

Introduction to the 2014 Colorado Spring Crop Variety Performance Trial Results

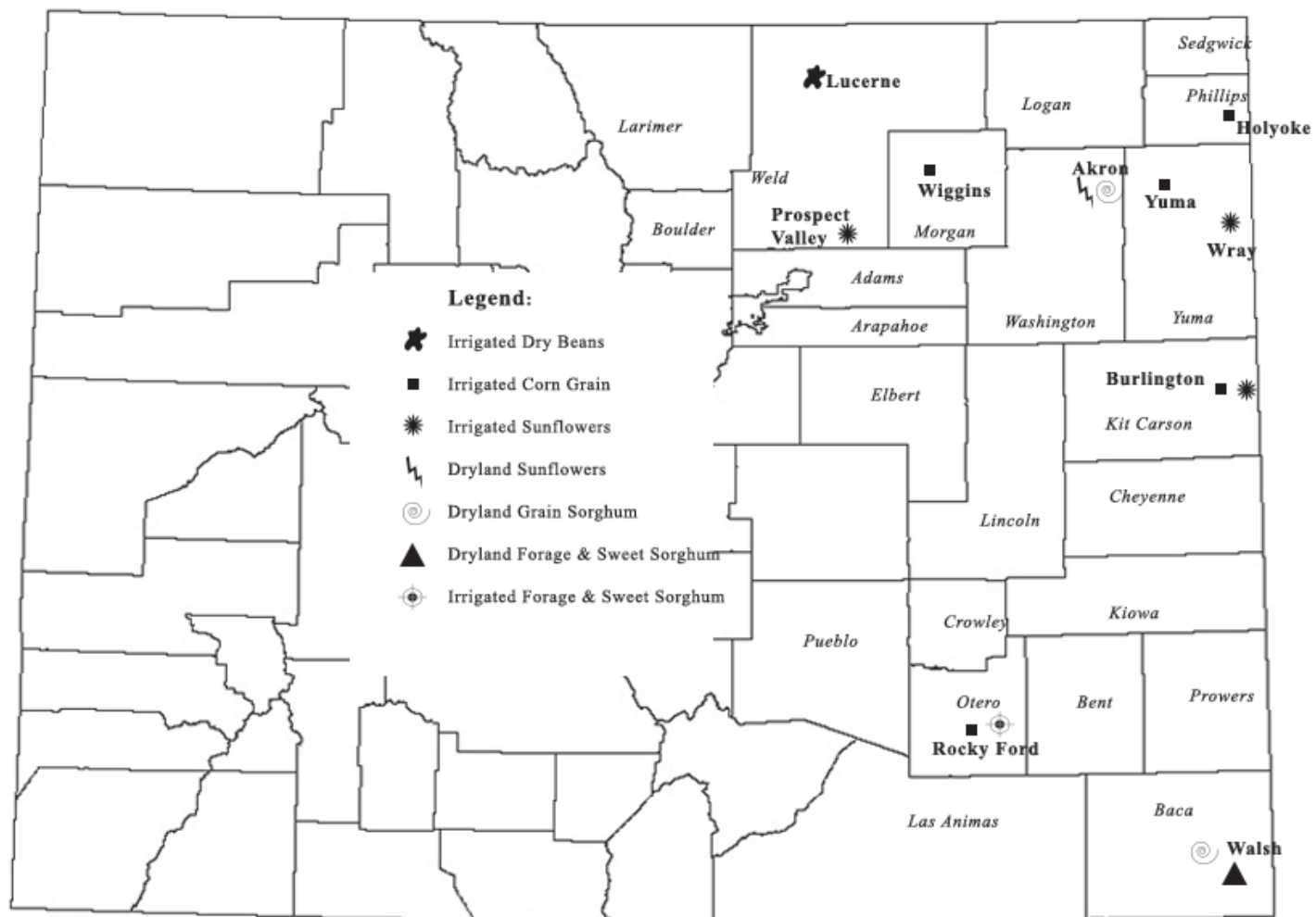
Colorado State University: Jerry J. Johnson, Jim Hain, Sally Sauer, Kevin Larson, Brett Pettinger, Mike Bartolo, Jeff Davidson, Kevin Tanabe, Mark Brick, Howard Schwartz, Ron Meyer, Merle Vigil, and Kierra Jewell

Colorado State University collaborates with university breeding programs and seed companies to conduct variety trials for unbiased and reliable results to help Colorado farmers make good variety decisions. Variety trials help breeders screen elite experimental lines for their adaptability to Colorado conditions. Seed companies use results for marketing decisions. Some trials are part of CSU’s formal education efforts to train the next generation of the world’s plant breeders and agronomists. CSU extension agents and Agriculture Experiment Station personnel use trial results to make variety recommendations to Colorado farmers.

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. All of the variety trial results for 2014 (and in past years) can be found at our website, www.csucrops.com.

The map below provides the approximate location of variety trials in eastern Colorado. Some of the trials are conducted on CSU Agricultural Experiment Stations and others in fields of superior farmers. We are very thankful to the farmers who host the variety trials. Their names are at the bottom of each trial results table. The trials are made possible with funding from seed company entry fees, as well as funding from the Colorado Dry Bean Administrative Committee, the Colorado Sorghum Producers, and the Colorado Sunflower Administrative Committee.

