on April 30th and harvested on October 18th with an average yield of 176 bu/a.

Irrigated test was planted in Clay County.

- The Clay County irrigated test was planted on April 30th and harvested on October 18th with an average yield of 286 bu/a.

West Central and West:

Rainfed tests were planted in Cheyenne and Perkins Counties.

- The Cheyenne County rainfed test was planted on May 19th and harvested on October 7th, with an average yield of 59 bu/a.
- The Perkins County rainfed test was planted on May 4th and harvested on October 22nd with an average yield of 42 bu/a which was similar to the surrounding field. Stand was relatively uniform in the field, but results were poor due to dry and hot conditions throughout the season. Yield data was highly variable and no significant differences in yield among the varieties were found.

Irrigated test was planted in Perkins County.

- The Perkins County irrigated test was planted on May 4th and harvested on October 22nd with an average yield of 232 bu/a which was similar to the surrounding field, and the same hybrid as in surrounding field was included in the trial as the Farm Check. Stand was relatively uniform in the field, but yield results were poor due to dry and hot conditions throughout the season. Yield data was highly variable and no significant differences in yield among the varieties were found.

CULTURAL PRACTICES

Saunders County Rainfed: Previous crop: Soybeans; No-till; Fertilizer: 175 lb/a N; Herbicide: 0.5 pt/a atrazine.

Clay County Rainfed: Previous Crop: Sorghum; No-till; Fertilizer: 50.8 gal/a 32-0-0; Herbicide: 22 oz/a Roundup PowerMax, 2.5 oz/a Acuron.

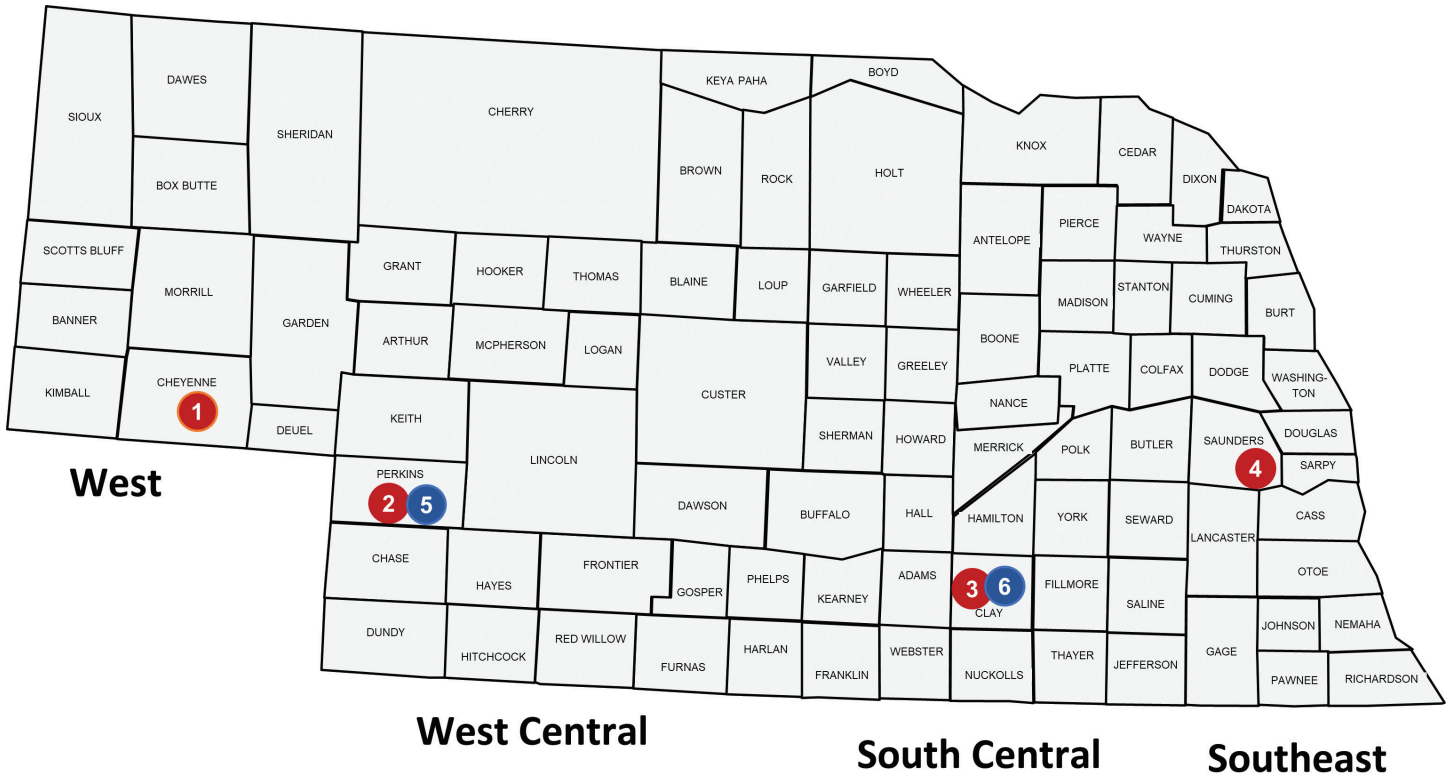
Clay County Irrigated: Previous Crop: Soybean; No-till; Fertilizer: 200 lb/a N as anhydrous ammonia; Herbicide: 2.5 oz/a Acuron.

Cheyenne County Rainfed: Previous crop: Wheat; No-till; Fertilizer: 5 gal/a 10-34-0; Herbicide: Pre-plant burndown, 32 oz RoundUp and 16 oz 2,4-D.

Perkins County Rainfed: Previous crop: Wheat; No-till; Fertilizer: 5 gal/a 10-34-0.

Perkins County Irrigated: Previous crop: Soybeans; Strip-till; Fertilizer: 5 gal/a 10-34-0.

