

Introduction to the 2013 Colorado Spring Crop Variety Performance Trial Results

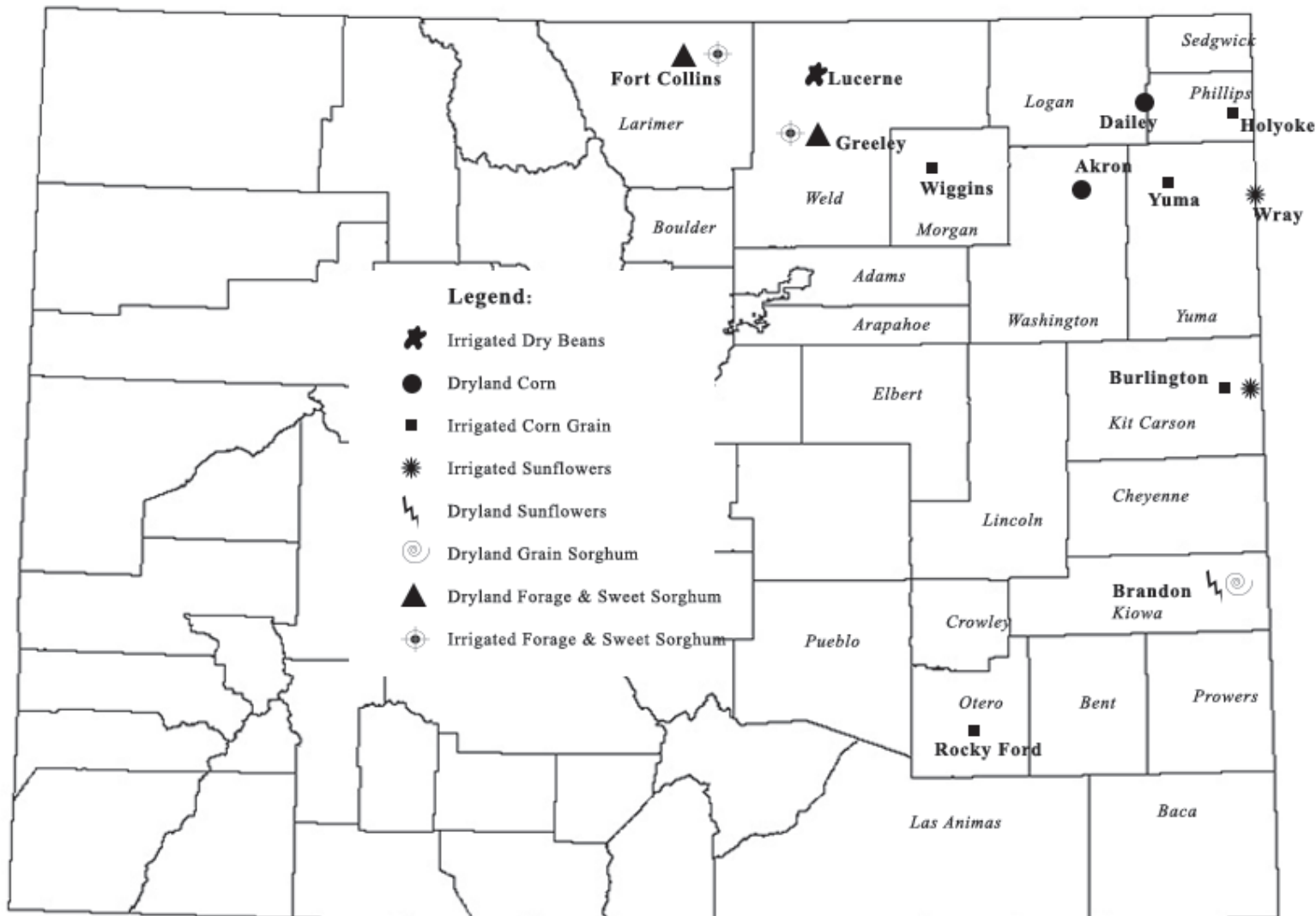
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The Colorado State University Crops Testing program annually collaborates with university breeding programs and seed companies to conduct crop performance trials to provide unbiased and reliable results to help Colorado crop producers make better variety decisions. These trials allow universities and seed companies to screen elite experimental lines for adaptability to diverse and variable Colorado cropping environments. Seed companies use results to make variety and hybrid marketing decisions. Some trials are also part of CSU's formal education efforts where graduate students are required to conduct thesis research, and training is provided to undergraduates as universities prepare the next generation of the world's plant breeders and agronomists. CSU extension agents and CSU Agriculture Experiment Station personnel participate in conducting these trials and use trial results to make agronomic and variety recommendations to Colorado crop producers.

This publication marks the seventh year that CSU spring crop performance trial results have been published by the High Plains Journal and we are thankful for their collaboration. Selected pinto bean, corn, sunflower, and grain and forage sorghum trial results are featured in the following tables. Please note that these tables are intended to be stand alone and self-explanatory. The complete set of 2013 crop performance trial results for each crop is available on the Crops Testing website at www.csucrops.com. Crop performance trial results for previous years are also available at the same site.

The map below provides the approximate location of these trials within eastern Colorado. Some of the trials are conducted on CSU Agricultural Experiment Stations and others in superior farmer fields. We are especially thankful to the collaborating farmers, whose names are provided at the bottom of each trial results table. They donate their land, time, and equipment so that all Colorado crop producers can benefit from these trial results. The trials are made possible with funding from seed company entry fees, funding from the Colorado Dry Bean Administrative Committee, the Colorado Sorghum Producers, and the Colorado Sunflower Administrative Committee.

2013 Colorado Crop Variety Performance Trial Locations



2013 Irrigated Dry Bean Variety Performance Trial at Lucerne

Variety	Source	Yield ^a lb/ac	Moisture percent	Seeds/pound count
CO 91216-15	Colorado State Univ.	2449	12.8	1173
La Paz	ProVita, Inc.	2416	12.5	1311
CO 90848-14	Colorado State Univ.	2233	11.0	1269
CO 91212-4	Colorado State Univ.	2193	15.3	1216
CO 92807	Colorado State Univ.	2128	11.1	1347
CO 92731	Colorado State Univ.	2122	14.5	1233
CO 91003-7	Colorado State Univ.	2100	12.3	1261
CO 91137-3	Colorado State Univ.	2089	12.3	1331
Croissant	Colorado State Univ.	2079	11.0	1339
GTS-904	Gentec Inc.	2055	13.2	1268
Mariah	Seminis	1982	10.9	1384
Medicine Hat	Seminis	1940	9.5	1297
ND-307	North Dakota State Univ.	1899	11.2	1224
Sinaloa	ProVita, Inc.	1881	10.7	1506
PIN-1314	Seminis	1869	10.2	1245
Montrose	Colorado State Univ.	1869	10.6	1413
Stampede	North Dakota State Univ.	1843	14.3	1261
Long's Peak	Colorado State Univ.	1842	13.1	1369
CO 91160-11	Colorado State Univ.	1840	11.9	1318
CO 86661-5	Colorado State Univ.	1780	11.2	1281
PIN-1012	Seminis	1688	9.7	1375
Windbreaker	Seminis	1615	9.8	1278
Bill Z	Colorado State Univ.	1610	9.6	1369
CO 97166-3	Colorado State Univ.	1551	13.1	1255
Othello	Washington State Univ.	1534	9.9	1380
Lariat	North Dakota State Univ.	1463	15.0	1261
GTS-907	Gentec Inc.	1413	9.7	1312
Average		1907	11.7	1306
^b LSD (P<0.30)		267		

^aYields corrected to 14% moisture.

^bIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is statistically significant.

Plot Size: 10' x 30'

Site Information

Cooperator: Steve Kelly
 Planting Date: 5/31/2013
 Harvest Date: 9/5/2013
 Previous Crop: Silage Corn
 Herbicides: Dual, Eptam, and Raptor
 Fertilizer: 20 lb/ac of N