2014 Colorado Crop Variety Performance Trial Locations



2014 Irrigated Dry Bean Variety Performance Trial at Lucerne

Variety	Source	Yield ^a	Moisture	Seeds/Pound
		lb/ac	percent	count
Monterrey	ProVita, Inc.	4043	11.1	1302
Santa Cruz	ProVita, Inc.	3709	10.4	1350
GTS-904	Gentec Inc.	3579	10.0	1257
La Paz	ProVita, Inc.	3440	11.3	1338
Sinaloa	ProVita, Inc.	3423	10.2	1368
GTS-907	Gentec Inc.	3411	9.7	1302
Montrose	Colorado State Univ.	3389	9.9	1212
SV6239 GR	Seminis	3227	10.4	1386
Croissant	Colorado State Univ.	3213	9.6	1335
SV6653 GR	Seminis	3068	10.2	1254
Long's Peak	Colorado State Univ.	3048	10.1	1284
CO 86661-5	Colorado State Univ.	2955	9.6	1239
CO 91216-15	Colorado State Univ.	2931	9.7	1191
Medicine Hat	Seminis	2902	10.0	1209
CO 91212-4	Colorado State Univ.	2854	10.3	1221
Othello	USDA-Prosser, WA	2844	9.5	1134
Average		3252	10.1	1274
^b LSD (P<0.30)		321		

^aYields corrected to 14% moisture.

^bIf the difference between two variety 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: Ed Croissant
 Planting Date: 5/9/2014
 Harvest Date: 9/17/2014

2014 Irrigated Corn Hybrid Performance Trial at Burlington

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b	2-Year	Relative	Test		Plant		Lodging
			bu/ac	Avg. Yield	Maturity ^c	Moisture	Weight	Height	Population	
AgVenture	RL5811HBW	HXT, RR2, LL	234.0	-	100	13.5	56.6	73	28,953	1.0
Mycogen	2C799	RASS, RR2, LL	224.3	-	113	17.8	56.9	80	28,386	0.4
Mycogen	2P659	RASS, RR2, LL	221.4	-	108	16.6	57.0	87	29,785	0.0
AgVenture	RL7687YHB	INTX, RR2, LL	216.4	-	110	15.5	60.0	79	28,584	1.0
Mycogen	2V709	RASS, RR2, LL	213.0	198.6	110	18.6	56.8	82	29,050	0.0
Mycogen	X14504S2	Experimental	207.8	-	106	14.9	58.1	83	26,486	1.6
Channel	211-24STXRIB	STXRIB, RR2, LL	204.6	-	111	15.4	58.1	84	27,824	0.0
Channel	209-53STXRIB	STXRIB, RR2, LL	192.5	-	109	16.5	58.1	78	27,788	1.4
Mycogen	2D599	RASS, RR2, LL	191.0	-	106	15.8	57.9	80	26,508	1.2
AgVenture	RL7362HB	HX, RR2, LL	185.5	-	106	14.4	59.0	77	26,536	0.4
NuTech/G2 Genetics	5F-709	AM, RR2, LL	184.4	196.6	109	16.1	59.2	75	26,151	0.0
Channel	208-49STXRIB	STXRIB, RR2, LL	182.4	-	108	15.5	59.6	73	25,369	0.4
NuTech/G2 Genetics	5H-806	HX, RR2, LL	179.0	175.1	106	15.3	58.8	76	27,128	0.7
Mycogen	2G685	3000GT, GT, LL	176.1	183.8	109	15.7	56.3	76	28,841	1.7
Mycogen	2R549	RASS, RR2, LL	166.0	-	104	15.0	59.4	78	24,571	2.0
NuTech/G2 Genetics	5Z-707	INT, RR2, LL	162.4	164.3	107	14.9	59.7	74	25,318	0.4
Average			196.3	183.7	108	15.7	58.2	78	27,330	0.8

^dLSD (P<0.30)

17.0

^aTechnology trait designations: 3000GT=Agrisure 3000GT; AM=Optimum AcreMax; GT=Glyphosate tolerant; HX=Herculex 1; HXT=Herculex XTRA; INT=Optimum Intrasect; INTX=Optimum Intrasect Xtra; LL=LibertyLink; RASS=Refuge Advanced by SmartStax (Refuge in the Bag); RR2=Roundup Ready 2; STXRIB=Genuity SmartStax 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 30'

Site Information

Collaborator: Tim Stahlecker

Planting Date: 5/5/2014

Harvest Date: 10/30/2014

Trial Comments: The trial experienced heavy rain and moderate hail damage in mid-June, resulting in reduced stands.