2021 CORN HYBRID TRIAL LOCATIONS MAP



● Rainfed Sites ● Irrigated Sites

2021 CORN TRIAL SITE PRECIPITATION (inches)

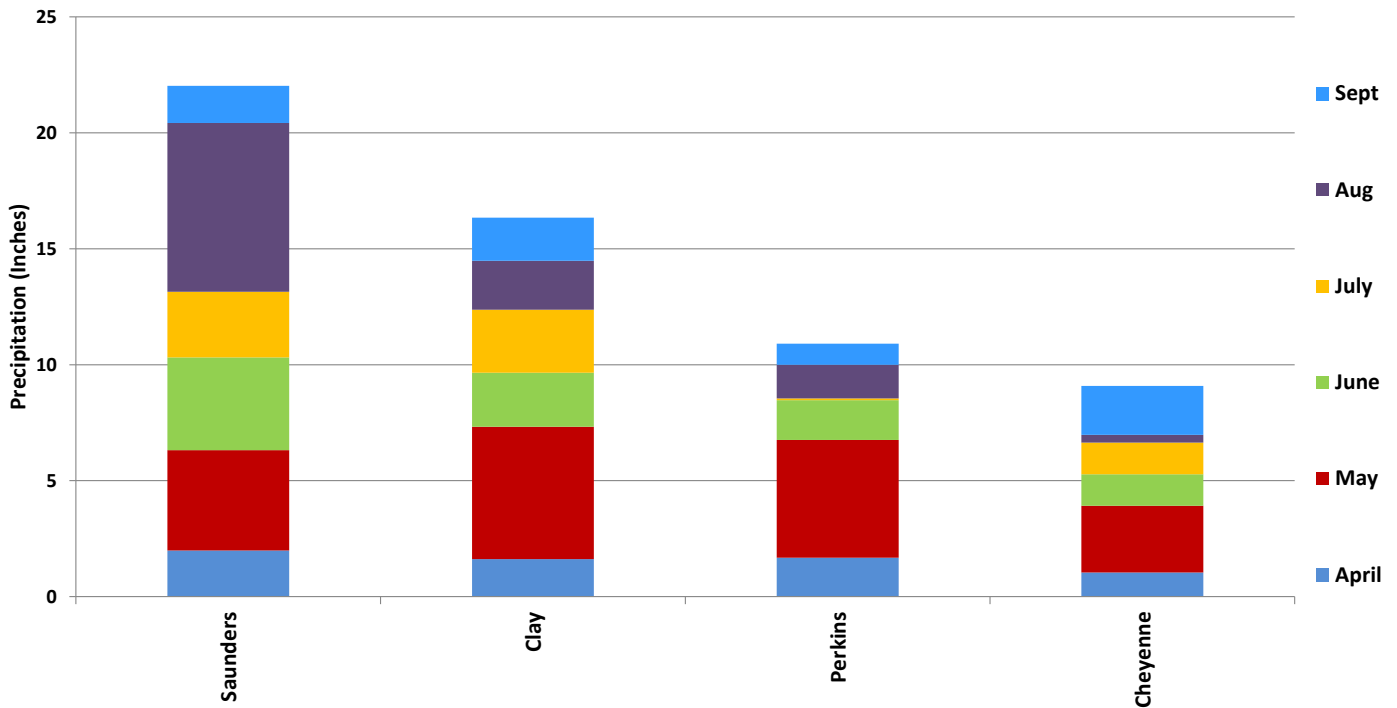


TABLE A. LOCATIONS, COOPERATORS, PLANTING AND HARVEST DATES OF NEBRASKA CORN TRIAL PLOTS

Location	Cooperator	Condition	Latitude	Longitude	Planted	Harvested
Southeast and South Central						
Saunders County	UNL ARDC; Ithaca, NE	Rainfed	41.158456	-96.406833	5/5/2021	10/11/2021
Clay County	South Central Research & Extension Center; Harvard, NE	Rainfed	40.575702	-98.129598	4/30/2021	10/18/2021
Clay County	South Central Research & Extension Center; Harvard, NE	Irrigated	40.56843	-98.135561	4/30/2021	10/18/2021
West Central and West						
Perkins County	UNL Stumpf International Wheat Center; Grant, NE	Rainfed	40.852046	-101.687090	5/4/2021	10/22/2021
Perkins County	UNL Stumpf International Wheat Center; Grant, NE	Irrigated	40.850491	-101.701421	5/4/2021	10/22/2021
Cheyenne County	UNL High Plains Ag Lab; Sidney, NE	Rainfed	41.236546	-102.998211	5/19/2021	10/7/2021

TABLE B. SOIL TYPE AND CULTURAL PRACTICES AT CORN TRIAL SITES

Location	Soil Series	Tillage System	Previous Crop	Fertilizer	Herbicide
Southeast and South Central					
Saunders Rainfed	Tomek silt loam	No-till	Soybeans	175 lb/a N as 32% UAN	2.6 pt/a Triple Flex, 1 pt/a Roundup, 12 oz/a 2,4-D pre-plant, 4 oz/a Status
Clay Rainfed	Crete silt loam	No-till	Sorghum	180 lb/a N as 32-0-0	22 oz/a Roundup + 2.5 qt/a Acuron
Clay Irrigated	Crete silt loam	No-till	Soybeans	200 lb/a N as anhydrous ammonia	2.5 qt/a Acuron
West Central and West					
Perkins Rainfed	Rosebud loam	No-till	Wheat	5 gal/a of 10-34-0	-
Perkins Irrigated	Kuma silt loam	Strip-till	Soybeans	5 gal/a of 10-34-0	-
Cheyenne Rainfed	Alliance loam	No-till	Wheat	5 gal/a of 10-34-0	Pre-plant burndown, 32 oz/a RoundUp and 16 oz/a 2,4-D

TABLE C. AVERAGE CORN PERFORMANCE SUMMARY

Location	Average Yield (bu/a, 15.5%)	Yield LSD	Top Yield (bu/ac)	Bushel Weight (lb/bu)	Ear Height (in)	Final Stand (plants/a)
Southeast and South Central						
Saunders Rainfed	233.5	13.1	246.8	56.7	48.7	27,564
Clay Rainfed	175.9	23.2	191.8	57.2	45.8	26,515
Clay Irrigated	285.9	31.2	332.6	57.4	52.4	35,506
West Central and West						
Perkins Rainfed	41.7	Data was highly variable with no significant differences between hybrids. For more detailed information contact Amanda Easterly or Cody Creech.				
Perkins Irrigated	231.7	Data was highly variable with no significant differences between hybrids. For more detailed information contact Amanda Easterly or Cody Creech.				
Cheyenne Rainfed	58.5	7.8	68.0	54.0	-	14,526

TABLE D. CORN ENTRANT CONTACT AND HYBRID OVERVIEW

Entrant	Contact	Phone	Hybrids Entered
308 Ag/FBN	Todd Schrotberger	308-883-1596	A9436VT2P, A9447VT2P, A9567VT2P
Channel Seed channel.com	Jay Behrends	308-249-5837	192-08VT2PRIB, 193-53VT2PRIB, 194-49DG-VT2PRIB, 197-66VT2PRIB
Dyna-Gro Seed PO Box 2050 1720 16th Ave Kearney, NE 68848 dynagroseed.com	Dave Welch	308-237-5194	D48QV22, D49SS70RIB, D50VC78RIB, D51SS41RIB, D51SS61RIB, D51VC67RIB, D52DC82RIB, D53TC19RIB, D54SS34RIB, D54SS74RIB, D54VC14RIB, D57TC29RIB, D57VC17RIB, D58VC65RIB
Hi Fidelity Genetics 326 West Geer St. Durham, NC 27701 hifidelitygenetics.com	Rachel Greenhut	530-574-3135	EXP2035, EXP2118, HFG1051, HFG1132, HFG1142
Prairie Hybrids 27445 Hurd Rd. Deer Grove, IL 61243 prairiehybrids.com	Rodney Hostetler	815-438-7815	5141, 5900, 6590, 6878, 7355, 8290, 8759, 8960

TABLE E. CORN ENTRANT BRAND AND HYBRID DETAILS

Brand	Hybrid	Growing Degree Days	Days to Maturity	Technology/Trait	Herbicide Resistance	Other Information
308 Ag/FBN	Mission A9436VT2P 0		94	VT2 Pro	Glyphosate	
308 Ag/FBN	Mission A9447VT2P		94	VT2 Pro	Glyphosate	
308 Ag/FBN	Mission A9567VT2P		95	VT2 Pro	Glyphosate	
Channel Seed	192-08VT2PRIB		92	VT2 Pro	Glyphosate	
Channel Seed	193-53VT2PRIB		93	VT2 Pro	Glyphosate	
Channel Seed	194-49DGVT2PRIB		94	DroughtGard/VT2 Pro	Glyphosate	
Channel Seed	197-66VT2PRIB		97	VT2 Pro	Glyphosate	
Dyna-Gro Seed	D48QV22	2620	108	3330A EZ	Roundup	
Dyna-Gro Seed	D49SS70RIB	2640	109	SmartStax	Roundup/Liberty	
Dyna-Gro Seed	D50VC78RIB	2610	110	VT Double Pro	Roundup	
Dyna-Gro Seed	D51SS41RIB	2630	111	SmartStax	Roundup/Liberty	
Dyna-Gro Seed	D51SS61RIB	2670	111	SmartStax	Roundup/Liberty	
Dyna-Gro Seed	D51VC67RIB	2650	111	VT Double Pro	Roundup	
Dyna-Gro Seed	D52DC82RIB	2670	112	DroughtGard/ VT2 Pro	Roundup	
Dyna-Gro Seed	D53TC19RIB	2710	113	Trecepta	Roundup	
Dyna-Gro Seed	D54SS34RIB	2740	114	SmartStax	Roundup/Liberty	Yellow Food Grade
Dyna-Gro Seed	D54SS74RIB	2740	114	SmartStax	Roundup/Liberty	
Dyna-Gro Seed	D54VC14RIB	2710	117	VT Double Pro	Roundup	Yellow Food Grade
Dyna-Gro Seed	D57TC29RIB	2790	117	Trecepta	Roundup	
Dyna-Gro Seed	D57VC17RIB	2840	117	VT Double Pro	Roundup	
Dyna-Gro Seed	D58VC65RIB	2820	118	VT Double Pro	Roundup	
Hi Fidelity Genetics EXP2035						
Hi Fidelity Genetics	EXP2118		114	conventional / A500V	none	
Hi Fidelity Genetics	HFG1051		105	conventional / CM250++	none	
Hi Fidelity Genetics	HFG1132		113	conventional / CM250++	none	
Hi Fidelity Genetics	HFG1142		114	conventional / CM250++	none	
Prairie Hybrids	5141	2700	108	NonGMO maxium Quatro	none	
Prairie Hybrids	5900	2700	108	NonGMO maxium Quatro	none	
Prairie Hybrids	6590	2790	111	NonGMO maxium Quatro	none	
Prairie Hybrids	6878	2770	112	NonGMO maxium Quatro	none	
Prairie Hybrids	7355	2770	112	NonGMO maxium Quatro	none	
Prairie Hybrids	8290	2825	114	NonGMO maxium Quatro	none	
Prairie Hybrids	8759	2870	115	NonGMO maxium Quatro	none	
Prairie Hybrids	8960	2860	114	NonGMO maxium Quatro	none	