2013 Irrigated Corn Hybrid Performance Trial at Burlington

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	2-Year		Relative Maturity ^c	Test		Plant		Lodging
			Yield ^b bu/ac	Avg. Yield bu/ac		Moisture percent	Weight lb/bu	Height in	Population plants/ac	
Dekalb	DKC62-97RIB	GENVT3PRIB, RR2	210.8	198.9	112	16.2	57.6	105	28,649	11.3
NuTech/G2 Genetics	5Z-709	INT, RR2, LL	208.8	-	109	16.6	57.8	107	31,654	17.0
LG Seeds	LG5550	VT3PRIB, RR2	207.1	-	106	14.2	53.3	103	30,478	6.8
NuTech/G2 Genetics	5H-610	HX, RR2, LL	206.7	-	110	16.1	58.0	114	31,145	14.0
Triumph	6754S	SSX, RR2, LL	201.3	-	107	16.9	56.1	110	33,067	5.9
Triumph	1217S	SSX, RR2, LL	200.1	175.7	112	15.9	56.8	108	33,024	14.4
Dekalb	DKC52-04	GENVT3PRIB, RR2	192.9	191.7	102	15.5	57.9	102	30,359	5.9
Dekalb	DKC53-56RIB	GENSSRIB, RR2, LL	192.5	-	103	15.0	57.7	101	31,363	3.9
Producers Hybrids	6318	STXRIB, RR2, LL	192.2	-	103	15.5	57.7	101	30,584	6.7
Mycogen	2G685	3000GT, GT, LL	191.4	-	109	14.9	55.6	103	30,071	22.0
Triumph	3465S	SSX, RR2, LL	187.8	-	104	16.5	56.8	105	29,881	2.5
Producers Hybrids	6424	VT3PRIB, RR2	186.3	162.3	104	13.4	53.7	103	31,145	19.1
Mycogen	2V709	RASS, RR2, LL	184.2	-	110	16.4	57.7	107	31,808	12.1
Dekalb	DKC49-29RIB	GENSSRIB, RR2, LL	181.7	-	99	14.9	57.7	101	30,788	7.0
Producers Hybrids	6394	VT3Pro, RR2	180.3	-	103	15.7	57.7	102	29,113	20.2
Producers Hybrids	6624	VT3PRIB, RR2	177.4	171.9	106	14.0	53.6	106	31,145	14.0
Producers Hybrids	6108	STXRIB, RR2, LL	177.1	-	101	15.7	57.4	101	30,419	20.6
Mycogen	2V676	SSX, RR2, LL	171.5	170.1	108	16.6	57.2	106	30,774	23.3
LG Seeds	LG2549	VT3PRIB, RR2	171.4	-	109	14.1	53.9	105	28,532	12.7
NuTech/G2 Genetics	5H-806	HX, RR2, LL	171.2	159.8	106	16.3	58.6	107	27,975	38.2
Producers Hybrids	6878	STXRIB, RR2, LL	170.2	-	108	16.2	57.6	108	30,434	25.3
Dekalb	DKC61-16RIB	GENSSRIB, RR2, LL	166.6	-	111	16.6	57.6	107	29,258	9.4
LG Seeds	LG5533	VT3Pro, RR2	166.5	-	107	14.5	56.1	104	29,462	50.5
NuTech/G2 Genetics	5H-707	HX, RR2, LL	166.3	-	107	15.9	57.7	107	30,347	17.8
LG Seeds	LG2602	VT3PRIB, RR2	165.0	-	112	15.7	54.8	108	30,002	22.3
Triumph	1366S	SSX, RR2, LL	159.2	-	114	17.8	54.8	103	30,347	48.2
Mycogen	2K757	HXT, RR2, LL	145.2	-	113	14.3	54.2	104	30,056	21.7
Average			182.6	175.8	107	15.6	56.5	105	30,440	17.5

^dLSD (P<0.30)

14.9

^aTechnology trait designations: 3000GT=Agrisure 3000GT; GENSSRIB=Genuity SmartStax Refuge in the Bag Complete; GENVT3PRIB=Genuity VecTran Triple Protection Refuge in the Bag Complete; GT=Glyphosate tolerant; HX=Herculex 1; HXT=Herculex XTRA; INT=Optimum Intrasect; LL=LibertyLink; RASS=Refuge Advanced by SmartStax (Refuge in the Bag); RR2=Roundup Ready 2; SSX=SmartStax; STXRIB=Genuity SmartStax Refuge in the Bag Complete; VT3PRIB=Genuity VecTran Triple Protection Refuge in the Bag Complete; VT3Pro=Genuity VecTran Triple Protection.

^bYields corrected to 15.5% moisture.

^cRelative maturity is provided by the respective companies and is the approximate time from planting to harvest maturity. The method of calculation of the relative maturity ratings may vary among companies.

^dIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is significant.

Plot size: 5' x 30'

Site Information

Collaborator: Tim Stahlecker
 Planting Date: 5/8/2013
 Harvest Date: 10/30/2013
 Previous Crop: Corn
 Fertilizer: Nitrogen at 200, phosphorus at 60, sulfur at 10, and zinc at 1 lb/ac
 Herbicide: Halex GT
 Insecticide: Brigade and methilate

2013 Irrigated Corn Hybrid Performance Trial at Holyoke

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b bu/ac	2-Year	Relative	Moisture percent	Test Weight lb/bu	Plant Height in	Population plants/ac	Lodging percent
				Avg. Yield bu/ac	Maturity ^c					
Producers Hybrids	7268	STXRIB, RR2, LL	255.2	-	112	16.8	59.3	104	30,855	0.9
NuTech/G2 Genetics	5H-805	HX, RR2, LL	253.6	-	105	16.3	60.2	112	31,821	0.0
NuTech/G2 Genetics	5H-399	HX, RR2, LL	253.3	-	99	13.7	57.4	108	32,730	1.4
NuTech/G2 Genetics	5H-202	HX, RR2, LL	248.6	196.2	102	13.9	61.3	110	32,302	2.8
Mycogen	2V709	RASS, RR2, LL	243.6	-	110	15.9	59.3	106	31,652	0.5
NuTech/G2 Genetics	5H-905	HX, RR2, LL	241.1	-	105	14.0	58.2	110	32,345	0.9
Dekalb	DKC61-16RIB	GENSSRIB, RR2, LL	239.9	-	111	15.0	59.1	110	31,932	1.2
Dekalb	DKC63-07RIB	GENVT3PRIB, RR2	238.0	208.3	113	15.4	60.2	103	31,486	2.3
NuTech/G2 Genetics	3F-198	AM, RR2, LL	237.5	-	98	13.0	56.1	105	30,432	1.2
Triumph	6754S	SSX, RR2, LL	237.2	-	107	16.2	57.5	112	31,744	0.7
Dekalb	DKC52-04	GENVT3PRIB, RR2	237.1	220.5	102	13.5	59.0	103	31,654	0.2
Dekalb	DKC62-97RIB	GENVT3PRIB, RR2	235.3	219.5	112	13.8	59.2	103	30,056	0.2
Triumph	5423S	SSX, RR2, LL	234.6	-	104	15.1	58.6	109	32,136	0.0
Triumph	9946S	SSX, RR2, LL	232.8	211.5	100	13.8	58.2	111	31,467	0.2
NuTech/G2 Genetics	5H-502	HX, RR2, LL	228.3	203.7	102	14.6	59.9	107	28,851	0.8
Mycogen	2G685	3000GT, GT, LL	225.1	-	109	13.6	57.3	107	32,878	3.3
Mycogen	2R549	RASS, RR2, LL	224.7	-	104	15.2	58.0	110	31,347	0.4
Producers Hybrids	7224	VT3PRIB, RR2	224.6	-	112	13.6	56.4	110	30,459	2.0
Producers Hybrids	6108	STXRIB, RR2, LL	220.5	-	101	13.4	59.2	104	31,070	2.9
NuTech/G2 Genetics	5Z-200	INT, RR2, LL	217.9	-	100	13.4	58.5	103	31,245	1.7
Dekalb	DKC53-56RIB	GENSSRIB, RR2, LL	215.7	-	103	13.6	59.0	106	31,258	0.4
LG Seeds	LG5579	VT3Pro, RR2	215.6	-	109	12.7	56.3	112	31,518	2.1
LG Seeds	LG2602	VT3PRIB, RR2	208.1	-	112	13.0	55.1	112	30,703	1.0
Triumph	9865S	SSX, RR2, LL	202.6	-	98	13.8	57.5	104	32,597	1.2
LG Seeds	LG5524	VT3Pro, RR2	200.0	-	105	13.1	56.9	112	30,950	0.7
Mycogen	2K757	HXT, RR2, LL	198.8	172.9	113	12.7	55.4	105	31,594	2.2
Triumph	3465S	SSX, RR2, LL	196.3	-	104	14.7	57.3	105	29,984	0.7
LG Seeds	LG2549	VT3PRIB, RR2	196.2	-	109	14.1	56.6	105	28,192	0.8
Triumph	9331S	SSX, RR2, LL	186.7	-	92	12.9	57.2	103	30,868	0.8
Average			225.8	204.7	105	14.2	58.1	107	31,246	1.2

^dLSD (P<0.30)

12.3

^aTechnology trait designations: 3000GT=Agrisure 3000GT; AM=Optimum AcreMax; GENSSRIB=Genuity SmartStax Refuge in the Bag Complete; GENVT3PRIB=Genuity VecTran Triple Protection Refuge in the Bag Complete; GT=Glyphosate tolerant; HX=Herculex 1; HXT=Herculex XTRA; INT=Optimum Intrasect; LL=LibertyLink; RASS=Refuge Advanced by SmartStax (Refuge in the Bag); RR2=Roundup Ready 2; SSX=SmartStax; STXRIB=Genuity SmartStax Refuge in the Bag Complete; VT3PRIB=Genuity VecTran Triple Protection Refuge in the Bag Complete; VT3Pro=Genuity VecTran Triple Protection.

^bYields corrected to 15.5% moisture.

^cRelative maturity is provided by the respective companies and is the approximate time from planting to harvest maturity. The method of calculation of the relative maturity ratings may vary among companies.

^dIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is significant.