2014 Irrigated Corn Hybrid Performance Trial at Holyoke

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b bu/ac	2-Year		Relative Maturity ^c	Moisture percent	Test Weight lb/bu	Plant Height in	Population plants/ac	Lodging percent
				Avg. Yield bu/ac							
AgVenture	RL7687YHB	INTX, RR2, LL	278.8	-	110	14.0	59.3	90	32,525	0.0	
AgVenture	RL8767HB	HX, RR2, LL	271.7	-	113	12.7	56.7	92	31,223	0.0	
NuTech/G2 Genetics	5H-905	HX, RR2, LL	260.6	250.9	105	13.3	58.5	85	30,105	0.0	
Producers Hybrids	7268STXRIB	STXRIB, RR2, LL	259.9	257.5	112	14.4	57.9	84	32,407	0.3	
Channel	209-53STXRIB	STXRIB, RR2, LL	256.6	-	109	12.9	57.8	84	32,331	0.3	
NuTech/G2 Genetics	5F-399	AM, RR2, LL	256.0	254.6	99	11.6	56.3	81	31,548	0.0	
AgVenture	RL7362HB	HX, RR2, LL	252.8	-	106	12.7	57.3	85	30,049	0.3	
Channel	208-49STXRIB	STXRIB, RR2, LL	249.0	-	108	13.5	59.3	85	30,879	0.3	
Mycogen	2D599	RASS, RR2, LL	240.2	-	106	12.8	56.2	89	32,622	0.0	
NuTech/G2 Genetics	5F-805	AM, RR2, LL	239.9	246.8	105	13.4	58.0	86	30,796	0.0	
Mycogen	2R549	RASS, RR2, LL	239.7	232.2	104	12.4	56.5	86	31,750	0.0	
NuTech/G2 Genetics	5F-198	AM, RR2, LL	239.5	238.5	98	10.5	54.7	86	32,297	0.0	
LG Seeds	LG2549	VT3PRIB, RR2	239.1	217.7	109	11.6	54.7	83	30,298	0.0	
Mycogen	2V709	RASS, RR2, LL	238.8	241.2	110	12.8	56.9	87	33,092	0.9	
Producers Hybrids	7213VT2RIB	VT2RIB, RR2	238.2	-	112	12.2	57.5	83	32,794	0.3	
AgVenture	RL5811HBW	HXT, RR2, LL	237.3	-	100	11.7	55.0	80	31,944	0.6	
Mycogen	X14504S2	Experimental	235.6	-	106	12.1	57.4	89	31,997	0.6	
Producers Hybrids	7198STXRIB	STXRIB, RR2, LL	234.9	-	111	11.6	57.1	80	30,817	1.3	
Producers Hybrids	6968STXRIB	STXRIB, RR2, LL	230.7	-	109	12.4	58.7	81	31,127	0.0	
NuTech/G2 Genetics	5H-502	HX, RR2, LL	230.0	229.1	102	12.5	58.2	84	30,524	0.0	
NuTech/G2 Genetics	5Z-002	INT, RR2, LL	228.6	-	102	12.6	57.6	83	32,931	0.3	
Mycogen	2T498	RASS, RR2, LL	224.6	-	100	12.0	56.3	84	32,428	0.0	
LG Seeds	LG2602	VT3PRIB, RR2	222.8	215.5	112	12.1	54.3	85	31,654	0.0	
LG Seeds	LG5524	VT3PRIB, RR2	218.8	209.4	105	10.8	55.6	92	29,398	0.0	
Mycogen	2G685	3000GT, GT, LL	215.9	220.5	109	12.3	54.8	82	32,156	0.3	
Producers Hybrids	7088STXRIB	STXRIB, RR2, LL	215.5	-	110	11.8	57.7	96	31,205	0.6	
Mycogen	X14402S3	Experimental	211.7	-	99	10.9	54.5	83	32,026	0.0	
LG Seeds	LG5579	VT3PRIB, RR2	211.0	213.3	109	12.6	56.1	86	31,170	0.3	
Channel	202-64STXRIB	STXRIB, RR2, LL	208.6	-	102	12.4	58.3	85	31,266	0.3	
Producers Hybrids	6878STXRIB	STXRIB, RR2, LL	202.5	-	108	11.7	56.7	89	31,143	0.6	
Average			236.3	232.9	106	12.3	56.9	85	31,550	0.3	

^dLSD (P<0.30)

12.1

^aTechnology trait designations: 3000GT=Agrisure 3000GT; AM=Optimum AcreMax; GT=Glyphosate tolerant; HX=Herculex 1; HXT=Herculex XTRA; INT=Optimum Intrasect; INTX=Optimum Intrasect Xtra; 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; VT2RIB=Genuity VecTran Double Protection 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 30'

Site Information

Collaborator: Brent Adler
 Planting Date: 5/3/2014
 Harvest Date: 11/4/2014
 Fertilizer: Nitrogen at 240, phosphorus at 75, potassium at 80, sulfur at 40, and zinc at 1.5 lb/ac
 Herbicide: Status, Roundup, and Dual
 Herbicide: Lorsban
 Insecticide: Capture

2014 Irrigated Corn Hybrid Performance Trial at Rocky Ford

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b	2-Year	Relative	Moisture	Test	Plant	Silk Date	Population
			bu/ac	Avg. Yield	Maturity ^c		Weight	Height		
				bu/ac		percent	lb/bu	in	days after planting	plants/ac
LG Seeds	LG5618	STXRIB, RR2, LL	251.0	237.6	112	16.5	59.8	98	70	28,478
Mycogen	2J794	HX, RR2, LL	232.0	-	115	18.9	54.8	106	72	28,103
LG Seeds	LG2642	VT3PRIB, RR2	230.2	216.2	115	17.4	56.5	99	69	28,853
Mycogen	2Y767	RASS, RR2, LL	228.1	-	114	16.5	55.8	104	71	28,759
Mycogen	2C788	RASS, RR2, LL	227.5	-	114	18.2	56.9	99	75	29,321
LG Seeds	LG2636	VT3PRIB, RR2	227.1	209.1	114	16.3	56.9	105	71	29,321
LG Seeds	LG5612	STXRIB, RR2, LL	220.3	-	112	15.1	58.6	106	70	30,070
Mycogen	2G685	3000GT, GT, LL	214.4	-	109	15.2	58.4	104	71	29,508
Mycogen	2C799	RASS, RR2, LL	213.4	-	113	15.5	57.8	104	72	30,539
Mycogen	2V709	RASS, RR2, LL	208.2	-	110	16.2	58.4	105	72	31,007
Mycogen	2P659	RASS, RR2, LL	184.3	-	108	15.3	58.2	111	73	27,916
Average			221.5	221.0	112	16.5	57.5	104	72	29,261

^dLSD (P<0.30)

12.9

^aTechnology trait designations: 3000GT=Agrisure 3000GT; GT=Glyphosate tolerant; HX=Herculex 1; LL=LibertyLink; RASS=Refuge Advanced by SmartStax (Refuge in the Bag); RR2=Roundup Ready 2; 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 (Mike Bartolo, Jeff Davidson, & Kevin Tanabe)