SAUNDERS COUNTY DRYLAND CORN HYBRID TRIAL - 2021

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	Ear Height (in)	Relative Maturity (days)[2]	Final Stand (plants/a)
6590	Prairie Hybrids	246.8	57.6	48.5	111	27,163
HFG1142	Hi Fidelity Genetics	246.5	53.2	53.3	114	28,440
EXP2118	Hi Fidelity Genetics	244.3	57.0	53.2	114	28,386
Farm Check	NA	243.1	59.7	43.8	111	28,476
8290	Prairie Hybrids	238.5	57.1	51.1	114	28,756
5900	Prairie Hybrids	233.1	56.5	47.6	108	26,267
7355	Prairie Hybrids	232.6	56.5	42.7	112	28,610
6878	Prairie Hybrids	231.4	56.2	50.5	112	27,306
5141	Prairie Hybrids	229.1	54.5	48.9	108	26,394
HFG1132	Hi Fidelity Genetics	227.0	58.1	51.1	113	27,056
EXP2035	Hi Fidelity Genetics	219.8	56.2	47.3	-	27,888
Farm Check	NA	209.6	57.7	46.4	105	26,029
Average of all entries		233.5	56.7	48.7	-	27,564
Standard error		7.8	0.6	1.3	-	634
LSD [3]		13.1	1.0	2.2	-	1065
Coefficient of variation [4]		3.3	1.1	2.7	-	2.3
Replicates		5	5	5	-	5

[1] Yield values based on 56 lb/bu test weight and corrected to 15.5% moisture.

[2] Relative maturities are provided by the respective companies and determination of rating may vary by company.

[3] For differences between varieties that are equal to or greater than the LSD value, the chance that the difference is significant is 90%.

[4] Coefficient of Variation (CV) indicates the quality of a trial, and lower than 15 indicates a high quality trial. For CV>15, there was higher than expected variability in the field or the data and the results should be used with caution.



CLAY COUNTY DRYLAND CORN HYBRID TRIAL - 2021

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	Ear Height (in)	Relative Maturity (days)[2]	Final Stand (plants/a)
Farm Check	NA	191.8	57.5	42.5	105	27,165
8759	Prairie Hybrids	191.3	55.1	48.1	115	27,352
8960	Prairie Hybrids	188.4	55.9	44.8	114	26,977
8290	Prairie Hybrids	169.2	58.6	49.3	114	26,551
Farm Check	NA	157.4	58.1	44	93	24,833
Farm Check	NA	157.4	58.1	46.3	110	26,209
Average of all entries		175.9	57.2	45.8	-	26,515
Standard error		13.4	0.4	0.9	-	424
LSD [3]		23.2	0.8	1.5	-	731
Coefficient of variation [4]		7.6	0.8	1.9	-	1.6
Replicates		5	5	5	-	5

[1] Yield values based on 56 lb/bu test weight and corrected to 15.5% moisture.

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CHEYENNE COUNTY DRYLAND CORN HYBRID TRIAL - 2021

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	Relative Maturity (days)[2]	Final Stand (plants/a)
Farm Check	NA	68.0	53.2	105	15,101
Mission_A9567VT2P	308 Ag/FBN	68.0	53.4	95	14,984
197-66VT2PRIB	Channel Seed	61.7	54.8	97	14,346
Farm Check	NA	61.0	55.1	93	14,230
193-53VT2PRIB	Channel Seed	59.1	54.7	93	15,101
192-08VT2PRIB	Channel Seed	58.9	54.6	92	13,997
194-49DGV2PRIB	Channel Seed	56.2	55.2	94	14,113
Mission_A9436VT2P_0	308 Ag/FBN	55.6	54.7	94	13,649
Mission_A9447VT2P	308 Ag/FBN	55.6	55.5	94	14,636
D48QV22	DynaGro Seeds	40.6	49.1	108	15,101
Average of all entries		58.5	54.0	-	14,526
Standard error		4.6	0.6	-	507
LSD [3]		7.8	1.1	-	856
Coefficient of variation [4]		7.9	1.2	-	3.5
Replicates		5	5	-	5

[1] Yield values based on 56 lb/bu test weight and corrected to 15.5% moisture.

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CLAY COUNTY IRRIGATED CORN HYBRID TRIAL - 2021

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	Ear Height (in)	Relative Maturity (days)[2]	Final Stand (plants/a)
D57TC29RIB	DynaGro Seeds	332.6	54.0	50.5	115	33,939
8290	Prairie Hybrids	329.8	57.6	56.0	114	34,536
HFG1142	Hi Fidelity Genetics	321.5	54.4	57.5	114	36,931
8759	Prairie Hybrids	308.4	54.3	54.3	115	35,328
D54SS34RIB	DynaGro Seeds	307.2	60.1	53.8	114	36,150
EXP2118	Hi Fidelity Genetics	303.8	58.7	59.7	114	36,528
D51SS61RIB	DynaGro Seeds	299.7	57.5	53.3	111	33,866
D51VC67RIB	DynaGro Seeds	299.1	57.1	47.5	111	34,873
D52DC82RIB	DynaGro Seeds	298.2	57.3	54.7	112	36,200
D53TC19RIB	DynaGro Seeds	296.4	57.4	54.0	113	34,553
D54SS74RIB	DynaGro Seeds	294.7	58.1	50.3	114	37,129
D51SS41RIB	DynaGro Seeds	290.5	56.7	49.8	111	36,781
D54VC14RIB	DynaGro Seeds	272.8	58.9	50.8	114	36,697
Farm Check	NA	270.0	58.5	51.3	110	36,024
6878	Prairie Hybrids	269.2	57.2	45.8	112	34,159
D57VC17RIB	DynaGro Seeds	245.5	58.7	51.7	115	34,644
HFG1132	Hi Fidelity Genetics	233.7	58.9	51.7	113	34,938
D58VC65RIB	DynaGro Seeds	173.0	58.0	50.3	118	35,832
Average of all entries		285.9	57.4	52.4	-	35,506
Standard error		18.6	0.7	1.4	-	1130
LSD [3]		31.2	1.1	2.3	-	1893
Coefficient of variation [4]		6.5	1.2	2.6	-	3.2
Replicates		4	4	4	-	4

[1] Yield values based on 56 lb/bu test weight and corrected to 15.5% moisture.

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NEBRASKA SORGHUM VARIETY TRIALS

- 2021 -

CROP PRODUCTION SUMMARY

According to the National Agricultural Statistics Service, 320 thousand acres of grain sorghum were planted in Nebraska in 2021. There were 265 thousand acres of grain sorghum harvested producing around 19.9 million bushels of grain. The average grain sorghum yield in Nebraska for 2021 was 75 bushels per acre (bu/a). The table below shows grain sorghum yields from the previous 10 years.

Average Nebraska Grain Sorghum Yields (Last 10 Years)

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Yield (bu/a)	96	59	67	82	96	102	89	94	93	91	75
NE Total Production (million bu)	8.6	3.5	9.7	13.1	23.0	17.9	11.6	16.0	12.1	13.7	19.9

Source: National Agricultural Statistics Service (<http://www.nass.usda.gov>)

Detailed information regarding crop progress and history can be obtained from the National Agricultural Statistics Service available online at <http://www.nass.usda.gov>.