Plot size: 5' x 30'

Site Information

Collaborator: Brent Adler
 Planting Date: 5/5/2013
 Harvest Date: 11/2/2013
 Fertilizer: Nitrogen at 240, phosphorus at 75, potassium at 80, sulfur at 40, and zinc at 1.5 lb/ac
 Herbicide: Roundup PowerMax, Status, and Parallel
 Insecticide: Lorsban, Brigade, and dimethoate
 Fungicide: Quilt

2013 Irrigated Corn Hybrid Performance Trial at Rocky Ford

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b		2-Year Avg. Yield	Relative Maturity ^c	Moisture	Test Weight	Plant Height	Silk Date	Population
			bu/ac	bu/ac							
LG Seeds	LG5618	STX, RR2, LL	224.3	-	112	15.3	58.8	96	71	30,539	
Dekalb	DKC64-69RIB	GENVT3PRIB, RR2	220.0	236.1	114	14.7	59.4	98	70	30,820	
Triumph	1366S	SSX, RR2, LL	212.8	236.8	114	17.0	57.4	98	75	30,445	
Triumph	1375S	SSX, RR2, LL	212.1	-	114	15.0	57.8	100	72	31,757	
Dekalb	DKC63-07RIB	GENVT3PRIB, RR2	208.2	235.9	113	13.9	58.4	98	69	29,696	
Triumph	1329S	SSX, RR2, LL	207.6	231.6	113	15.0	57.2	100	71	29,696	
Producers Hybrids	7268	STXRIB, RR2, LL	207.0	-	112	15.2	58.1	96	71	29,977	
LG Seeds	LG2642	VT3PRIB, RR2	202.1	232.0	115	14.7	57.6	96	69	30,070	
Producers Hybrids	7574	VT3PRIB, RR2	194.6	-	115	13.8	57.1	98	70	30,445	
LG Seeds	LG2636	VT3PRIB, RR2	191.1	227.4	114	14.3	57.6	97	70	29,977	
LG Seeds	LG2602	VT3PRIB, RR2	186.6	213.5	112	13.7	56.2	102	71	31,101	
Dekalb	DKC61-88RIB	GENVT3PRIB, RR2	180.8	-	111	13.2	57.1	103	71	32,038	
Producers Hybrids	7224	VT3PRIB, RR2	167.6	-	112	13.7	56.8	101	71	30,539	
Dekalb	DKC63-33RIB	GENSSRIB, RR2, LL	162.1	-	113	13.2	57.1	100	71	30,726	
Dekalb	DKC61-16RIB	GENSSRIB, RR2, LL	161.3	-	111	12.3	56.4	97	70	29,602	
Average			195.9	230.5	113	14.3	57.5	99	71	30,495	

^dLSD (P<0.30)

12.5

^aTechnology trait designations: GENSSRIB=Genuity SmartStax Refuge in the Bag Complete; GENVT3PRIB=Genuity VecTran Triple Protection Refuge in the Bag Complete; LL=LibertyLink; RR2=Roundup Ready 2; SSX=SmartStax; STX=Genuity SmartStax Refuge in the Bag Complete; STXRIB=Genuity SmartStax Refuge in the Bag Complete; VT3PRIB=Genuity VecTran Triple Protection Refuge in the Bag Complete.

^bYields corrected to 15.5% moisture.

^cRelative maturity is provided by the respective companies and is the approximate time from planting to harvest maturity. The method of calculation of the relative maturity ratings may vary among companies.

^dIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is significant.

Plot size: 5' x 31'

Site Information

Collaborators: Arkansas Valley Research Center
 Planting Date: 5/6/2013
 Harvest Date: 10/13/2013
 Previous Crop: Winter canola (failed) and winter wheat in 2012
 Fertilizer: 130 lb/ac of nitrogen (applied as 82-0-0) on 6/26/13 and an additional 100 lb/ac (applied as 46-0-0) in February
 Herbicide: 4 oz/ac of Status on 5/30/13 and 32 oz/ac of Buccaneer Plus on 5/30/13
 Insecticide: 54 oz/ac of Comite II applied on 7/5/13 and 6.4 oz/ac of Brigade 2EC applied on 8/10/13
 Irrigation: Furrow
 Soil Type: Rocky Ford silty clay loam

2013 Irrigated Corn Hybrid Performance Trial at Wiggins

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b bu/ac	Relative Maturity ^c	Test		Plant	
					Moisture percent	Weight lb/bu	Height in	Population plants/ac
NuTech/G2 Genetics	5H-805	HX, RR2, LL	210.4	105	15.7	60.2	96	32,750
Producers Hybrids	6394	VT3Pro, RR2	207.6	103	13.2	57.7	88	34,052
NuTech/G2 Genetics	5H-905	HX, RR2, LL	207.4	105	13.8	57.3	92	36,227
NuTech/G2 Genetics	5Z-200	INT, RR2, LL	201.0	100	13.5	58.0	86	32,189
Producers Hybrids	6108	STXRIB, RR2, LL	198.3	101	13.3	58.9	89	32,808
Dekalb	DKC52-04	GENVT3PRIB, RR2	196.5	102	13.3	58.4	88	32,524
NuTech/G2 Genetics	5H-502	HX, RR2, LL	195.1	102	13.8	59.7	93	31,548
LG Seeds	LG5499	STXRIB, RR2, LL	193.4	100	13.3	58.3	88	32,691
NuTech/G2 Genetics	5H-202	HX, RR2, LL	192.5	102	13.5	59.5	89	33,541
Triumph	5425S	SSX, RR2, LL	192.3	106	14.8	57.4	99	35,574
Mycogen	2Y479	RASS, RR2, LL	189.3	98	14.0	57.5	93	37,360
Triumph	9865S	SSX, RR2, LL	184.9	98	13.7	57.2	93	35,524
LG Seeds	LG5524	VT3Pro, RR2	183.8	105	12.8	54.8	90	31,243
Triumph	5423S	SSX, RR2, LL	182.9	104	13.4	57.7	92	30,971
Mycogen	2R549	RASS, RR2, LL	182.8	104	13.5	57.5	91	30,793
Triumph	3465S	SSX, RR2, LL	181.4	104	14.2	57.7	88	31,667
LG Seeds	LG5522	VT3Pro, RR2	178.3	103	12.8	54.2	94	32,367
Dekalb	DKC53-56RIB	GENSSRIB, RR2, LL	174.2	103	13.1	57.8	88	31,585
Dekalb	DKC49-29RIB	GENSSRIB, RR2, LL	172.7	99	13.1	57.2	87	31,635
LG Seeds	LG5470	STXRIB, RR2, LL	172.0	98	13.0	57.0	87	32,431
NuTech/G2 Genetics	5H-399	HX, RR2, LL	171.3	99	12.7	54.6	87	33,496
Mycogen	2A557	RASS, RR2, LL	171.1	103	12.6	57.8	92	32,379
NuTech/G2 Genetics	3F-198	AM, RR2, LL	167.6	98	12.7	54.9	89	32,555
Producers Hybrids	5898	STXRIB, RR2, LL	167.4	98	12.9	56.7	88	31,754
Mycogen	2T498	RASS, RR2, LL	167.0	100	12.7	56.4	85	31,787
Dekalb	DKC46-20RIB	GENVT3PRIB, RR2	165.3	96	12.9	57.9	83	32,723
Triumph	9946S	SSX, RR2, LL	162.5	100	12.9	57.1	88	31,335
Average			184.0	101	13.4	57.4	90	32,797

^dLSD (P<0.30)

11.5

^aTechnology trait designations: AM=Optimum AcreMax; GENSSRIB=Genuity SmartStax Refuge in the Bag Complete; GENVT3PRIB=Genuity VecTran Triple Protection Refuge in the Bag Complete; HX=Herculex 1; INT=Optimum IntraSect; LL=LibertyLink; RASS=Refuge Advanced by SmartStax (Refuge in the Bag); RR2=Roundup Ready 2; SSX=SmartStax; STXRIB=Genuity SmartStax Refuge in the Bag Complete; VT3Pro=Genuity VecTran Triple Protection.

^bYields corrected to 15.5% moisture.

^cRelative maturity is provided by the respective companies and is the approximate time from planting to harvest maturity. The method of calculation of the relative maturity ratings may vary among companies.

^dIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is significant.

Plot size: 5' x 30'

Site Information

Collaborator: Cooksey Farms

Planting Date: 5/7/2013

Harvest Date: 11/1/2013

Previous Crop: Corn

Fertilizer: Pre-plant: Nitrogen and phosphorus at 100 and 24 lb/ac; Starter fert.(planting): nitrogen at 20, phosphorus at 18, potassium at 4.5, sulfur at 4.5, and Zinc at 1 lb/ac; Mid-season: nitrogen at 90, potassium at 10, and sulfur at 10 lb/ac