Planting Date: 5/5/2014

Harvest Date: 10/31/2014

Irrigation: Furrow

Soil Type: Rocky Ford silty clay loam

2014 Irrigated Corn Hybrid Performance Trial at Wiggins

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b bu/ac	2-Year		Test		Plant		Lodging percent
				Avg. Yield	Relative Maturity ^c	Moisture percent	Weight lb/bu	Height in	Population plants/ac	
AgVenture	RL7687YHB	INTX, RR2, LL	266.0	-	110	14.8	61.1	95	32,960	0.9
Mycogen	X14504S2	Experimental	236.8	-	106	13.4	58.6	94	31,023	1.6
Channel	208-49STXRIB	STXRIB, RR2, LL	230.3	-	108	14.5	60.1	85	32,331	0.3
AgVenture	RL5811HBW	HXT, RR2, LL	229.3	-	100	12.4	56.8	80	30,976	1.0
Mycogen	2D599	RASS, RR2, LL	218.5	-	106	12.4	57.6	90	32,074	0.3
NuTech/G2 Genetics	5F-805	AM, RR2, LL	215.5	213.0	105	13.4	59.9	84	29,083	0.0
NuTech/G2 Genetics	5Z-002	INT, RR2, LL	214.4	-	102	12.2	59.5	86	30,589	0.6
LG Seeds	LG5499	STXRIB, RR2, LL	211.0	202.2	100	11.8	60.2	84	32,815	0.9
NuTech/G2 Genetics	5F-399	AM, RR2, LL	209.1	190.2	99	11.3	57.3	85	31,310	0.3
NuTech/G2 Genetics	5H-905	HX, RR2, LL	208.3	207.8	105	11.9	56.2	85	31,170	0.6
NuTech/G2 Genetics	5H-502	HX, RR2, LL	204.9	200.0	102	11.7	59.8	84	30,454	2.1
Channel	202-64STXRIB	STXRIB, RR2, LL	203.9	-	102	11.5	59.5	89	32,592	1.2
Channel	197-68STXRIB	STXRIB, RR2, LL	203.3	-	97	11.0	58.9	83	30,991	0.0
LG Seeds	LG5524	VT3PRIB, RR2	202.7	193.3	105	9.9	56.4	90	32,234	0.6
Mycogen	X13534VH	Experimental	199.3	-	104	12.1	56.7	86	31,266	0.6
LG Seeds	LG5522	VT3PRIB, RR2	194.5	186.4	103	9.9	56.6	85	32,815	0.6
LG Seeds	LG5470	STXRIB, RR2, LL	193.1	182.6	98	10.9	58.6	82	32,675	2.6
Mycogen	2R549	RASS, RR2, LL	192.5	187.6	104	11.6	58.5	90	31,750	2.1
NuTech/G2 Genetics	5F-198	AM, RR2, LL	180.0	173.8	98	10.6	55.6	83	31,654	0.6
Mycogen	X14402S3	Experimental	177.7	-	99	11.0	56.3	84	31,727	0.9
Mycogen	2Y479	RASS, RR2, LL	174.7	182.0	98	11.6	57.4	84	31,036	2.2
Mycogen	2T498	RASS, RR2, LL	167.0	167.0	100	10.9	58.6	85	32,331	6.0
Average			206.0	190.5	102	11.9	58.2	86	31,630	1.2

^dLSD (P<0.30)

12.0

^aTechnology trait designations: AM=Optimum AcreMax; HX=Herculex 1; HXT=Herculex XTRA; INT=Optimum Intrasect; INTX=Optimum Intrasect Xtra; LL=LibertyLink; RASS=Refuge Advanced by SmartStax (Refuge in the Bag); RR2=Roundup Ready 2; 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 30'

Site Information

Collaborator: Cooksey Farms

Planting Date: 5/3/2014

Harvest Date: 11/1/2014

2014 Irrigated Corn Hybrid Performance Trial at Yuma

Brand	Hybrid	Insect and Herbicide Technology Traits ^a	Yield ^b bu/ac	2-Year	Relative	Test		Plant		Lodging percent
				Avg. Yield bu/ac	Maturity ^c	Moisture percent	Weight lb/bu	Height in	Population plants/ac	
AgVenture	RL7687YHB	INTX, RR2, LL	279.6	-	110	16.3	59.3	100	31,847	0.0
LG Seeds	LG5618	STXRIB, RR2, LL	279.0	-	112	17.3	58.1	85	32,525	0.0
Channel	209-53STXRIB	STXRIB, RR2, LL	274.8	-	109	15.7	58.4	85	31,944	0.3
AgVenture	RL8767HB	HX, RR2, LL	271.1	-	113	16.7	56.8	87	32,041	0.0
AgVenture	RL5811HBW	HXT, RR2, LL	265.4	-	100	13.4	55.7	84	33,061	0.0
Mycogen	2V709	RASS, RR2, LL	264.6	248.0	110	16.0	57.3	88	32,421	0.0
Mycogen	2C788	RASS, RR2, LL	260.5	-	114	17.1	55.7	92	34,267	0.0
Channel	208-49STXRIB	STXRIB, RR2, LL	252.8	-	108	15.5	59.3	87	32,124	0.3
Mycogen	2C799	RASS, RR2, LL	251.1	-	113	15.8	56.7	95	32,912	0.0
Mycogen	X14504S2	Experimental	248.7	-	106	14.3	57.8	93	31,764	0.0
NuTech/G2 Genetics	5H-905	HX, RR2, LL	245.7	247.1	105	14.4	57.1	84	31,098	0.0
LG Seeds	LG2602	VT3PRIB, RR2	244.2	228.9	112	12.9	55.6	91	33,202	0.0
Mycogen	2D599	RASS, RR2, LL	242.5	-	106	13.8	57.0	96	33,949	0.0
Channel	211-24STXRIB	STXRIB, RR2, LL	236.2	-	111	13.5	57.7	89	31,909	0.3
Mycogen	2R549	RASS, RR2, LL	235.4	237.1	104	13.3	57.8	91	32,697	1.3
NuTech/G2 Genetics	5F-805	AM, RR2, LL	234.8	239.9	105	15.9	58.1	88	30,395	0.0
NuTech/G2 Genetics	5F-399	AM, RR2, LL	230.3	230.1	99	12.9	56.8	87	31,584	0.0
NuTech/G2 Genetics	5H-502	HX, RR2, LL	228.0	232.2	102	13.9	58.6	86	31,557	0.0
NuTech/G2 Genetics	5Z-002	INT, RR2, LL	227.7	-	102	13.5	58.4	86	31,944	0.3
NuTech/G2 Genetics	5F-198	AM, RR2, LL	226.1	223.9	98	12.3	56.0	87	31,266	0.0
Mycogen	2G685	3000GT, GT, LL	224.4	222.6	109	13.1	56.9	85	32,476	0.6
LG Seeds	LG5524	VT3PRIB, RR2	224.3	222.1	105	12.3	55.8	91	31,735	1.6
LG Seeds	LG5579	VT3PRIB, RR2	223.7	219.6	109	12.8	56.8	86	32,546	0.0
Average			246.6	231.9	107	14.5	57.3	89	32,229	0.2