PROCEDURE

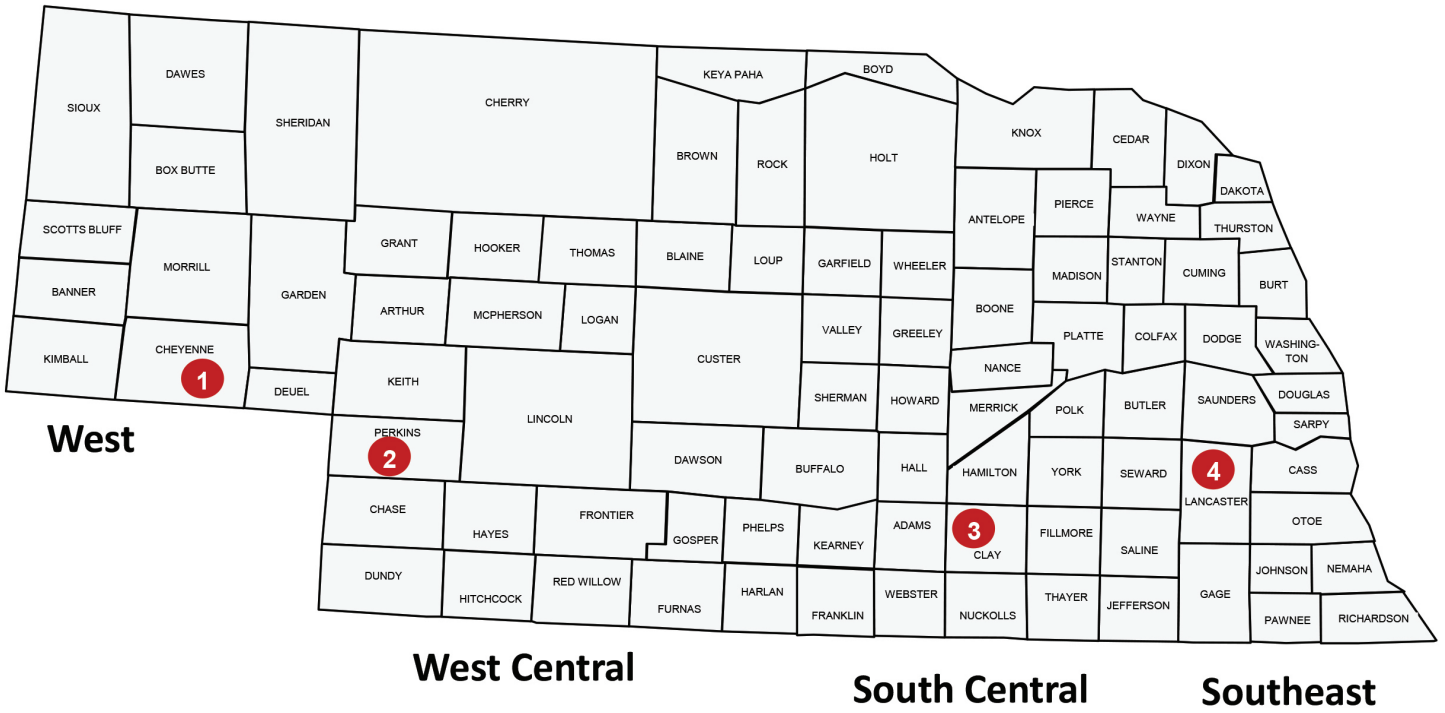
Four sorghum performance field trials were planted throughout Nebraska in 2021. Sorghum trials are conducted to provide yield and other information about sorghum hybrids available to sorghum growers in Nebraska. A fee from seed companies covers a portion of the cost of each test. Entry was on a voluntary basis and hybrids were selected by seed producers.

Individual plots are two rows wide and range from 25 to 30 feet long. At each test location, the same number of seeds were planted for all hybrids. The plant population represents the average harvested plant density. Grain yields are expressed on a 14% moisture basis. Yields shown are averages of four or more replicated plots at each location. Plots were machine harvested and grain moisture determinations were made with an electronic moisture meter or moisture sensors on the combine.

Variations in soil fertility, moisture conditions, and other factors are found in each test area. We make every effort to remove the variability by blocking and using other experimental design methods. We also use statistical procedures to remove a portion of the spatial variability. However, some variability remains which makes it impossible to measure yielding ability of hybrids with absolute accuracy. For this reason, small yield differences have little meaning. Unless the difference in performance of two varieties is greater than the difference required for least significance difference (LSD) shown in the tables, little confidence can be placed in the superiority of one variety over the other for measured traits in that particular test. These differences are shown at the 10% level, meaning that differences as large or larger could be expected through chance alone in 1 of 10 trials (10%).

In these experiments, many hybrids statistically had the same grain production. Performances of hybrids vary with seasonal conditions. Great care should be used in interpreting the results of a single year test. Earlier maturing hybrids are favored in some seasons while later ones perform best in other years. In addition, some hybrids are able to withstand unfavorable weather conditions better than others which may do well under ideal growing conditions. Performance over a period of years should give a much better measure of adaptation whenever available. Harvest moisture, stalk strength, and resistance to insect and disease also are factors which must be considered in selecting hybrids.

2021 GRAIN SORGHUM HYBRID TRIAL LOCATIONS MAP



● Rainfed Sites

2021 GRAIN SORGHUM TRIAL SITE PRECIPITATION (inches)

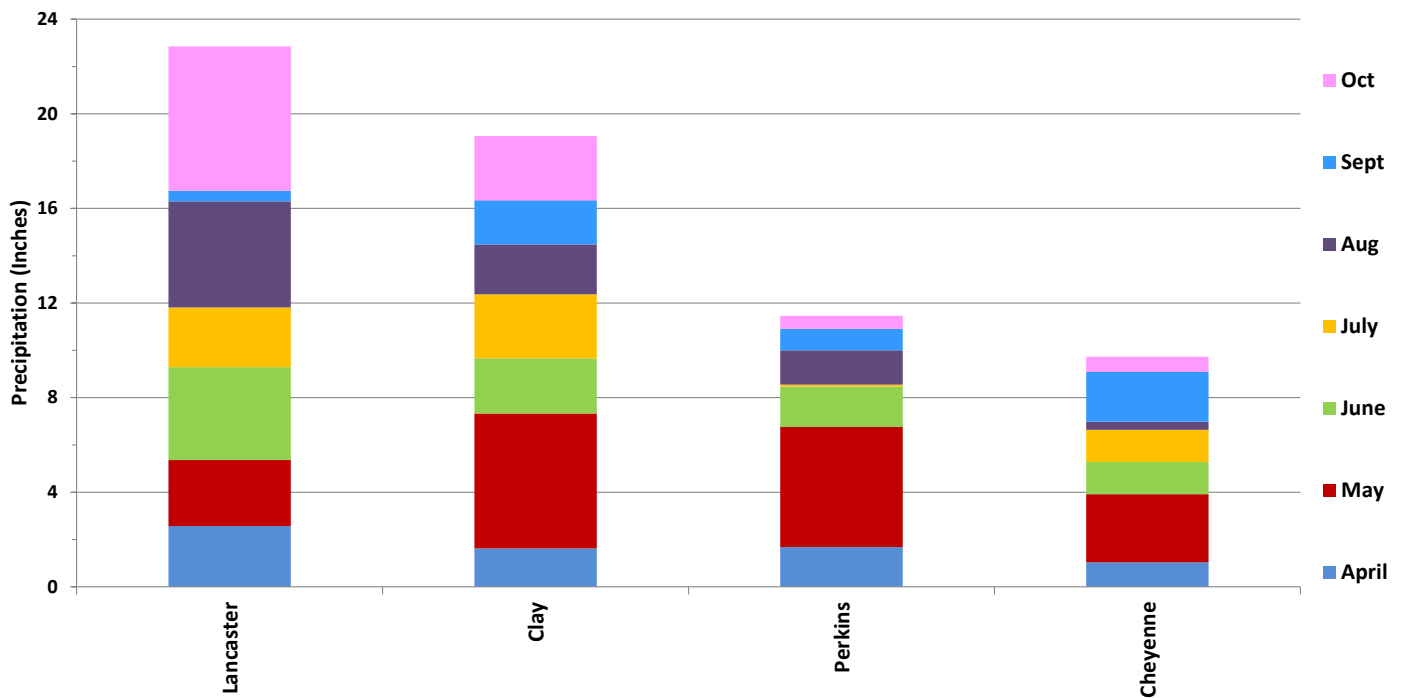


TABLE A. LOCATIONS, COOPERATORS, PLANTING AND HARVEST DATES OF NEBRASKA SORGHUM TRIAL PLOTS

Location	Cooperator	Condition	Latitude	Longitude	Planted	Harvested
Southeast and South Central						
Lancaster County	UNL Havelock Farm; Lincoln, NE	Rainfed	40.853412	-96.610289	5/24/2021	10/8/2021
Clay County	South Central Research & Extension Center; Harvard, NE	Rainfed	40.360339	-90.969678	5/26/2021	11/15/2021
West Central and West						
Perkins County	UNL Stumpf International Wheat Center; Grant, NE	Rainfed	40.845316	-101.686794	6/3/2021	11/16/2021
Cheyenne County	UNL High Plains Ag Lab; Sidney, NE	Rainfed	41.235949	-103.002516	5/28/2021	11/10/2021



TABLE B. SOIL TYPE AND CULTURAL PRACTICES AT SORGHUM TRIAL SITES

Location	Soil Series	Tillage System	Previous Crop	Fertilizer	Herbicide
Southeast and South Central					
Lancaster Rainfed	Crete & Aksarban silty clay loam	Disked	Oats	80 lbs/a N	32 oz/a of Roundup and 1 lb/a atrazine pre-emergent
Clay Rainfed	Hastings silt loam	No-till	Corn & rye cover crop	120 lb/a N as N-SOL 32 preplant	Lexar EZ & Roundup PowerMax preplant, MEC Amine-D and Roundup PowerMax pre-emergent, Huskie & Atrazine 4L post-emergent
West Central and West					
Perkins Rainfed	Alliance & Kuma silt loams	No-till	Wheat	5 gal/a 10-34-0	Pre-plant burndown with 32 oz Glyphosate and 16 oz 2,4-D; additional 1 lb atrazine used
Cheyenne Rainfed	Alliance loam	No-till	Wheat	5 gal/a 10-34-0	Pre-plant burndown with 32 oz Glyphosate and 16 oz 2,4-D; additional 1 lb atrazine used