Herbicide: Makaze and Widematch

2013 Irrigated Corn Hybrid Performance Trial at Yuma

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b bu/ac	Relative Maturity ^c	Moisture percent	Test Weight lb/bu	Plant Height in	Population plants/ac	Lodging percent
NuTech/G2 Genetics	5H-905	HX, RR2, LL	248.5	105	16.1	56.3	111	33,221	1.1
Dekalb	DKC62-97RIB	GENVT3PRIB, RR2	245.9	112	18.7	58.3	107	30,242	7.8
NuTech/G2 Genetics	5H-805	HX, RR2, LL	245.0	105	17.8	58.3	110	31,563	3.0
Producers Hybrids	7268	STXRIB, RR2, LL	241.8	112	22.7	56.4	103	31,145	0.5
Dekalb	DKC63-07RIB	GENVT3PRIB, RR2	241.0	113	19.9	58.5	105	31,291	5.4
Triumph	6754S	SSX, RR2, LL	239.8	107	19.4	55.3	111	31,137	5.3
Mycogen	2R549	RASS, RR2, LL	238.7	104	18.8	56.4	110	32,575	3.2
NuTech/G2 Genetics	5H-502	HX, RR2, LL	236.4	102	17.4	58.7	108	31,121	1.4
Producers Hybrids	6108	STXRIB, RR2, LL	234.2	101	17.2	57.8	103	31,348	14.4
Mycogen	2V709	RASS, RR2, LL	231.4	110	20.2	56.3	112	31,847	18.5
Producers Hybrids	6734	VT3Pro, RR2	230.3	107	16.7	57.9	110	31,987	15.1
NuTech/G2 Genetics	5H-399	HX, RR2, LL	230.0	99	16.4	56.8	105	31,145	29.7
Mycogen	2V676	SSX, RR2, LL	226.8	108	18.3	56.9	111	31,654	11.6
Triumph	1217S	SSX, RR2, LL	226.6	112	20.7	56.4	111	32,234	14.8
NuTech/G2 Genetics	5H-202	HX, RR2, LL	224.3	102	17.4	60.4	112	31,073	12.3
Dekalb	DKC61-16RIB	GENSSRIB, RR2, LL	222.2	111	18.5	56.6	107	32,591	1.3
NuTech/G2 Genetics	3F-198	AM, RR2, LL	221.6	98	14.7	55.7	109	30,668	2.9
Producers Hybrids	6394	VT3Pro, RR2	220.9	103	17.5	58.9	103	30,699	19.9
Mycogen	2G685	3000GT, GT, LL	220.7	109	17.7	56.2	107	31,920	28.6
LG Seeds	LG5524	VT3Pro, RR2	220.0	105	16.9	54.9	111	31,705	1.2
Dekalb	DKC52-04	GENVT3PRIB, RR2	219.2	102	16.8	58.5	102	30,419	19.2
LG Seeds	LG5579	VT3Pro, RR2	215.5	109	16.0	55.6	110	31,920	20.5
NuTech/G2 Genetics	5Z-200	INT, RR2, LL	214.1	100	16.2	58.2	104	31,696	1.2
LG Seeds	LG2602	VT3PRIB, RR2	213.6	112	15.9	54.2	113	31,436	16.2
Triumph	3465S	SSX, RR2, LL	211.9	104	18.5	55.7	105	30,755	1.7
Triumph	1157S	SSX, RR2, LL	211.5	111	17.7	56.7	111	31,987	19.1
LG Seeds	LG2549	VT3PRIB, RR2	210.0	109	17.1	54.1	107	29,702	13.1
Dekalb	DKC53-56RIB	GENSSRIB, RR2, LL	208.5	103	17.6	57.3	103	31,062	18.2
Average			226.8	106	17.8	56.9	108	31,434	11.0

^dLSD (P<0.30)

11.6

^aTechnology trait designations: 3000GT=Agrisure 3000GT; AM=Optimum AcreMax; GENSSRIB=Genuity SmartStax Refuge in the Bag Complete; GENVT3PRIB=Genuity VecTran Triple Protection Refuge in the Bag Complete; GT=Glyphosate tolerant; HX=Herculex 1; INT=Optimum Intrasect; LL=LibertyLink; RASS=Refuge Advanced by SmartStax (Refuge in the Bag); RR2=Roundup Ready 2; SSX=SmartStax; STXRIB=Genuity SmartStax Refuge in the Bag Complete; VT3PRIB=Genuity VecTran Triple Protection Refuge in the Bag Complete; VT3Pro=Genuity VecTran Triple Protection.

^bYields corrected to 15.5% moisture.

^cRelative maturity is provided by the respective companies and is the approximate time from planting to harvest maturity. The method of calculation of the relative maturity ratings may vary among companies.

^dIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is significant.

Plot size: 5' x 30'

Site Information

Collaborator: Larry Gardner
 Planting Date: 5/6/2013
 Harvest Date: 10/25/2013
 Previous Crop: Corn
 Fertilizer: Nitrogen at 65, sulfur at 7.5, and zinc at 7.5 lb/ac
 Herbicide: Roundup
 Fungicide: Quilt

2013 Dryland Corn Hybrid Performance Trial at Akron

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b bu/ac	Relative Maturity ^c	Test		Ear		Lodging percent
					Moisture percent	Weight lb/bu	Height in	Population plants/ac	
Dekalb	DKC43-10RIB	GENVT2PRIB, RR2	53.3	93	11.9	56.8	27	13,319	3.6
NuTech/G2 Genetics	5H-707	HX, RR2, LL	42.2	107	12.2	55.9	27	12,774	0.6
Dekalb	DKC46-17RIB	GENVT2PRIB, RR2	39.7	96	12.3	59.4	29	13,993	1.3
NuTech/G2 Genetics	5Z-200	INT, RR2, LL	39.5	100	12.1	56.4	30	13,004	0.8
Triumph	9331S	SSX, RR2, LL	39.1	92	11.8	57.7	25	13,354	0.5
NuTech/G2 Genetics	5X-698	HXT, RR2, LL	36.2	98	12.1	56.7	26	12,596	0.9
NuTech/G2 Genetics	5H-905	HX, RR2, LL	33.4	105	11.8	53.3	31	13,411	0.3
NuTech/G2 Genetics	5F-008	AM, RR2, LL	26.4	108	12.5	54.7	29	13,120	1.6
Triumph	9865S	SSX, RR2, LL	23.3	98	13.1	57.8	27	12,940	0.3
Average			37.0	100	12.2	56.5	28	13,168	1.1

^dLSD (P<0.30)

4.7

^aTechnology trait designations: AM=Optimum AcreMax; GENVT2PRIB=Genuity VecTran Double Protection Refuge in the Bag Complete; HX=Herculex 1; HXT=Herculex XTRA; INT=Optimum Intrasect; LL=LibertyLink; RR2=Roundup Ready 2; SSX=SmartStax.

^bYields corrected to 15.5% moisture.

^cRelative maturity is provided by the respective companies and is the approximate time from planting to harvest maturity. The method of calculation of the relative maturity ratings may vary among companies.

^dIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is significant.

Plot size: 10' x 31'

Site Information

Collaborators: USDA-ARS Central Great Plains Research Station
 Planting Date: 5/14/2013
 Harvest Date: 11/7/2013
 Fertilizer: Nitrogen applied at 50 lb/ac on 5/16/13
 Herbicide: Lumax applied at 2 qt/ac on 5/16/13
 Tillage: No-till
 Soil Type: Weld silt loam

2013 Dryland Corn Hybrid Performance Trial at Dailey

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b bu/ac	Relative Maturity ^c	Moisture percent	Test Weight lb/bu	Ear Height in	Population plants/ac
NuTech/G2 Genetics	5Z-200	INT, RR2, LL	47.4	100	10.3	51.1	29	17,173
NuTech/G2 Genetics	5H-707	HX, RR2, LL	45.9	107	11.1	51.9	28	16,819
Dekalb	DKC46-17RIB	GENVT2PRIB, RR2	45.2	96	10.8	53.9	33	16,929
Dekalb	DKC43-10RIB	GENVT2PRIB, RR2	43.2	93	10.4	52.9	30	16,886
NuTech/G2 Genetics	5X-698	HXT, RR2, LL	42.0	98	10.4	52.6	34	16,405
Triumph Seed	9331S	SSX, RR2, LL	38.9	92	10.4	51.6	28	17,457
NuTech/G2 Genetics	5H-905	HX, RR2, LL	35.3	105	11.8	50.8	32	17,176
Triumph Seed	9865S	SSX, RR2, LL	34.5	98	13.3	51.5	32	17,354
NuTech/G2 Genetics	5F-008	AM, RR2, LL	27.5	108	13.2	52.2	29	16,931
Average			40.0	100	11.3	52.1	30	17,014

^dLSD (P<0.30)

4.7

^aTechnology trait designations: AM=Optimum AcreMax; GENVT2PRIB=Genuity VecTran Double Protection Refuge in the Bag Complete; HX=Herculex 1; HXT=Herculex XTRA; INT=Optimum Intrasect; LL=LibertyLink; RR2=Roundup Ready 2; SSX=SmartStax.

^bYields corrected to 15.5% moisture.

^cRelative maturity is provided by the respective companies and is the approximate time from planting to harvest maturity. The method of calculation of the relative maturity ratings may vary among companies.

^dIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is significant.

Plot size: 10' x 31'

Site Information

Collaborators: Mark & Neal Lambert
 Planting Date: 5/15/2013
 Harvest Date: 10/8/2013
 Tillage: No-till
 Fertilizer: Pre-plant: Composted manure applied at 1.5 tons/ac; Planting: Nitrogen at 18 and phosphorus at 48 lb/ac
 Herbicide: Roundup PowerMax and atrazine
 Soil Type: Haxtun sandy loam