^dLSD (P<0.30)

12.0

^aTechnology trait designations: 3000GT=Agrisure 3000GT; AM=Optimum AcreMax; GT=Glyphosate tolerant; HX=Herculex 1; HXT=Herculex XTRA; INT=Optimum Intrasect; INTX=Optimum Intrasect Xtra; LL=LibertyLink; RASS=Refuge Advanced by SmartStax (Refuge in the Bag); RR2=Roundup Ready 2; 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 30'

Site Information

Collaborator: Larry Gardner

Planting Date: 5/7/2014

Harvest Date: 11/5/2014

Fertilizer: Starter: Nitrogen at 9, phosphorus at 25, potassium at 4, sulfur at 5, and zinc at 0.25 lb/ac

After planting: Nitrogen at 250, phosphorus at 25, potassium at 4, sulfur at 5, and zinc at 0.25 lb/ac

Herbicide: Brawl, Touchdown, Lockdown, and Prowl

Insecticide/Fungicide: Hendragol, Belt, Quilt, Aurora

2014 Limited-Irrigation Oil Sunflower Hybrid Performance Trial at Burlington

Brand	Hybrid	Herbicide		2014	2-Year	Moisture	Test	Plant	Population	Lodging	Oil
		Oil Type ^a	Technology Trait ^b	Yield ^c	Avg. Yield		Weight	Height			Content
				lb/ac		percent	lb/bu	in	plants/ac	percent	percent
Croplan	14-572	HO	Clearfield	3226	-	6.9	30.6	77	16,655	5.0	37.7
Croplan	559 CL	NS	Clearfield	3066	2546	6.9	30.4	73	22,554	9.0	39.5
Croplan	545 CL	NS	Clearfield	3017	-	7.3	31.7	78	21,216	2.8	39.5
Mycogen	8H449CLDM	HO	Clearfield	3015	2516	6.5	31.8	67	22,004	7.6	41.3
Nuseed Americas Inc.	Hornet	HO	Clearfield	2970	2513	6.8	29.9	79	22,458	5.2	39.9
Croplan	432 E	NS	ExpressSun	2910	2162	7.1	29.8	65	21,714	7.6	37.0
Croplan	13-652 CL	HO	Clearfield	2894	2710	7.2	29.3	66	19,914	10.6	39.3
Nuseed Americas Inc.	Camaro II	NS	Clearfield	2863	2275	6.5	32.2	68	22,324	4.4	39.1
Mycogen	8H859CL	HO	Clearfield	2857	-	7.3	30.0	74	22,845	7.2	39.7
Syngenta	3732 NS	NS	N/A	2831	-	6.6	30.1	61	20,690	9.5	39.7
Syngenta	3845 HO	HO	N/A	2715	2500	6.4	30.1	63	20,988	11.4	41.1
Mycogen	8N668S	NS	N/A	2427	2310	7.6	29.2	56	19,281	10.1	40.6
Nuseed Americas Inc.	Falcon	NS	ExpressSun	2392	2099	8.4	30.3	62	19,638	5.7	39.1
Syngenta	7717 HO/CL/DM	HO	Clearfield	2185	-	6.3	29.9	67	20,956	6.4	38.8
Croplan	13-08 E	HO	ExpressSun	2118	1953	7.1	30.4	53	20,535	13.2	39.5
Mycogen	8H570CL	HO	Clearfield	1467	-	6.7	30.7	51	22,942	12.0	38.8
Average				2685	2358	7.0	30.4	66	21,045	8.0	39.4

^dLSD (P<0.30)

365

^aOil type designations: HO=High oleic; NS=NuSun/Mid-oleic.

^bHerbicide technology trait designations: Clearfield=Tolerant to Beyond herbicide; ExpressSun=Tolerant to Express herbicide; N/A=No herbicide traits.

^cYields were corrected to 10% moisture.

^dIf 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: 6/16/2014
 Harvest Date: 10/22/2014
 Fertilizer: Nitrogen at 100 lb/ac and phosphorus at 40 lb/ac
 Insecticide: Warrior applied at 1.92 oz/ac during bloom stage
 Irrigation: Pre-plant: 3 inches applied
 Post-emergence: 2 inches applied
 Soil Type: Silt-loam