TABLE C. AVERAGE GRAIN SORGHUM PERFORMANCE SUMMARY

Location	Average Yield (bu/a, 14%)	Yield LSD	Top Yield (bu/ac)	Bushel Weight (lb/bu)	50% Bloom (days after planting)	Plant Height (in)	Population (plts/a)
Southeast and South Central							
Lancaster Rainfed	152.2	13.2	173.1	60.1	63.4	51.4	67,360
Clay Rainfed	80.0	14.6	109.5	59.2	-	48.9	39,226
West Central and West							
Perkins Rainfed	55.5	18.1	73.2	53.6	-	33.3	33,548
Cheyenne Rainfed	43.8	6.6	52.9	53.7	75.5	34.0	28,528

TABLE D - SORGHUM ENTRANTS AND CONTACT INFORMATION

The entrant should be contacted for information on seed availability, adaptation and agronomic characteristics.

Entrant	Address	Contact	Phone	Website
Alta Seeds	301 S Polk, Ste 860 Amarillo, TX 79101	Zach Eder	979-332-5138	altaseeds.com
Channel	Sidney, NE	Jay Behrends	308-249-5837	channel.com
DEKALB	2505 W35TH ST Kearney, NE 68845	Kevin Keller	402-719-7813	dekalbasgrowdeltapine.com
Dyna-Gro Seed	1720 16th Ave Kearney, NE 68848	Dave Welch	308-237-5194	dynagroseed.com
Golden Acres/LG seeds	74172 330 Ave Imperial, NE 69033	Matt Teply	308-883-0515	lgseeds.com
Legend Seeds	PO Box 241 DeSmet, SD 57231	Colby Brink	605-295-2745	legendseeds.net
RAGT Semences	Groupe RAGT – Rue Emile Singla – BP 3331 Alexandre Calorbe 12033 RODEZ Cedex 9		33672255830	ragt-semences.fr/en-fr
Sorghum Partners	2101 Ken Pratt Blvd Suite 201 Longmont, CO 80501	Scott Staggenborg	720-647-8180	sorghumpartners.com

Table E. Grain Sorghum Entrant Brand and Hybrid Details (1/2)

Brand/Source	Hybrid	Relative Maturity	Grain Color	Technology/Trait/Seed Treatment	Other Descriptive Information
Alta Seeds	ADV G1120IG	Med-Early	Red	IGROWTH HERBICIDE TOL	
Alta Seeds	ADV G1153	Med-Early	Red	APHIX SCA TOL	
Alta Seeds	ADV G1329	Early	Cream	APHIX SCA TOL	
Alta Seeds	ADV G2106	Med-Early	Red		
Alta Seeds	ADV G2165	Medium	Red		
Alta Seeds	ADV G2168IG	Medium	Red	IGROWTH HERBICIDE TOL	
Alta Seeds	ADV G2193IG	Medium	Red	IGROWTH HERBICIDE TOL	
Alta Seeds	ADV G2275	Medium	Red		
Alta Seeds	ADV XG015IG	Early	Red	IGROWTH HERBICIDE TOL	
Alta Seeds	ADV XG034IG	Medium		IGROWTH HERBICIDE TOL	
Alta Seeds	ADV XG160	Med-Early			
Alta Seeds	ADV XG272	Medium			
Alta Seeds	AG1201	Early	Red	APHIX SCA TOL	
Channel Seed	5C35	Early	Cream		
Channel Seed	5B29	57 d	Bronze		
DEKALB	DKS27-80	Early	Bronze	CONVENTIONAL Concept/Poncho	
DEKALB	DKS28-05	Early	Bronze	CONVENTIONAL Concept/Poncho	
DEKALB	DKS29-95	Early	Red	CONVENTIONAL Concept/Poncho	
DEKALB	DKS36-07	Med-Early	Bronze	CONVENTIONAL Concept/Poncho	
DEKALB	DKS38-16	Med-Early	Bronze	CONVENTIONAL Concept/Poncho	
DEKALB	DKS44-07	Medium	Red	CONVENTIONAL Concept/Poncho	
DEKALB	DKS54-07	Med-Full	Red	CONVENTIONAL Concept/Poncho	
Dyna-Gro Seed	GX20970	Medium	Bronze	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	GX20973	Med-Early	Bronze	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	GX20998	Medium	Bronze	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	GX21965	Med-Full	Bronze	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	M54GR24	Very Early	Red	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	M59GB57	Early	Bronze	Safened + Imidacloprid	
Dyna-Gro Seed	M59GB94	Early	Bronze	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	M60GB31	Med-Early	Bronze	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	M60GB88	Med-Early	Bronze	Safened + Imidacloprid	
Dyna-Gro Seed	M63GB78	Med-Early	Bronze	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	M67GB87	Medium	Bronze	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	M71GR91	Med-Full	Red	Safened + Imidacloprid	SCA Tolerance
Dyna-Gro Seed	M72GB71	Med-Full	Bronze	Safened + Imidacloprid	SCA Tolerance
Golden Acres	GA 1510C	Early	Cream	AgriShield MAX/FSI	
Golden Acres	GA 2620C	Med-Early	Cream	AgriShield MAX/FSI	
Golden Acres	GA 2730B	Med-Early	Bronze	AgriShield MAX/FSI	
Legend Seeds	LGS 5002	Early	Red	Safened	
Legend Seeds	LGS 5508W	Med-Early	White	Safened	Food Grade

TABLE CONTINUED ON NEXT PAGE

Table E. Grain Sorghum Entrant Brand and Hybrid Details (2/2)

Brand/Source	Hybrid	Relative Maturity	Grain Color	Technology/Trait/Seed Treatment	Other Descriptive Information
Legend Seeds	LGS 6321	Med-Early	Bronze	Safened	
Legend Seeds	LGS X6922	Med-Late	Bronze	Safened	
RAGT Semences	AC2102	Early	Red	Influx XL/Concept III	
RAGT Semences	AC2103	Med-Early	White-cream	Influx XL/Concept III	
RAGT Semences	AC2104	Med-Early	Red	Influx XL/Concept III	
Sorghum Partners	251	Early	Red	Fungicide, Safener, Insecticide	
Sorghum Partners	SP 25C10	Early	Cream	Fungicide, Safener, Insecticide	
Sorghum Partners	SP 43M80	Med-Early	Bronze	Fungicide, Safener, Insecticide	High SCA Tolerance
Sorghum Partners	SP 68M57	Medium	Bronze	Fungicide, Safener, Insecticide	
Sorghum Partners	SPSA308	Med-Full	Bronze	Fungicide, Safener, Insecticide	High SCA Tolerance
Sorghum Partners	SPSC343	Medium	Bronze	Fungicide, Safener, Insecticide	High SCA Tolerance
Sorghum Partners	SPSC344	Medium	Bronze	Fungicide, Safener, Insecticide	High SCA Tolerance