2013 Irrigated Oil Sunflower Hybrid Performance Trial at Burlington

Brand	Hybrid	Yield ^a	Moisture	Test Weight	Plant Height	Population	Lodging	Oil Content
		lb/ac	percent	lb/bu	in	plants/ac	percent	percent
Croplan	13-652 CL	2526	7.2	26.2	61	19,204	4.3	39.4
Nuseed/Seeds 2000	NLK12M008	2447	7.9	30.3	65	21,954	9.0	40.9
Triumph	662	2381	7.2	28.6	53	19,083	12.9	39.3
Mycogen	8N510	2340	7.1	28.5	48	19,354	13.3	38.4
Triumph	s673	2304	7.1	28.1	49	23,284	10.1	41.6
Syngenta	3845 HO	2285	6.9	29.7	52	17,273	13.0	41.7
Triumph	s668	2233	7.3	29.0	42	19,772	17.1	41.6
Triumph	849CLD	2228	7.3	31.0	50	20,297	6.8	41.8
Croplan	13-59 CL	2222	8.1	29.9	59	19,298	13.3	40.0
Triumph	TRXs12435CP	2200	8.8	26.6	47	19,764	4.1	41.3
Mycogen	8N668S	2192	7.5	29.3	45	22,612	10.3	41.3
Triumph	651CLD	2182	6.8	29.4	58	21,483	9.0	39.7
Nuseed/Seeds 2000	HORNET	2055	7.3	28.5	61	22,894	8.7	40.3
Triumph	s870CL	2031	7.4	29.2	45	22,735	5.3	41.6
Croplan	559 CL	2026	7.3	29.3	57	18,737	30.6	38.4
Mycogen	8H449CLDM	2017	7.4	30.8	48	18,822	6.0	39.5
Nuseed/Seeds 2000	Torino	1975	7.6	29.9	60	20,259	14.1	39.7
Mycogen	8N421CLDM	1932	7.1	28.8	62	18,187	13.5	39.0
Syngenta	3733 NS/DM	1897	6.9	29.8	53	17,148	21.0	40.0
Croplan	460 E	1854	7.2	27.3	56	16,460	21.8	41.4
Croplan	548 CL	1838	7.1	30.3	57	16,701	7.3	37.0
Nuseed/Seeds 2000	Falcon	1806	6.8	29.3	49	20,729	7.2	39.2
Croplan	13-08 E	1787	7.9	25.3	55	17,696	10.0	29.6
Nuseed/Seeds 2000	Camaro II	1686	7.3	31.1	60	20,558	10.9	39.9
Croplan	13-86 E	1582	7.1	29.8	58	18,909	8.4	40.7
Croplan	13-52 E	1582	7.1	29.4	57	16,110	18.8	40.4
Syngenta	3158 NS/CL/DM	1519	7.5	29.9	54	19,527	18.6	38.6
Nuseed/Seeds 2000	Cobalt II	1460	7.5	29.5	54	21,819	6.7	39.0
Croplan	432 E	1415	7.5	29.5	56	21,916	10.2	33.8
Average		2000	7.4	29.1	54	19,744	11.8	39.5

^bLSD (P<0.30)

262

^aYields were corrected to 10% moisture.

^bIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is statistically significant.

Plot size: 5' x 31'

Site Information

Collaborator: Gerhard Heintges
 Planting Date: 6/3/2013
 Harvest Date: 10/16/2013
 Fertilizer: Nitrogen at 110 lb/ac and phosphorus at 25 lb/ac
 Herbicide: Spartan applied at 3.2 oz/ac and Select applied post-emerge at 6 oz/ac
 Insecticide: Warrior II applied at 1.25 oz/ac on 8/5/13 and 8/23/13

2013 Irrigated Confection Sunflower Hybrid Performance Trial at Burlington

Brand	Hybrid	Yield ^a	Moisture	Test Weight	Plant Height	Population	Lodging	Seed Size							
								Over 24/64	Over 23/64	Over 22/64	Over 21/64	Over 20/64	Over 19/64	Over 16/64	Through 16/64
		lb/ac	percent	lb/bu	in	plants/ac	percent	percent							
Red River Commodities	RRC 2215	2191	10.0	19.4	66	14,434	7.9	28.6	20.6	23.0	14.2	7.0	3.4	1.8	1.4
Red River Commodities	RRC 2215 CL	2191	10.7	18.2	69	15,154	8.6	29.2	20.2	15.0	16.2	8.8	6.4	3.6	0.6
Sunopta/Dahlgren	9506CL	2166	9.7	18.0	82	15,335	19.0	47.2	18.8	13.8	7.4	3.8	5.0	3.6	0.4
Triumph	751CP	2122	10.3	17.7	67	16,419	6.6	35.8	17.0	13.8	15.6	6.2	6.4	3.8	1.4
Triumph	770CL	2118	10.1	19.0	74	14,973	9.5	47.4	18.4	9.2	7.6	4.0	7.6	4.8	1.0
Nuseed Global	NHW12717	2107	9.6	20.6	77	14,988	12.5	3.6	2.2	2.4	2.2	5.2	15.6	61.4	7.4
Sunopta/Dahlgren	9530CL	2084	10.0	19.1	61	15,009	7.3	31.8	22.8	14.8	11.6	6.0	8.8	2.8	1.4
Nuseed Global	5009	2074	9.7	19.8	58	14,953	10.2	2.0	5.2	8.2	18.4	18.0	27.0	19.8	1.4
Red River Commodities	RRC 2217	2047	9.0	18.3	67	14,411	15.5	18.6	17.6	21.8	20.4	7.2	7.4	5.0	2.0
Mycogen	8C451CP	2029	9.4	17.5	60	14,110	13.1	24.6	17.6	16.4	14.6	8.0	9.2	7.8	1.8
Red River Commodities	RRC 8015	2028	9.2	16.9	60	13,115	14.5	14.8	17.4	15.0	22.8	12.6	10.4	6.0	1.0
Nuseed/Seeds 2000	Jaguar	1988	9.7	18.2	54	16,740	6.7	25.4	22.4	19.4	15.8	7.4	4.0	4.0	1.6
Nuseed Global	X98578	1939	10.1	16.4	67	15,738	8.0	22.4	13.4	16.6	18.8	9.8	11.8	6.0	1.2
Sunopta/Dahlgren	9579	1927	9.7	16.6	66	14,392	14.6	14.4	16.0	13.8	26.4	14.6	10.2	3.6	1.0
Nuseed/Seeds 2000	X4334	1875	11.9	17.0	63	15,447	9.8	49.0	15.4	12.8	8.2	2.4	3.8	6.8	1.6
Sunopta/Dahlgren	9521	1811	9.5	19.1	72	14,088	3.8	38.6	18.4	15.2	12.4	5.8	4.8	3.6	1.2
Nuseed/Seeds 2000	Jaguar XL	1800	17.2	16.8	73	16,226	9.8	13.4	10.0	12.2	19.4	12.6	17.2	12.8	2.4
Sunopta/Dahlgren	9592CL+	1795	10.2	17.6	66	16,469	11.9	28.8	18.4	14.4	16.2	7.2	8.0	5.8	1.2
Triumph	TRX3412C	1794	10.4	18.0	78	14,973	9.4	19.2	16.2	18.0	17.8	10.2	9.2	7.6	1.8
Nuseed Global	NHW12703	1764	11.9	18.6	85	15,039	11.8	4.0	3.6	6.4	12.8	16.2	24.0	32.0	1.0
Nuseed Global	NHW11914	1715	10.8	18.2	67	15,419	11.2	7.6	6.2	7.2	17.6	14.4	24.2	20.2	2.6
Nuseed/Seeds 2000	Jaguar II	1686	10.1	18.4	56	14,680	11.1	24.8	18.4	13.8	10.8	6.8	10.8	11.8	2.8
Nuseed Global	NHW10403	1666	9.5	17.5	66	15,413	12.6	19.2	11.4	15.0	23.2	11.0	11.4	2.4	6.4
Nuseed Global	NHW11915	1637	15.5	18.4	77	13,458	10.4	4.8	4.4	4.6	9.4	9.2	22.4	40.0	5.2
Triumph	755C	1617	9.8	17.9	83	15,352	10.3	25.6	17.2	12.6	20.8	9.8	7.6	5.0	1.4
Nuseed/Seeds 2000	NSK12M048	1495	12.4	15.9	71	13,157	11.7	69.4	9.0	6.0	5.8	3.6	3.0	2.0	1.2
Nuseed Global	X3939	1337	9.6	18.5	63	15,786	11.6	6.8	5.4	5.8	9.8	11.4	23.4	33.8	3.6
Average		1889	10.6	18.1	68	15,010	10.7	24.3	14.2	12.9	14.7	8.9	11.2	11.8	2.1

^bLSD (P<0.30)

187

^aYields were corrected to 10% moisture.

^bIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is statistically significant.

Plot size: 5' x 30'

Site Information

Collaborator: Gerhard Heintges
 Planting Date: 6/3/2013
 Harvest Date: 10/17/2013
 Fertilizer: Nitrogen at 110 lb/ac and phosphorus at 25 lb/ac
 Herbicide: Spartan applied at 3.2 oz/ac and Select applied post-emerge at 6 oz/ac
 Insecticide: Warrior II applied at 1.25 oz/ac on 8/5/13 and 8/23/13

2013 Irrigated Oil Sunflower Hybrid Performance Trial at Wray

Brand	Hybrid	Yield ^a	Test		Plant		Lodging	Oil Content
			Moisture	Weight	Height	Population		
		lb/ac	percent	lb/bu	in	plants/ac	percent	percent
Syngenta	3845 HO	2969	5.8	30.2	59	19,063	7.9	40.9
Mycogen	8N510	2957	6.2	29.4	59	20,187	1.8	37.6
Croplan	13-59 CL	2957	7.9	32.3	65	20,750	8.1	38.7
Triumph	662	2924	6.2	29.0	61	20,609	5.8	37.5
Mycogen	8H449CLDM	2921	6.5	33.8	62	19,355	4.5	40.1
Triumph	849CLD	2902	6.5	31.9	62	20,667	4.5	40.1
Croplan	432 E	2884	6.4	30.8	60	18,829	4.5	36.4
Nuseed/Seeds 2000	NLK12M008	2874	7.0	31.9	59	21,921	21.9	40.2
Triumph	651CLD	2835	6.4	31.3	67	21,780	5.4	38.6
Croplan	13-86 E	2831	6.3	30.5	57	21,921	5.1	41.3
Mycogen	8N421CLDM	2740	6.5	31.0	69	20,448	5.8	38.2
Croplan	13-52 E	2642	5.9	30.5	61	21,719	7.3	40.4
Nuseed/Seeds 2000	Camaro II	2599	6.6	32.7	69	21,428	3.6	38.3
Syngenta	3158 NS/CL/DM	2582	6.6	29.8	60	19,015	8.1	38.2
Triumph	s673	2539	6.3	29.7	54	18,853	18.8	39.5
Nuseed/Seeds 2000	Falcon	2464	6.6	31.6	64	19,438	5.9	37.6
Nuseed/Seeds 2000	HORNET	2432	6.6	30.3	66	19,953	10.1	39.5
Croplan	548 CL	2392	6.2	30.5	61	18,750	6.4	37.4
Syngenta	3733 NS/DM	2348	6.4	30.3	64	21,124	10.6	37.7
Mycogen	8N668S	2288	7.1	31.5	59	20,058	10.5	38.6
Croplan	559 CL	2286	6.2	31.4	70	20,000	11.3	38.6
Croplan	13-08 E	2175	7.4	28.4	68	14,322	2.1	37.0
Nuseed/Seeds 2000	Torino	2156	6.9	31.4	67	19,906	9.0	39.0
Triumph	s668	2153	6.8	31.5	48	18,565	10.6	39.7
Triumph	s870CL	2114	6.1	31.2	54	18,743	6.5	39.7
Croplan	460 E	2093	6.3	28.1	70	21,602	13.6	40.5
Croplan	13-652 CL	1993	6.3	28.5	70	19,860	18.4	37.5
Nuseed/Seeds 2000	Cobalt II	1844	6.7	31.7	62	8,806	6.4	37.8
Triumph	TRXs12435CP	1798	7.9	28.4	53	16,896	7.3	38.4
Average		2507	6.6	30.7	62	19,468	8.3	38.8