2014 Limited-Irrigation Confection Sunflower Hybrid Performance Trial at Burlington

Brand	Hybrid	Herbicide Technology Trait ^a	2014 Yield ^b lb/ac	2-Year		Test Plant		Population plants/ac	Lodging percent	Seed Retained Over Screen			
				Avg. Yield lb/ac	Moisture percent	Weight lb/bu	Height in			Over 24/64	Over 22/64	Over 20/64	Over 16/64
CHS Royal Hybrid	12EXP01	ExpressSun	3363	-	10.3	19.8	75	19,457	3.5	12.4	41.6	78.8	99.0
Nuseed Americas Inc.	X4334	IMI	3338	2607	12.8	18.7	72	16,712	9.4	6.2	28.4	67.6	99.0
CHS Royal Hybrid	14EXP02	Clearfield	3330	-	9.7	20.0	78	20,540	5.2	8.6	26.0	55.4	99.0
Red River Commodities	2215	N/A	3308	2749	9.1	20.7	70	19,667	7.4	8.8	23.8	58.0	99.2
Red River Commodities	2215 CL	Clearfield	3292	2742	10.3	21.2	73	19,097	6.2	3.2	17.4	48.2	99.8
Nuseed Americas Inc.	X4237	IMI	3291	-	14.3	20.1	83	16,648	4.8	0.2	0.4	2.6	71.4
CHS Royal Hybrid	14EXP01	N/A	3286	-	10.2	21.6	79	18,198	2.7	23.2	56.8	82.8	99.2
Nuseed Americas Inc.	NSK12M018	IMI	3169	-	12.7	19.1	82	18,213	4.4	3.8	10.0	24.8	95.6
Nuseed Americas Inc.	NHW11909	N/A	3036	-	10.2	19.2	77	18,200	10.6	9.8	32.6	67.6	98.6
Nuseed Americas Inc.	NHW12984	N/A	3035	-	19.4	18.5	77	9,741	4.9	12.0	32.8	70.2	98.4
Nuseed Americas Inc.	X5334	IMI	3024	-	13.0	17.1	75	17,908	4.3	6.0	29.2	67.2	98.6
Nuseed Americas Inc.	NHW12983	N/A	2848	-	13.2	19.7	79	18,806	2.1	1.6	10.6	30.2	97.8
Nuseed Americas Inc.	X5323	IMI	2770	-	11.3	19.0	74	16,138	3.9	31.4	57.0	80.2	99.4
Red River Commodities	8015	N/A	2725	2376	10.4	18.4	66	16,531	6.2	6.0	26.4	63.2	99.4
Nuseed Americas Inc.	X5326	IMI	2698	-	9.9	21.1	81	18,879	5.8	7.6	30.4	69.0	99.0
Nuseed Americas Inc.	X98578	N/A	2673	2306	9.9	19.0	76	19,365	5.1	6.6	27.8	57.4	97.8
Nuseed Americas Inc.	NSK13M333	IMI	2619	-	10.4	20.7	65	19,288	3.0	7.0	17.0	37.2	97.6
SunOpta	EXO245	Clearfield	2613	-	11.4	19.8	79	18,607	6.4	15.2	53.8	81.4	99.4
Red River Commodities	2217 CP	Clearfield Plus	2506	2276	9.3	19.7	71	21,147	4.1	1.4	14.0	44.6	99.4
Nuseed Americas Inc.	NHW12985	N/A	2406	-	9.4	18.2	79	18,786	7.8	23.4	47.6	72.8	98.6
Nuseed Americas Inc.	NHW12759	N/A	1985	-	10.2	17.7	65	19,281	8.5	20.6	47.0	77.2	99.6
Average			2920	2509	11.3	19.5	75	18,153	5.5	10.2	30.0	58.9	97.4

^cLSD (P<0.30)

314

^aHerbicide technology trait designations: Clearfield=Tolerant to Beyond herbicide; Clearfield Plus=Tolerant to Beyond herbicide; ExpressSun=Tolerant to Express herbicide; IMI=Tolerant to Beyond herbicide (imidazolinone chemistry class); N/A=No herbicide traits.

^bYields were corrected to 10% moisture.

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

Site Information

Collaborator: Gerhard Heintges
 Planting Date: 6/16/2014
 Harvest Date: 10/23/2014
 Fertilizer: Nitrogen at 100 lb/ac and phosphorus at 40 lb/ac
 Insecticide: Warrior applied at 1.92 oz/ac during bloom stage
 Irrigation: Pre-plant: 3 inches applied
 Post-emergence: 2 inches applied
 Soil Type: Silt-loam

2014 Limited-Irrigation Oil Sunflower Hybrid Performance Trial at Prospect Valley

Brand	Hybrid	Oil Type ^a	Herbicide		Yield ^c	Moisture	Test	Plant	Population	Lodging	Oil
			Technology	Trait ^b			Weight	Height			plants/ac
					lb/ac	percent	lb/bu	in	plants/ac	percent	percent
Mycogen	8H449CLDM	HO	Clearfield		2152	5.5	26.6	66	23,499	0.6	39.2
NuSeed Americas Inc.	Hornet	HO	Clearfield		2006	5.2	25.4	74	26,852	3.5	38.0
NuSeed Americas Inc.	Camaro II	NS	Clearfield		1979	5.1	27.1	71	28,050	0.9	38.4
Mycogen	8H570CL	HO	Clearfield		1857	5.3	28.4	51	25,772	2.0	37.9
Mycogen	8N668S	NS	N/A		1823	7.0	27.8	50	23,358	1.4	41.2
Mycogen	8H859CL	HO	Clearfield		1800	6.0	28.9	69	25,350	1.3	39.9
NuSeed Americas Inc.	Falcon	NS	ExpressSun		1695	5.7	30.5	59	22,033	1.2	39.4
Syngenta	3732 NS	NS	N/A		1690	5.3	24.6	61	26,420	0.8	35.9
Syngenta	7717 HO/CL/DM	HO	Clearfield		1652	5.1	23.4	60	25,910	0.3	35.2
Syngenta	3845 HO	HO	N/a		1572	5.2	24.3	56	23,279	0.6	37.4
Average					1822	5.6	26.7	62	25,052	1.3	38.2

^dLSD (P<0.30)

123

^aOil type designations: HO=High oleic; NS=NuSun/Mid-oleic.

^bHerbicide technology trait designations: Clearfield=Tolerant to Beyond herbicide; ExpressSun=Tolerant to Express herbicide; N/A=No herbicide traits.

^cYields were corrected to 10% moisture.