LANCASTER COUNTY GRAIN SORGHUM HYBRID TRIAL - 2021

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	50% Bloom (days after planting)	Plant Height (in)	Population (plts/a)	Grian Color
M67GB87	Dyna-Gro Seed	173.1	58.7	63.3	55.9	69,612	Bronze
GX20998	Dyna-Gro Seed	168.8	61.7	63.2	50.7	73,765	Bronze
M60GB31	Dyna-Gro Seed	167.1	60.4	63.3	49.8	60,460	Bronze
DKS44-07	DEKALB	166.8	62.2	64.4	50.6	79,103	Red
ADV G2106	Alta Seeds	166.4	60.4	62.0	49.8	68,408	Red
ADV XG160	Alta Seeds	164.1	60.2	64.6	51.4	65,298	-
GX20970	Dyna-Gro Seed	163.9	61.2	65.7	50.9	69,431	Bronze
ADV G2275	Alta Seeds	163.0	60.6	63.4	52.5	61,501	Red
M63GB78	Dyna-Gro Seed	162.6	60.6	62.8	51.2	69,370	Bronze
GX20973	Dyna-Gro Seed	162.3	62.7	61.3	54.1	72,826	Bronze
SPSA308	Sorghum Partners	160.6	60.2	62.4	53.6	72,042	Bronze
DKS36-07	DEKALB	159.7	60.0	61.1	55.3	79,125	Bronze
SP 68M57	Sorghum Partners	158.8	59.8	62.8	47.4	60,470	Bronze
ADV G1153	Alta Seeds	157.6	60.6	64.3	48.4	57,602	Red
DKS38-16	DEKALB	157.3	62.6	62.3	56.3	77,222	Bronze
ADV G2193IG	Alta Seeds	155.6	60.3	63.6	48.4	65,232	Red
ADV XG272	Alta Seeds	155.5	59.7	63.6	53.0	57,244	-
M59GB94	Dyna-Gro Seed	155.1	59.7	59.8	54.3	70,693	Bronze
LGS 6321	Legend Seeds	154.7	60.5	63.0	52.1	70,587	Bronze
Medium Maturity Check	NA	153.5	61.4	62.5	52.1	75,001	Bronze
GX21965	Dyna-Gro Seed	153.4	60.9	66.9	49.5	67,770	Bronze
ADV G1120IG	Alta Seeds	152.8	58.1	63.3	54.6	57,041	Red
M60GB88	Dyna-Gro Seed	151.6	59.6	62.8	50.6	77,521	Bronze
M71GR91	Dyna-Gro Seed	150.5	62.0	67.5	53.7	59,811	Red

TABLE CONTINUED ON NEXT PAGE



LANCASTER COUNTY GRAIN SORGHUM TRIAL - 2021 (continued)

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	50% Bloom (days after planting)	Plant Height (in)	Population (plts/a)	Grain Color
ADV G2165	Alta Seeds	148.0	60.6	63.5	52.3	61,591	Red
Early Maturity Check	NA	146.2	52.4	56.4	45.9	82,754	Bronze
DKS54-07	DEKALB	142.0	61.3	70.5	56.6	67,029	Red
ADV XG015IG	Alta Seeds	140.7	60.3	65.5	46.5	57,560	Red
M72GB71	Dyna-Gro Seed	140.5	61.9	68.9	54.8	68,451	Bronze
Imazamox Tolerant Check	NA	140.4	60.5	65.3	47.1	63,914	Red
LGS X6922	Legend Seeds	140.1	60.0	69.4	61.5	62,810	Bronze
SP 43M80	Sorghum Partners	131.7	59.3	60.0	50.7	62,872	Bronze
SP 25C10	Sorghum Partners	129.2	55.5	56.1	44.8	70,583	Cream
251	Sorghum Partners	118.1	56.6	55.7	42.4	72,680	Red
ADV XG034IG	Alta Seeds	114.0	60.0	68.1	48.9	50,230	-
Average of all entries		152.2	60.1	63.4	51.4	67,360	-
Standard error		7.9	0.7	0.8	0.9	2,425	-
LSD [2]		13.2	1.1	1.4	1.6	4,025	-
Coefficient of variation [3]		5.2	1.1	1.3	1.8	3.6	-
Replicates		4	4	4	4	4	-

[1] Yield adjusted to 14% moisture and assuming 56 lb/bu test weight.

[2] For differences between varieties that are equal to or greater than the LSD value, the chance that the difference is significant is 90%.

[3] Coefficient of Variation (CV) indicates the quality of a trial, and lower than 15 indicates a high quality trial. For CV>15, there was higher than expected variability in the field or the data and the results should be used with caution.



CLAY COUNTY GRAIN SORGHUM HYBRID TRIAL - 2021

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	Plant Height (in)	Population (plts/a)	Grain Color
GX21965	Dyna-Gro Seed	109.5	60.8	54.2	46,879	Bronze
M60GB88	Dyna-Gro Seed	106.1	58.9	50.6	51,887	Bronze
M67GB87	Dyna-Gro Seed	102.2	58.3	51.9	45,561	Bronze
SPSC343	Sorghum Partners	100.0	60.6	53.1	40,616	Bronze
M72GB71	Dyna-Gro Seed	99.6	60.5	52.0	51,909	Bronze
DKS54-07	DEKALB	99.3	61.6	54.1	44,717	Red
GX20970	Dyna-Gro Seed	97.0	61.2	50.4	43,931	Bronze
M63GB78	Dyna-Gro Seed	93.9	59.4	49.2	49,084	Bronze
DKS38-16	DEKALB	93.2	60.7	49.8	49,191	Bronze
DKS44-07	DEKALB	93.0	61.4	49.1	47,699	Red
ADV G2193IG	Alta Seeds	92.4	59.3	46.2	38,768	Bronze
Medium Maturity Check	NA	91.2	61.1	49.3	43,144	Bronze
M60GB31	Dyna-Gro Seed	90.9	59.7	49.2	31,264	Bronze
SP 68M57	Sorghum Partners	86.9	59.1	46.6	32,715	Bronze
AC2104	RAGT Semences	86.4	58.4	53.7	49,602	Red
GX20973	Dyna-Gro Seed	85.1	61.0	47.9	38,876	Bronze
DKS36-07	DEKALB	84.2	60.3	49.6	47,094	Bronze
GX20998	Dyna-Gro Seed	83.9	61.0	48.9	47,648	Bronze
ADV G2275	Alta Seeds	80.3	58.7	48.6	34,944	Red
ADV G1120IG	Alta Seeds	80.1	58.9	49.2	33,500	Red
M71GR91	Dyna-Gro Seed	79.2	60.1	53.4	38,811	Red
Early Maturity Check	NA	78.8	57.6	46.4	65,531	Bronze
SPSC344	Sorghum Partners	78.1	58.8	45.1	41,631	Bronze
ADV XG272	Alta Seeds	75.5	59.2	50.5	29,660	--
ADV G2106	Alta Seeds	74.1	59.0	43.9	29,874	Red
ADV G2165	Alta Seeds	69.7	59.4	51.4	27,499	Red
ADV XG160	Alta Seeds	68.5	58.1	47.2	24,690	--
AC2103	RAGT Semences	67.8	58.8	47.2	36,165	Cream
ADV XG015IG	Alta Seeds	67.4	58.6	45.3	31,021	Red
SP 43M80	Sorghum Partners	65.8	58.2	46.1	34,118	Bronze
LGS 6321	Legend Seeds	64.7	58.0	52.3	27,995	Bronze
ADV XG034IG	Alta Seeds	63.8	58.1	46.3	26,050	--
ADV G1153	Alta Seeds	62.0	58.2	48.4	32,053	Red
Imazamox Tolerant Check	NA	61.8	59.3	45.7	21,407	Red
AC2102	RAGT Semences	58.7	57.4	49.9	62,890	Red
SP 25C10	Sorghum Partners	58.6	57.1	42.5	39,815	Cream

TABLE CONTINUED ON NEXT PAGE

CLAY COUNTY GRAIN SORGHUM HYBRID TRIAL - 2021 (continued)

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	Plant Height (in)	Population (plts/a)	Grain Color
SPSA308	Sorghum Partners	58.4	57.1	46.5	34,185	Bronze
LGS X6922	Legend Seeds	57.7	57.4	53.8	21,965	Bronze
251	Sorghum Partners	53.1	56.2	43.0	35,431	Red
Average of all entries		80.0	59.2	48.9	39,226	-
Standard error		8.8	0.7	1.2	3,944	-
LSD [2]		14.6	1.1	2.0	6,548	-
Coefficient of variation [3]		11.0	1.2	2.5	10.1	-
Replicates		4	4	4	4	-

[1] Yield adjusted to 14% moisture and assuming 56 lb/bu test weight.

[2] For differences between varieties that are equal to or greater than the LSD value, the chance that the difference is significant is 90%.

[3] Coefficient of Variation (CV) indicates the quality of a trial, and lower than 15 indicates a high quality trial. For CV>15, there was higher than expected variability in the field or the data and the results should be used with caution.

Notes: Difficult conditions at planting led to lower than anticipated stand and yield. However, yields were very similar to the surrounding fields.