^bLSD (P<0.30)

282

^aYields were corrected to 10% moisture.

^bIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is statistically significant.

Plot size: 5' x 31'

Site Information

Collaborator: Jerry McPherson

Planting Date: 6/3/2013

Harvest Date: 10/24/2013

Fertilizer: Nitrogen at 5 lb/ac and phosphorus 55 lb/ac as starter, and nitrogen at 100 lb/ac later in the season

Herbicide: Dual, Spartan, and Eptam

2013 Irrigated Confection Sunflower Hybrid Performance Trial at Wray

Seed Size

Brand	Hybrid	Yield ^a lb/ac	Moisture percent	Test Weight lb/bu	Plant Height in	Population plants/ac	Lodging percent	Seed Size							
								Over 24/64	Over 23/64	Over 22/64	Over 21/64	Over 20/64	Over 19/64	Over 16/64	Through 16/64
Sunopta/Dahlgren	9521	3089	8.6	20.9	74	16,763	4.0	53.4	16.6	11.2	7.6	3.8	3.6	2.2	1.6
Red River Commodities	RRC 8015	2787	9.5	17.7	66	13,958	9.3	28.2	23.4	14.2	17.0	6.4	5.2	4.2	1.4
Sunopta/Dahlgren	9530CL	2690	9.7	20.3	73	14,379	7.2	34.6	23.4	14.6	12.0	5.2	5.0	3.4	1.8
Red River Commodities	RRC 2215 CL	2590	9.0	21.1	73	16,408	7.1	24.8	18.6	18.4	19.2	7.6	7.4	2.0	2.0
Nuseed/Seeds 2000	Jaguar	2511	8.9	18.2	68	13,090	3.8	61.8	14.8	9.0	4.2	2.6	2.4	3.0	2.2
Red River Commodities	RRC 2215	2511	9.0	21.2	72	12,693	5.1	22.6	23.2	22.0	16.2	5.8	5.0	3.6	1.6
Sunopta/Dahlgren	9506CL	2505	10.2	20.6	77	14,848	10.9	44.8	24.2	14.4	8.0	3.4	2.2	1.8	1.2
Red River Commodities	RRC 2217	2492	8.6	19.6	69	14,448	7.2	37.6	15.8	18.4	13.4	4.8	5.0	3.8	1.2
Nuseed/Seeds 2000	X4334	2379	10.7	18.3	74	11,452	9.2	59.4	14.0	8.8	7.6	4.4	2.8	1.6	1.4
Mycogen	8C451CP	2373	9.7	19.0	68	14,898	8.6	31.2	18.6	16.2	16.6	5.8	6.0	3.6	2.0
Nuseed/Seeds 2000	Jaguar XL	2344	12.8	18.9	72	9,798	4.9	19.8	17.0	16.2	17.8	10.8	8.4	7.2	2.8
Sunopta/Dahlgren	9579	2316	9.2	17.3	66	18,154	14.2	37.0	21.0	11.6	14.8	7.2	3.4	3.6	1.4
Sunopta/Dahlgren	9592CL+	2314	9.4	19.0	70	14,100	9.4	49.0	19.6	10.4	8.8	3.8	3.8	3.2	1.4
Nuseed/Seeds 2000	NSK12M048	1891	9.8	16.6	70	9,819	13.3	76.0	7.8	5.8	3.6	2.2	1.4	2.0	1.2
Nuseed/Seeds 2000	Jaguar II	1765	9.3	18.3	66	12,210	8.4	48.8	16.0	11.2	8.4	5.6	4.6	3.6	1.8
Average		2437	9.6	19.1	71	13,801	8.2	41.9	18.3	13.5	11.7	5.3	4.4	3.3	1.7

^bLSD (P<0.30)

271

^aYields were corrected to 10% moisture.

^bIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is statistically significant.

Plot size: 5' x 31'

Site Information

Collaborator: Jerry McPherson

Planting Date: 6/3/2013

Harvest Date: 10/24/2013

Fertilizer: Nitrogen at 5 lb/ac and phosphorus 55 lb/ac as starter, and nitrogen at 100 lb/ac later in the season

Herbicide: Dual, Spartan, and Eptam

2013 Dryland Oil Sunflower Hybrid Performance Trial at Sheridan Lake

Brand	Hybrid	Yield ^a	Moisture	Test Weight	Plant Height	Population	Lodging	Oil Content
		lb/ac	percent	lb/bu	in	plants/ac	percent	percent
Syngenta	3733 NS/DM	660	6.8	21.5	36	12,601	25.7	30.5
Mycogen	8N510	596	6.6	21.1	35	13,124	15.0	30.1
Croplan	432 E	584	6.7	21.0	35	13,721	8.9	31.1
Croplan	548 CL	555	6.7	20.8	46	12,611	24.0	31.3
Croplan	13-59 CL	522	6.6	22.1	38	13,150	31.3	33.4
Triumph	651CLD	515	6.5	22.4	41	12,829	12.0	32.7
Mycogen	8N421CLDM	505	6.5	22.1	41	12,840	12.5	33.0
Syngenta	3845 HO	495	6.5	21.6	35	11,984	17.1	30.5
Triumph	662	490	6.7	21.5	36	12,528	20.9	30.9
Croplan	13-52 E	469	6.7	21.2	33	12,304	26.2	31.6
Mycogen	8H449CLDM	452	6.6	20.8	35	12,025	15.5	28.9
Nuseed/Seeds 2000	Torino	451	6.7	22.1	39	13,192	24.0	30.0
Nuseed/Seeds 2000	NLK12M008	448	6.7	21.7	40	12,778	38.0	30.6
Croplan	13-652 CL	419	6.6	20.2	45	12,684	30.2	30.0
Triumph	849CLD	408	6.6	22.6	41	12,772	12.8	30.5
Syngenta	3158 NS/CL/DM	405	6.7	21.3	38	13,129	38.9	30.1
Nuseed/Seeds 2000	HORNET	398	6.7	21.7	46	13,192	38.0	32.0
Triumph	s870CL	395	6.6	21.3	34	12,296	24.4	32.3
Triumph	s668	378	6.6	21.2	33	11,960	19.1	31.6
Croplan	13-08 E	366	6.8	21.1	52	11,043	16.6	29.6
Mycogen	8N668S	363	6.7	21.7	34	12,902	22.5	31.6
Triumph	s673	363	6.6	21.9	31	11,663	15.1	33.3
Croplan	559 CL	351	6.7	20.6	45	11,784	21.9	29.8
Croplan	13-86 E	333	6.8	21.1	34	12,000	32.9	29.3
Croplan	460 E	288	6.7	20.9	41	11,794	30.1	31.1
Average		448	6.6	21.4	38	12,516	22.9	31.0

^bLSD (P<0.30)

94

^aYields were corrected to 10% moisture.

^bIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is statistically significant.

Plot size: 5' x 30'

Site Information

Collaborator: Burl Scherler

Planting Date: 6/14/2013

Harvest Date: 10/21/2013

Comments: Extremely hot and dry conditions were experienced during the flowering and grain fill stages, which resulted in lower yields.