^dIf 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

Collaborator: David Ruppel
 Planting Date: 6/6/2014
 Harvest Date: 10/20/2014
 Fertilizer: Poultry manure applied at 4 tons/ac
 Herbicide: Sonalan
 Insecticide: Warrior and Lorsban

2014 Dryland Oil Sunflower Hybrid Performance Trial at Akron

Brand	Hybrid	Oil Type ^a	Herbicide Technology Trait ^b	Yield ^c	Moisture	Test Weight	Plant Height	Population	Lodging	Oil Content
				lb/ac	percent	lb/bu	in	plants/ac	percent	percent
Syngenta	3845 HO	HO	N/A	2239	5.9	31.0	49	7,192	9.5	39.9
Mycogen	8H570CL	HO	Clearfield	2214	5.6	28.5	39	9,616	5.0	40.3
Croplan	13-652 CL	HO	Clearfield	2184	5.6	28.1	48	7,676	7.6	38.1
Mycogen	8N668S	NS	N/A	2116	6.8	29.9	43	9,371	15.7	38.8
Croplan	545 CL	NS	Clearfield	1960	6.9	28.3	55	7,877	16.7	38.1
Mycogen	8H449CLDM	HO	Clearfield	1860	6.5	30.8	51	9,701	12.9	40.7
Syngenta	3732 NS	NS	N/A	1749	5.7	28.4	48	8,543	22.9	39.2
Mycogen	8H859CL	HO	Clearfield	1742	7.3	28.2	57	8,650	12.4	38.3
Syngenta	7717 HO/CL/DM	HO	Clearfield	1624	5.8	29.9	53	8,515	12.1	36.4
Croplan	432 E	NS	ExpressSun	1590	5.9	28.4	50	8,591	22.0	36.2
Croplan	14-572	HO	Clearfield	1511	6.4	27.0	59	5,703	25.9	37.1
Croplan	559 CL	NS	Clearfield	1398	5.6	29.2	60	9,002	31.2	38.6
Average				1849	6.1	29.0	51	8,370	16.2	38.5

^dLSD (P<0.30)

264

^aOil type designations: HO=High oleic; NS=NuSun/Mid-oleic.

^bHerbicide technology trait designations: Clearfield=Tolerant to Beyond herbicide; ExpressSun=Tolerant to Express herbicide; N/A=N herbicide traits.

^cYields were corrected to 10% moisture.

^dIf 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: Central Great Plains Research Center

Planting Date: 6/12/2014

Harvest Date: 10/24/2014

2014 Irrigated Forage and Sweet Sorghum Variety Performance Trial at Rocky Ford

Brand	Hybrid	Forage		Stem	Harvest	Plant	Days to	Relative	Forage
		Yield ^a	Yield	Sugar	Density	Height	Boot	Maturity ^b	Type ^c
		tons/ac	% of test avg.	%	plants/ac (1000 x)	in	days after planting		
Gayland Ward Seed	Sweet Forever BMR	34.5	123	9.9	98.0	124	82	PS	SS
Gayland Ward Seed	Super Sugar	32.5	116	10.7	139.4	127	81	L	SS
Gayland Ward Seed	Sweet Six BMR	32.3	115	8.8	121.4	128	69	E	SS
Alta	AS6401	31.1	111	10.4	123.1	122	82	ML	SS
Alta	AF7201	30.7	109	10.8	94.2	112	73	ME	FS
Alta	AS6501	30.5	109	10.0	116.0	121	79	PS	SS
Gayland Ward Seed	GW 600 BMR	30.1	107	12.2	105.1	119	71	M	FS
Alta	AF7101	29.9	107	9.0	106.2	111	73	E	FS
Gayland Ward Seed	GW 400 BMR	29.8	106	12.1	91.5	117	69	ME	FS
Gayland Ward Seed	Super Sugar (sterile)	29.2	104	8.3	157.4	110	68	ME	SS
Gayland Ward Seed	GW 300 BMR	28.4	101	8.9	93.1	120	74	ME	SS
Alta	AF7202	27.0	96	6.7	109.4	87	72	M	FS
Alta	AF7102	24.4	87	7.3	93.1	84	71	M	FS
Alta	AS6402	23.0	82	10.1	105.6	99	82	L	SS
Alta	AF7401	20.1	72	9.6	112.7	75	86	L	FS
Gayland Ward Seed	Dwarf BMR 6	15.9	57	10.4	85.5	83	81	M	FS
Average		28.1		9.7	109.5	109	76		

^dLSD (P<0.20)

3.2

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

^bRelative Maturity: E=early; ME=medium-early; M=medium; ML=medium-late, L=late, PS=photoperiod sensitive.

^cForage Type: SS=sorghum sudangrass and FS=forage sorghum

^dIf the difference between two varieties yields equals or exceeds the LSD value, then they are significantly different with less than 20% probability that the difference is due to random error.

Site Information

Collaborator: Arkansas Valley Research Center (Mike Bartolo, Jeff Davidson, & Kevin Tanabe)
 Planting Date: 5/30/2014
 Harvest Date: 9/9/2014
 Fertilizer: Manure applied at 20 tons/ac
 Soil Type: Rocky Ford Silty Clay Loam