PERKINS COUNTY GRAIN SORGHUM HYBRID TRIAL - 2021

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	Plant Height (in)	Population (plts/a)	Grain Color
DKS36-07	DEKALB	73.2	54.6	35.9	29,190	Bronze
DKS38-16	DEKALB	72.8	52.3	34.2	37,058	Bronze
GA 2620C	Golden Acres	68.5	54.8	34.7	28,885	Cream
AC2104	RAGT Semences	67.4	56.2	35.2	36,938	Red
ADV XG272	Alta Seeds	66.3	51.9	36.5	35,739	Bronze
GA 2730B	Golden Acres	65.9	55.3	32.9	41,758	Bronze
DKS29-95	DEKALB	65.8	55.3	32.6	41,804	Red
SP 43M80	Sorghum Partners	65.1	55.2	33.9	28,226	Bronze
Early Maturity Check	NA	62.3	55.7	29.7	33,369	Bronze
GA 1510C	Golden Acres	61.8	55.5	27.3	41,528	Cream
SP 25C10	Sorghum Partners	59.2	56.2	32.2	26,999	Cream
251	Sorghum Partners	58.6	56.2	31.7	37,038	Red
ADV G1329	Alta Seeds	58.4	55.6	29.5	32,390	Cream
M60GB88	Dyna-Gro Seed	57.7	51.7	35.8	38,249	Bronze
M59GB57	Dyna-Gro Seed	57.5	54.9	31.0	31,197	Bronze
M59GB94	Dyna-Gro Seed	56.8	52.4	32.1	28,653	Bronze
AC2103	RAGT Semences	53.1	54.9	35.0	25,007	Cream
DKS28-05	DEKALB	53.0	53.2	34.0	34,515	Bronze
GX20973	Dyna-Gro Seed	52.8	56.5	34.0	31,695	Bronze
ADV G1153	Alta Seeds	52.6	49.9	34.2	34,008	Red
M54GR24	Dyna-Gro Seed	51.5	56.2	35.3	38,025	Red
AG1201	Alta Seeds	50.9	54.5	29.9	39,875	Red
ADV G2168IG	Alta Seeds	50.9	53.6	31.9	29,430	Red
LGS 5002	Legend Seeds	47.8	55.6	31.3	35,160	Red
M63GB78	Dyna-Gro Seed	46.6	53.4	32.3	34,765	Bronze
LGS 6321	Legend Seeds	46.5	53.0	35.2	28,987	Bronze
M60GB31	Dyna-Gro Seed	43.4	49.8	33.8	29,180	Bronze
AC2102	RAGT Semences	41.7	54.9	39.7	40,663	Red
ADV G1120IG	Alta Seeds	31.2	46.8	34.2	26,076	Red
ADV XG015IG	Alta Seeds	27.2	42.9	33.7	30,041	Red
Average of all entries		55.5	53.6	33.3	33,548	-
Standard error		10.7	1.8	1.8	5,590	-
LSD [2]		18.1	3.0	3.0	9,344	-
Coefficient of variation [3]		19.3	3.3	5.4	16.7	-
Replicates		3	4	4	4	-

[1] Yield adjusted to 14% moisture and assuming 56 lb/bu test weight.

[2] For differences between varieties that are equal to or greater than the LSD value, the chance that the difference is significant is 90%.

[3] Coefficient of Variation (CV) indicates the quality of a trial, and lower than 15 indicates a high quality trial. For CV>15, there was higher than expected variability in the field or data and the results should be used with caution.

Notes: Difficult conditions at planting and heavy weed pressure led to lower than anticipated stand and yield.

CHEYENNE COUNTY GRAIN SORGHUM HYBRID TRIAL - 2021

Hybrid	Brand	Average Yield (bu/a)[1]	Bushel Weight (lb/bu)	50% Bloom (days after planting)	Plant Height (in)	Population (plts/a)	Grain Color
Check	NA	52.9	54.9	33.2	74.8	33,396	Bronze
GA 2620C	Golden Acres	51.9	53.4	34.0	75.8	28,053	Cream
ADV G1329	Alta Seeds	51.8	55.3	31.8	76.2	28,111	Cream
DKS28-05	DEKALB	47.7	52.9	36.6	75.0	33,744	Bronze
DKS29-95	DEKALB	47.6	53.8	33.6	76.0	31,305	Red
GA 2730B	Golden Acres	47.4	53.1	36.4	76.2	31,073	Bronze
GA 1510C	Golden Acres	47.4	55.5	29.8	76.0	32,409	Cream
M59GB94	Dyna-Gro Seed	45.6	51.3	34.2	76.2	26,252	Bronze
5B29	Channel Seed	45.2	52.6	34.0	74.6	33,396	Bronze
SP 43M80	Sorghum Partners	44.1	55.2	37.8	76.4	25,149	Bronze
M59GB57	Dyna-Gro Seed	43.6	53.4	34.2	75.4	25,613	Bronze
SP 25C10	Sorghum Partners	43.4	54.2	32.8	74.4	25,381	Cream
AG1201	Alta Seeds	42.2	54.1	30.0	75.4	29,737	Red
M54GR24	Dyna-Gro Seed	41.8	54.6	34.0	75.4	26,426	Red
DKS27-80	DEKALB	41.6	53.6	34.8	74.4	31,944	Bronze
LGS 5508W	Legend Seeds	41.4	54.1	38.2	76.2	24,742	White
5C35	Channel Seed	40.9	54.4	34.4	75.0	27,878	Cream
LGS 5002	Legend Seeds	40.5	55.6	34.8	75.0	30,202	Red
DKS36-07	DEKALB	40.4	53.0	33.2	76.9	29,969	Bronze
251	Sorghum Partners	39.2	55.3	32.6	75.2	23,522	Red
ADV G1120IG	Alta Seeds	22.8	47.1	36.8	-	23,827	Red
ADV XG015IG	Alta Seeds	-	-	30.0	-	25,497	Red
Average of all entries		43.8	53.7	34.0	75.5	28,528	-
Standard error		4.0	0.9	1.8	0.5	1,731	-
LSD [2]		6.6	1.4	3	0.8	2,879	-
Coefficient of variation [3]		9.1	1.6	5.3	0.7	6.1	-
Replicates		5	5	5	5	5	-

[1] Yield adjusted to 14% moisture and assuming 56 lb/bu test weight.

[2] For differences between varieties that are equal to or greater than the LSD value, the chance that the difference is significant is 90%.

[3] Coefficient of Variation (CV) indicates the quality of a trial, and lower than 15 indicates a high quality trial. For CV>15, there was higher than expected variability in the field or the data and the results should be used with caution.

Notes: ADV XG015IG and ADV G1120IG are both bred to include a tolerance to imazamox. Both showed lower than expected numbers of heading, with XB015IG having not enough heads to calculate yield, and G1120IG showing sporadic heading and overall low yield.

SORGHUM VARIETY AVERAGE PERFORMANCE

Lancaster County - Two-year (2020-2021) averages

Variety	Brand	Grain Yield (bu/a)	Bushel Weight (lb/bu)	50% Bloom (Days after planting)	Plant Height (inches)	Grain Color
ADV G2275	Alta Seeds	167.3	59.7	60.7	56.2	Red
M60GB31	Dyna-Gro Seed	164.8	60.8	62.6	53.5	Bronze
ADV G2106	Alta Seeds	162.2	60.8	59.0	50.5	Red
M59GB94	Dyna-Gro Seed	157.0	59.7	56.9	55.7	Bronze
SP 68M57	Sorghum Partners	156.4	59.7	61.4	48.8	Bronze
ADV G2193IG	Alta Seeds	154.9	60.8	60.3	50.0	Red
M71GR91	Dyna-Gro Seed	154.7	61.9	66.2	58.3	Red
ADV G1153	Alta Seeds	152.5	60.5	63.2	50.7	Red
LGS 6321	Legend Seeds	152.3	60.2	61.5	54.3	Bronze
M60GB88	Dyna-Gro Seed	151.9	60.7	60.9	51.5	Bronze
ADV G2165	Alta Seeds	141.9	60.0	62.2	54.6	Red
SP 43M80	Sorghum Partners	141.5	59.4	57.5	52.9	Bronze
M72GB71	Dyna-Gro Seed	137.7	60.5	67.5	57.6	Bronze
Average of all entries		153.5	60.4	61.5	53.4	.

Cheyenne County - Two-year (2020-2021) averages

Variety	Brand	Average Grain Yield (bu/a)	Bushel Weight (lb/bu)	50% Bloom (Days after planting)	Plant Height (inches)	Grain Color
DKS29-95	DEKALB	38.8	49.8	79.0	35.2	Red
M59GB94	Dyna-Gro Seed	36.2	48.3	80.6	36.6	Bronze
AG1201	Alta Seeds	35.6	52.1	78.2	32.3	Red
ADV G1329	Alta Seeds	35.6	50.2	79.6	31.7	Cream
M59GB57	Dyna-Gro Seed	32.9	49.4	78.7	35.1	Bronze
M54GR24	Dyna-Gro Seed	31.4	52.4	79.2	35.4	Red
SP 25C10	Sorghum Partners	31.1	48.2	77.7	35.4	Cream
DKS36-07	DEKALB	29.2	45.3	81.5	35.6	Bronze
LGS 5002	Legend Seeds	28.5	49.4	79.0	34.6	Red
Average of all entries		33.2	49.4	79.3	34.6	.