2013 Dryland Confection Sunflower Hybrid Performance Trial at Sheridan Lake

Seed Size

Brand	Hybrid	Yield ^a lb/ac	Moisture percent	Test Weight lb/bu	Plant Height in	Population plants/ac	Lodging percent	Seed Size							
								Over 24/64	Over 23/64	Over 22/64	Over 21/64	Over 20/64	Over 19/64	Over 16/64	Through 16/64
Nuseed/Seeds 2000	Jaguar II	763	7.8	14.7	46	9,515	4.7	27.2	12.4	10.6	12.0	7.4	12.2	14.6	3.6
Nuseed Global	5009	723	7.6	15.1	41	9,784	16.3	11.2	13.6	19.6	20.0	10.0	12.2	10.6	2.8
Triumph	755C	721	7.6	15.1	54	10,445	20.0	6.2	10.2	12.6	17.0	10.2	18.4	22.0	3.4
Red River Commodities	RRC 2215	685	7.6	15.7	53	9,285	16.7	18.6	14.8	14.4	15.4	10.0	11.6	13.2	2.0
Nuseed Global	NHW11914	661	7.7	15.5	52	8,831	20.1	12.0	13.2	11.8	19.6	14.2	15.2	11.2	2.8
Nuseed Global	NHW11915	647	7.7	16.5	52	8,356	14.6	7.4	5.8	4.2	6.8	8.4	16.6	40.2	10.6
Mycogen	8C451CP	620	7.9	15.5	47	8,273	11.3	16.4	12.2	13.0	17.8	11.2	16.0	10.2	3.2
Nuseed Global	X98578	617	7.6	15.0	49	10,142	21.1	18.2	11.8	13.6	16.0	11.4	13.6	12.0	3.4
Nuseed Global	NHW10403	583	7.5	14.9	50	8,485	12.2	27.6	14.4	14.4	12.8	8.4	11.4	8.6	2.4
Nuseed Global	NHW12717	581	7.6	15.6	46	9,498	15.5	12.2	8.8	9.2	9.8	7.4	14.2	31.4	7.0
Red River Commodities	RRC 2215 CL	566	7.7	15.0	52	9,634	9.9	7.6	11.6	14.2	17.2	11.2	15.4	18.2	4.6
Nuseed Global	NHW12703	566	7.6	15.6	52	10,284	20.9	7.2	7.4	10.4	16.0	11.2	20.4	21.8	5.6
Nuseed/Seeds 2000	X4334	565	7.8	16.0	45	8,575	15.9	15.2	8.6	11.8	15.6	7.8	15.4	20.6	5.0
Red River Commodities	RRC 8015	537	7.6	15.2	41	9,523	14.4	13.8	11.0	15.4	18.4	11.0	16.2	12.0	2.2
Triumph	751CP	522	7.7	15.0	48	11,161	11.2	19.2	17.6	12.8	16.4	10.2	12.4	10.2	1.2
Nuseed Global	X3939	512	7.7	15.4	53	10,275	12.5	4.2	8.0	7.8	13.8	11.2	22.4	28.8	3.8
Triumph	TRX3412C	508	7.6	15.1	54	8,942	19.3	10.6	11.0	15.4	16.2	10.0	16.4	17.2	3.2
Red River Commodities	RRC 2217	415	7.7	14.4	50	8,287	10.0	19.8	16.0	11.4	15.4	10.8	15.8	9.4	1.4
Triumph	770CL	380	7.6	15.2	53	8,928	7.8	11.6	11.4	14.8	16.2	10.6	16.4	14.9	4.1
Average		588	7.6	15.3	49	9,380	14.4	14.0	11.6	12.5	15.4	10.1	15.4	17.2	3.8

^bLSD (P<0.30)

94

^aYields were corrected to 10% moisture.

^bIf the difference between two hybrid yields equals or exceeds the LSD value, there is a 70% chance the difference is statistically significant.

Plot size: 5' x 30'

Site Information

Collaborator: Burl Scherler

Planting Date: 6/14/2013

Harvest Date: 10/22/2013

Comments: Extremely hot and dry conditions were experienced during the flowering and grain fill stages, which resulted in lower yields.

2013 Dryland Forage and Sweet Sorghum Variety Performance Trial at Fort Collins

Brand	Plant Type	Variety	Maturity Group ^b	Forage Yield ^c tons/ac	Brix (Stem Sugar) percent	Plant Height in	Stem Diameter in	Harvest Index ^a		
								Leaf	Stem	Panicle
Sorghum Partners	Sweet Sorghum	CHR-FS4	L	14.4	15.3	73.8	0.69	0.29	0.65	0.06
Gayland Ward Seed	Forage Sorghum	Super Sugar	E	12.7	14.9	73.0	0.45	0.23	0.63	0.15
Gayland Ward Seed	Sorghum-Sudangrass	Sweet Six BMR	E	12.2	15.0	69.8	0.53	0.22	0.56	0.22
Gayland Ward Seed	Sorghum-Sudangrass	Sweet Forever BMR	PS	12.0	13.9	63.8	0.66	0.38	0.60	0.03
Gayland Ward Seed	Forage Sorghum	GW 400 BMR	ME	12.0	17.0	63.7	0.60	0.33	0.65	0.02
Gayland Ward Seed	Sorghum-Sudangrass	GW 300 BMR	ME	11.3	14.6	67.9	0.66	0.36	0.62	0.02
Sorghum Partners	Grain/Forage Sorghum	CHR-FS3	M	11.0	14.4	43.5	0.60	0.24	0.48	0.28
Gayland Ward Seed	Forage Sorghum	GW2120	M	10.7	16.8	56.7	0.64	0.35	0.63	0.03
Sorghum Partners	Sorghum-Sudangrass	CHR-SG1	PS	10.6	13.5	68.1	0.63	0.43	0.57	0.00
Gayland Ward Seed	Forage Sorghum	Sweet Forever	P	9.2	14.6	61.2	0.64	0.46	0.53	0.01
Sorghum Partners	Forage Sorghum	CHR-FS9	PS	8.9	14.8	51.6	0.75	0.49	0.51	0.00
Sorghum Partners	Sudangrass	CHR-SS2	PS	8.5	15.1	66.2	0.51	0.37	0.59	0.04
AERC, Inc.	Pearl Millet	CSSPM-7	E	7.8	13.3	52.7	0.58	0.43	0.54	0.04
Average				10.9	14.8	62.5	0.61	0.35	0.58	0.07

^dLSD (P<0.05)

3.5

^dLSD (P<0.20)

2.2

^aHarvest index is the proportion of the specified plant tissue biomass (leaf, stem, panicle/grain head) to the total plant biomass.

^bMaturity Group: E=early; ME=medium-early; M=medium; L=late, PS=photoperiod sensitive.

^cYields are adjusted to 70% moisture content based on oven-dried samples.

^dIf the difference between two varieties yields equals or exceeds the LSD value, there is a 95% (at P<0.05) or 80% (at P<0.20) chance the difference is statistically significant.

Site Information

Collaborator: Agricultural Research, Development and Education Center (ARDEC)
 Planting Date: 5/24/2013
 Harvest Date: 8/26/2013
 Fertilizer: Nitrogen at 100, phosphorus at 80, and zinc at 5 lb/ac
 Herbicide: Starane applied at a rate of 0.4 pt/ac on 6/22/2013
 Soil Type: Fort Collins loam
 Trial Comments: One inch of water was applied to irrigate-up the site immediately after planting.

2013 Irrigated Forage and Sweet Sorghum Variety Performance Trial at Fort Collins

Brand	Plant Type	Variety	Maturity Group ^b	Forage Yield ^c	Brix (Stem Sugar)	Plant Height	Stem Diameter	Harvest Index ^a		
								Leaf	Stem	Panicle
				tons/ac	percent	in	in			
Sorghum Partners	Sweet Sorghum	CHR-FS4	L	21.9	8.5	116.9	0.57	0.27	0.64	0.09
Gayland Ward Seed	Sorghum-Sudangrass	GW 300 BMR	ME	20.3	8.5	116.5	0.67	0.27	0.68	0.05
Gayland Ward Seed	Forage Sorghum	Super Sugar	E	20.0	9.6	110.3	0.48	0.19	0.65	0.16
Gayland Ward Seed	Forage Sorghum	GW 400 BMR	ME	19.9	11.0	107.7	0.70	0.23	0.70	0.07
Gayland Ward Seed	Sorghum-Sudangrass	Sweet Six BMR	E	19.7	8.5	100.4	0.52	0.21	0.58	0.21
Sorghum Partners	Sudangrass	CHR-SS2	PS	19.1	7.8	125.0	0.50	0.30	0.66	0.04
Sorghum Partners	Grain/Forage Sorghum	CHR-FS3	M	19.1	5.8	71.4	0.54	0.22	0.52	0.25
Gayland Ward Seed	Forage Sorghum	Sweet Forever	P	19.1	6.5	115.0	0.63	0.32	0.65	0.03
Sorghum Partners	Sorghum-Sudangrass	CHR-SG1	PS	18.8	9.0	115.0	0.58	0.34	0.64	0.02
Sorghum Partners	Forage Sorghum	CHR-FS9	PS	18.5	8.9	113.6	0.72	0.37	0.63	0.00
Gayland Ward Seed	Forage Sorghum	GW2120	M	17.3	11.2	91.5	0.63	0.25	0.67	0.08
Gayland Ward Seed	Sorghum-Sudangrass	Sweet Forever BMR	PS	15.7	9.9	110.5	0.69	0.28	0.66	0.06
AERC, Inc.	Pearl Millet	CSSPM-7	E	12.1	9.2	99.9	0.65	0.23	0.67	0.10
Average				18.6	8.8	107.2	0.61	0.27	0.64	0.09
^d LSD (P<0.05)				4.9						
^d LSD (P<0.20)				3.2						

^aHarvest index is the proportion of the specified plant tissue biomass (leaf, stem, panicle/grain head) to the total plant biomass.

^bMaturity Group: E=early; ME=medium-early; M=medium; L=late, PS=photoperiod sensitive.

^cYields are adjusted to 70% moisture content based on oven-dried samples.

^dIf the difference between two varieties yields equals or exceeds the LSD value, there is a 95% (at P<0.05) or 80% (at P<0.20) chance the difference is statistically significant.