SORGHUM VARIETY AVERAGE PERFORMANCE (cont'd)

Clay County - Two-year (2020-2021) averages

Variety	Brand	Grain Yield (bu/a)	Bushel Weight (lb/bu)	Plant Height (inches)	Grain Color
ADV G2193IG	Alta Seeds	138.2	60.2	47.3	Red
M72GB71	Dyna-Gro Seed	132.3	60.7	54.1	Bronze
DKS44-07	DEKALB	131.3	61.4	51.5	Red
DKS38-16	DEKALB	129.8	61.1	52.7	Bronze
M71GR91	Dyna-Gro Seed	129.5	61.1	55.7	Red
M60GB88	Dyna-Gro Seed	127.5	59.1	49.5	Bronze
M60GB31	Dyna-Gro Seed	125.2	60.7	50.6	Bronze
ADV G2106	Alta Seeds	122.1	59.6	46.3	Red
ADV G2165	Alta Seeds	116.8	59.2	52.7	Red
DKS36-07	DEKALB	116.5	60.0	50.8	Bronze
ADV G2275	Alta Seeds	113.7	60.0	51.3	Red
ADV G1153	Alta Seeds	112.1	58.4	49.0	Red
LGS 6321	Legend Seeds	109.2	58.8	54.5	Bronze
SP 68M57	Sorghum Partners	102.8	58.9	48.8	Bronze
Average of all entries		121.9	59.9	51.1	.

Perkins County - Two-year (2020-2021) averages

Variety	Brand	Average Grain Yield (bu/a)	Bushel Weight (lb/bu)	Plant Height (inches)	Grain Color
DKS38-16	DEKALB	69.3	54.1	41.4	Bronze
DKS36-07	DEKALB	69.1	54.4	40.7	Bronze
M59GB57	Dyna-Gro Seed	63.6	55.2	35.4	Bronze
SP 43M80	Sorghum Partners	62.4	55.6	39.4	Bronze
SP 25C10	Sorghum Partners	60.1	55.9	37.6	Cream
M60GB88	Dyna-Gro Seed	59.1	52.9	40.3	Bronze
ADV G2168IG	Alta Seeds	56.8	54.1	37.3	Red
AG1201	Alta Seeds	56.8	54.2	33.2	Red
ADV G1153	Alta Seeds	56.3	51.6	39.8	Red
ADV G1329	Alta Seeds	54.4	54.8	33.1	Cream
LGS 5002	Legend Seeds	52.7	55.4	36.6	Red
M54GR24	Dyna-Gro Seed	52.1	55.3	38.4	Red
M59GB94	Dyna-Gro Seed	52.0	53.8	38.3	Bronze
M60GB31	Dyna-Gro Seed	47.8	46.6	39.6	Bronze
Average of all entries		58.0	53.8	38.0	.

NEBRASKA SPRING WHEAT TRIAL - 2021 LOCATIONS, COOPERATORS, PLANTING AND HARVEST DATES OF PLOTS

Location	Cooperator	Latitude	Longitude	Planted	Harvested	Average Yield (bu/a)
Cheyenne County	UNL High Plains Ag Lab; Sidney, NE	41.232882	-103.016475	3/11/2021	7/30/2021	17.6
Kimball County	R&K Farms/Chad Bomberger, Pine Bluffs, WY	41.336458	-104.043991	3/12/2021	7/28/2021	27.7
Red Willow County	Peters Seed Farm; McCook, NE	40.174199	-100.761509	3/30/2021	7/27/2021	35.7

SPRING WHEAT VARIETY TRIAL YIELDS AND PROTEIN - 2021 CHEYENNE, KIMBALL, AND RED WILLOW COUNTIES

Variety	Brand	2021 Averages		Cheyenne		Kimball		Red Willow	
		Yield (bu/a)[1]	Protein (%) [2]	Yield (bu/a)	Protein (%)	Yield (bu/a)	Protein (%)	Yield (bu/a)	Protein (%)
WB9606	WestBred	31.2	14.6	20.7	14.6	28.7	15.1	44.1	14.1
WB9590	WestBred	29.0	16.1	17.8	16.5	28.9	15.9	40.4	15.8
WB9719	WestBred	28.8	15.4	20.6	15.1	35.0	15.4	30.8	15.7
Prevail	SDSU	28.1	15.2	17.0	15.7	30.2	15.7	37.0	14.3
LCS Cannon	Limagrain Cereal Seeds	27.9	15.6	15.2	15.7	28.9	15.9	39.5	15.2
AP Murdock	AgriPro-Syngenta	27.7	15.8	18.0	16.4	27.6	15.9	37.5	15.3
LCS Rebel	Limagrain Cereal Seeds	27.4	16.2	19.1	16.0	31.8	16.0	31.3	16.5
Surpass	SDSU	26.1	15.6	18.0	15.8	27.5	15.7	32.8	15.4
LCS Trigger	Limagrain Cereal Seeds	25.9	16.1	19.9	15.8	18.7	17.2	39.3	15.3
WB9707	WestBred	25.8	16.6	14.5	16.8	27.8	15.7	35.1	17.3
ND Frohberg	North Dakota Crop Improvement	24.5	16.8	16.8	16.6	24.8	17.2	32.0	16.5
ND Vitpro	North Dakota Crop Improvement	21.8	16.3	14.2	16.1	22.8	16.7	28.4	16.2
Mean performance of all entries in the trial.		27.0	15.9	17.6	15.9	27.7	16.0	35.7	15.6
Standard error		-	-	1.9	0.3	1.3	0.3	4.4	0.6
LSD [3]		-	-	3.2	0.4	2.3	0.6	7.4	1.0
Coefficient of variation[4]		-	-	10.8	1.6	4.8	2.2	12.3	3.8
Replicates		-	-	4	4	4	2	4	4

[1] Yield values corrected to 12% moisture and based on 60 lb/bu test weight.

[2] Protein corrected to 14% moisture.

[3] For differences between varieties that are equal to or greater than the LSD value, the chance that the difference is significant is 90%.

[4] Coefficient of Variation (CV) indicates the quality of a trial, and lower than 15 indicates a high quality trial. For CV>15, there was higher than expected variability in the field or the data and the results should be used with caution.



SPRING WHEAT VARIETY AGRONOMIC AND SEED CHARACTERISTICS-2021 CHEYENNE, KIMBALL, AND RED WILLOW COUNTIES

Variety	Brand	Cheyenne	Kimball		Red Willow		
		Plant Height (in)	Test Weight (lb/bu)	Seed Weight (kernels/lb)	Test Weight (lb/bu)	Plant Height (in)	Seed Weight (kernels/lb)
AP Murdock	AgriPro-Syngenta	24.0	55.9	27290	59.1	25.3	20907
LCS Cannon	Limagrain Cereal Seeds	24.5	58.7	26407	59.8	25.5	20727
LCS Rebel	Limagrain Cereal Seeds	25.0	59.9	22726	59.5	25.8	20613
LCS Trigger	Limagrain Cereal Seeds	21.5	56.1	33778	61.0	25.3	18365
ND Frohberg	North Dakota Crop Improvement	24.5	-	29279	59.2	25.3	19365
ND Vitpro	North Dakota Crop Improvement	24.5	-	21335	59.0	25.8	19930
Prevail	SDSU	23.5	58.2	24102	59.5	25.8	22807
Surpass	SDSU	25.5	57.6	26391	58.3	25.8	23253
WB9590	WestBred	21.5	57.2	29688	56.2	26.0	20584
WB9606	WestBred	21.3	57.4	25377	60.7	25.8	19490
WB9707	WestBred	20.8	58.9	20127	60.5	26.5	16656
WB9719	WestBred	21.5	59.5	20934	58.4	25.5	18883
Mean performance of all entries in the trial.		23.2	57.9	25260	59.3	25.7	20132
Standard error		1.2	0.7	3054	1.0	0.4	1348
LSD [1]		2.0	1.1	5332	1.7	0.7	2283
Coefficient of variation [2]		5.0	1.1	11.9	1.7	1.7	6.7
Replicates		4	4	2	4	4	4

[1] For differences between varieties that are equal to or greater than the LSD value, the chance that the difference is significant is 90%.

[2] Coefficient of Variation (CV) indicates the quality of a trial, and lower than 15 indicates a high quality trial. For CV>15, there was higher than expected variability in the field or the data and the results should be used with caution.



UNIVERSITY OF NEBRASKA VARIETY TESTING PROGRAM

<http://cropwatch.unl.edu/varietytest>

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University of Nebraska-Lincoln Extension
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