Site Information

Collaborator: Agricultural Research, Development and Education Center (ARDEC)
 Planting Date: 5/24/2013
 Harvest Date: 8/26/2013
 Fertilizer: Nitrogen at 100, phosphorus at 80, and zinc at 5 lb/ac
 Herbicide: Starane applied at a rate of 0.4 pt/ac on 6/22/2013
 Soil Type: Fort Collins loam
 Trial Comments: A total of 14 inches of water was applied over the course of the growing season.

2013 Dryland Forage and Sweet Sorghum Variety Performance Trial at Greeley

Brand	Plant Type	Variety	Maturity Group ^b	Forage Yield ^c tons/ac	Brix (Stem Sugar) percent	Plant Height in	Stem Diameter in	Harvest Index ^a		
								Leaf	Stem	Panicle
Sorghum Partners	Sweet Sorghum	CHR-FS4	L	17.6	13.1	67.4	0.64	0.23	0.59	0.18
Sorghum Partners	Sudangrass	CHR-SS2	PS	17.5	12.0	75.5	0.52	0.30	0.62	0.08
Gayland Ward Seed	Sorghum-Sudangrass	Sweet Forever BMR	PS	16.8	11.7	72.5	0.73	0.29	0.61	0.10
Gayland Ward Seed	Sorghum-Sudangrass	GW 300 BMR	ME	15.7	10.1	74.9	0.64	0.27	0.61	0.12
Gayland Ward Seed	Forage Sorghum	GW 400 BMR	ME	14.2	14.2	62.0	0.73	0.30	0.62	0.08
Sorghum Partners	Grain/Forage Sorghum	CHR-FS3	M	13.9	9.5	43.6	0.64	0.26	0.37	0.37
Gayland Ward Seed	Forage Sorghum	Super Sugar	E	13.2	11.3	60.8	0.55	0.29	0.49	0.22
AERC, Inc.	Pearl Millet	CSSPM-7	E	12.4	9.1	62.3	0.53	0.29	0.48	0.22
Gayland Ward Seed	Forage Sorghum	Sweet Forever	P	12.3	8.8	69.8	0.74	0.40	0.56	0.04
Sorghum Partners	Sorghum-Sudangrass	CHR-SG1	PS	11.7	10.7	69.2	0.62	0.42	0.56	0.02
Gayland Ward Seed	Forage Sorghum	GW2120	M	11.4	12.4	51.9	0.65	0.30	0.61	0.09
Sorghum Partners	Forage Sorghum	CHR-FS9	PS	11.2	9.8	61.2	0.85	0.49	0.51	0.00
Gayland Ward Seed	Sorghum-Sudangrass	Sweet Six BMR	E	10.5	11.1	60.1	0.57	0.28	0.47	0.25
Average				13.7	11.1	63.9	0.65	0.32	0.55	0.14
^d LSD (P<0.05)				5.6						
^d LSD (P<0.20)				3.6						

^aHarvest index is the proportion of the specified plant tissue biomass (leaf, stem, panicle/grain head) to the total plant biomass.

^bMaturity Group: E=early; ME=medium-early; M=medium; L=late, PS=photoperiod sensitive.

^cYields are adjusted to 70% moisture content based on oven-dried samples.

^dIf the difference between two varieties yields equals or exceeds the LSD value, there is a 95% (at P<0.05) or 80% (at P<0.20) chance the difference is statistically significant.

Site Information

Collaborator: USDA-NRS Limited Irrigation Research Farm (LIRF)
 Planting Date: 6/11/2013
 Harvest Date: 9/24/2013
 Fertilizer: Nitrogen at 80 lb/ac applied over two irrigations
 Herbicide: Starane applied at a rate of 0.4 pt/ac on 6/26/13 and spot treatment using 2,4-D in early July
 Soil Type: Dacono clay loam and Olney fine sandy loam
 Trial Comments: Three inches (total) of water was applied during the season to apply fertilizer and to irrigate-up the site immediately after planting.

2013 Irrigated Forage and Sweet Sorghum Variety Performance Trial at Greeley

Brand	Plant Type	Variety	Maturity Group ^b	Forage Yield ^c tons/ac	Brix (Stem Sugar) percent	Plant Height in	Stem Diameter in	Harvest Index ^a		
								Leaf	Stem	Panicle
Gayland Ward Seed	Sorghum-Sudangrass	GW 300 BMR	ME	27.2	11.0	106.4	0.65	0.21	0.64	0.14
Sorghum Partners	Sorghum-Sudangrass	CHR-SG1	PS	26.8	13.3	118.8	0.63	0.24	0.71	0.04
Sorghum Partners	Forage Sorghum	CHR-FS9	PS	26.6	11.6	102.6	0.71	0.38	0.62	0.00
Sorghum Partners	Sweet Sorghum	CHR-FS4	L	24.8	12.5	109.6	0.74	0.21	0.58	0.21
Gayland Ward Seed	Forage Sorghum	GW2120	M	24.1	14.5	90.0	0.62	0.20	0.62	0.19
Sorghum Partners	Sudangrass	CHR-SS2	PS	23.4	15.3	121.5	0.51	0.22	0.71	0.07
Gayland Ward Seed	Sorghum-Sudangrass	Sweet Forever BMR	PS	23.3	13.2	104.8	0.69	0.23	0.67	0.10
Sorghum Partners	Grain/Forage Sorghum	CHR-FS3	M	23.1	7.8	57.7	0.56	0.21	0.29	0.50
Gayland Ward Seed	Forage Sorghum	Sweet Forever	P	23.0	10.7	111.6	0.71	0.28	0.66	0.06
Gayland Ward Seed	Forage Sorghum	GW 400 BMR	ME	22.3	13.5	93.1	0.65	0.23	0.63	0.14
Gayland Ward Seed	Sorghum-Sudangrass	Sweet Six BMR	E	20.4	10.9	89.5	0.49	0.14	0.45	0.41
Gayland Ward Seed	Forage Sorghum	Super Sugar	E	19.5	11.1	98.7	0.51	0.14	0.50	0.35
AERC, Inc.	Pearl Millet	CSSPM-7	E	16.9	8.8	86.7	0.55	0.21	0.50	0.29
Average				23.2	11.9	99.3	0.62	0.22	0.58	0.19
^d LSD (P<0.05)				4.1						
^d LSD (P<0.20)				2.6						

^aHarvest index is the proportion of the specified plant tissue biomass (leaf, stem, panicle/grain head) to the total plant biomass.

^bMaturity Group: E=early; ME=medium-early; M=medium; L=late, PS=photoperiod sensitive.

^cYields are adjusted to 70% moisture content based on oven-dried samples.

^dIf the difference between two varieties yields equals or exceeds the LSD value, there is a 95% (at P<0.05) or 80% (at P<0.20) chance the difference is statistically significant.

Site Information

Collaborator: USDA-NRS Limited Irrigation Research Farm (LIRF)
 Planting Date: 6/11/2013
 Harvest Date: 9/24/2013
 Fertilizer: Nitrogen at 80 lb/ac applied over two irrigations
 Herbicide: Starane applied at a rate of 0.4 pt/ac on 6/26/13 and spot treatment using 2,4-D in early July
 Soil Type: Dacono clay loam and Olney fine sandy loam
 Trial Comments: A total of 13.25 inches of water was applied over the course of the growing season.

2013 Dryland Grain Sorghum Variety Performance Trial at Brandon

Brand	Hybrid	Grain Yield ^a bu/ac	Yield Percent of Trial Average percent	Test Weight lb/bu	Percent Lodging percent	Harvest Plant Population plants/ac	Plant Height in	50% Bloom days after planting	GDD ^b	50% Mature days after planting ^d	Maturity Group ^c
DEKALB	DKS29-28	24.2	166	58	0	25,800	36	70	1793	106	E
Advanta	AG1202	21.5	147	59	11	28,900	40	69	1768	105	E
Mycogen	1G557	18.1	124	58	2	28,700	30	70	1793	106	E
Triumph	TR424	17.9	123	59	2	24,000	41	71	1819	107	E
Advanta	AG1101	17.4	119	57	1	20,700	33	71	1819	107	E
AERC Inc.	CGSH-28	16.3	112	58	4	21,900	45	68	1744	104	E
DEKALB	DKS28-05	12.2	84	57	16	25,400	41	71	1819	107	E
Advanta	AG1201	16.7	114	57	1	24,200	32	80	2064	114	ME
Richardson Seeds	0413	15.2	104	56	0	23,200	38	85	2195	117	ME
Richardson Seeds	92123	14.9	102	57	1	25,200	32	81	2093	115	ME
Richardson Seeds	96173	13.9	95	56	1	24,200	45	86	2224	117	ME
Triumph	TR438	13.4	92	57	1	28,100	42	82	2143	115	ME
Richardson Seeds	10413	12.3	84	57	0	27,300	42	83	2143	117	ME
Mycogen	E32294	10.8	74	57	1	29,400	33	80	2064	115	ME
Richardson Seeds	50113	5.1	35	54	1	29,200	41	90	2361	ED	M
Richardson Seeds	06173	3.5	24	53	0	27,100	34	92	2386	ED	M
Average		14.6		57	3	25,831	38	78	2014	111	
^c LSD (P<0.20)		8.6			3						

^aYields corrected to 14% moisture.

^bGDD: Growing degree-days to 50% bloom date.

^cMaturity Group: E=early; ME=medium-early; M=medium.

^dDays after planting to reach maturity or growth stage at first freeze. ED=Early dough stage.

^eIf the difference between the yield of two varieties equals or exceeds the LSD value, there is an 80% chance the difference is significant.

Site Information

Collaborator: Burl Scherler

Planting Date: 6/10/2013

Harvest Date: 10/28/2013