2014 Dryland Forage and Sweet Sorghum Variety Performance Trial at Walsh

Brand	Hybrid	Forage		Stem	50% Bloom	Harvest	Plant	Stage at	Plant	Relative	Forage
		Yield ^a	Yield	Sugar	days after	Density	Height	Harvest ^b	Lodging	Maturity ^c	Type ^d
		tons/ac	% of test avg.	%	planting	plants/ac	in		%		
Sorghum Partners	SPX28313	18.1	137	6.5	113	41.6	70	MM	25	L	FS
Gayland Ward Seed	GW 400 BMR	16.8	127	17.3	77	42.2	64	MT	0	ME	FS
Sorghum Partners	NK300	15.9	120	10.6	86	45.7	51	MT	0	M	FS
Sorghum Partners	SDH2942BMR	15.7	119	12.7	131	44.9	80	FL	0	PS	SS
Sorghum Partners	SPX902	15.6	118	15.5	Veg	39.7	66	Veg	0	PS	FS
Sorghum Partners	SPX904	15.5	118	11.6	Veg	42.0	65	Veg	0	PS	FS
Sorghum Partners	X942	15.3	116	11.4	Veg	40.1	69	Veg	0	PS	SS
Sorghum Partners	1990	14.7	112	13.2	Veg	36.0	63	Veg	0	PS	FS
Sorghum Partners	Sordan Headless	14.4	109	16.7	132	46.5	73	FL	0	PS	SS
Sorghum Partners	SD1741BMR	14.1	107	16.2	79	39.3	83	MT	0	PS	SS
Sorghum Partners	SPX901	13.8	104	15.1	Veg	42.4	73	Veg	0	PS	FS
Gayland Ward Seed	Super Sugar (sterile)	13.2	100	19.3	69	43.4	77	MT	0	ME	SS
Gayland Ward Seed	GW 300 BMR	12.8	97	11.9	78	37.8	70	MT	0	ME	SS
Sorghum Partners	Trudan Headless	12.8	97	13.3	Veg	41.4	65	Veg	0	PS	SS
Mycogen	2Y767	12.5	95	16.4	75	23.6	54	HD	0	-	Corn
Gayland Ward Seed	Sweet Forever BMR	12.3	93	10.3	85	40.3	71	MM	0	PS	SS
Gayland Ward Seed	Super Sugar	12.1	92	18.7	90	35.6	77	SD	0	L	SS
Gayland Ward Seed	GW 600 BMR	11.9	90	12.9	78	38.1	65	HD	0	M	FS
Sorghum Partners	SPX3903	11.5	87	17.2	112	41.4	66	MM	0	L	FS
Sorghum Partners	SPX903	11.2	85	10.4	Veg	45.5	66	Veg	0	PS	FS
Sorghum Partners	SPX3952	11.0	83	13.7	79	45.7	61	MT	0	M	SS
Sorghum Partners	SS405	10.9	82	8.9	96	39.7	86	HD	30	L	FS
Gayland Ward Seed	Dwarf BMR 6	9.7	73	17.6	88	33.7	37	BT	0	M	FS
Sorghum Partners	SPX3902	9.5	72	21.7	86	37.0	45	PM	0	L	FS
Gayland Ward Seed	Sweet Six BMR	9.1	69	14.3	71	40.3	74	MT	0	E	SS
Average		13.2		14.1		40.2	67		2		

^eLSD (P<0.20)

3.3

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

^bHarvest Stage: Veg=vegetative; BT=boot; FL=flowering; PM=pre-milk; MM=mid-milk; SD=soft dough; HD=hard dough; MT=mature.

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

^dForage Type: SS=sorghum sudangrass and FS=forage sorghum.

^eIf the difference between two varieties yields equals or exceeds the LSD value, then they are significantly different with less than 20% probability that the difference is due to random error.

Site Information

Collaborator: Plainsman Research Center (Kevin Larson and Brett Pettinger)

Planting Date: 5/30/2014

Harvest Date: 10/15/2014

2014 Dryland Grain Sorghum Hybrid Performance Trial at Akron

Brand	Hybrid	Grain		Test		Plant		Maturity	Grain Color
		Yield ^a	Yield	Weight	Moisture	Height	Lodging	Class ^b	
		bu/ac	% of average	lb/bu	percent	inches	score (0-9) ^c		
Dyna-Gro Seed	722B	103.8	132	57.9	12.2	34	1	E	Bronze
Mycogen	1G557	93.3	118	57.9	11.8	31	0	E	Bronze
Dyna-Gro Seed	M71GB01	91.0	115	59.4	12.2	37	1	E	Bronze/Red
Richardson Seeds	11043	89.8	114	59.3	12.6	36	1	ME	Red
Dekalb	DK28E	87.9	112	59.6	12.2	34	1	E	Bronze
Dyna-Gro Seed	GX13501	87.2	111	58.6	13.4	39	1	ME	Bronze/Red
Sorghum Partners	K35-Y5	87.2	111	58.8	12.1	38	0	ME	Cream
Dekalb	DKS29-28	77.8	99	58.6	12.0	34	0	E	Bronze
Mycogen	1G588	76.7	97	58.5	12.9	39	1	E	Bronze
Richardson Seeds	99773	76.2	97	59.9	12.3	37	1	E	Red
Richardson Seeds	91743	71.6	91	59.7	14.9	38	0	E	Red
Sorghum Partners	SP3425	66.7	85	59.3	12.5	33	1	ME	Bronze
Dyna-Gro Seed	M72GW14	62.5	79	57.4	13.2	42	0	E	White
Sorghum Partners	251	56.9	72	60.0	12.2	31	0	E	Red
Sorghum Partners	KS310	53.1	67	59.0	12.3	35	1	ME	Bronze
Average		78.8		58.9	12.6	36	0		
^d LSD (P<0.30)		14.4							

^aYields corrected to 14% moisture.

^bMaturity class: E=early; ME=medium-early.

^cLodging scores: a score of 0 equals no lodging and 9 equals severe lodging.

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

Site Information

Collaborators: USDA-ARS Central Great Plains Research Station
 Planting Date: 5/19/2014
 Harvest Date: 11/21/2014
 Fertilizer: Nitrogen at 60 lb/ac
 Herbicide: Lumax and Roundup applied before emergence

2014 Dryland Grain Sorghum Hybrid Performance Trial at Walsh

Brand	Hybrid	Grain Yield ^a bu/ac	Yield Percent of Trial Average percent	Test Weight lb/bu	Harvest Plant Population plants/ac	Plant Height in	50% Bloom days after planting	GDD ^b	50% Mature days after planting ^d	Maturity Group ^c
RICHARDSON SEEDS	11043	55.0	114	61	29,000	42	69	1724	112	E
ALTA	AG1201	54.8	114	61	25,600	36	68	1696	112	E
RICHARDSON SEEDS	91743	48.7	101	61	27,300	46	67	1668	109	E
SORGHUM PARTNERS	SP3425	46.0	95	62	31,600	36	69	1724	114	E
ALTA	AG1101	43.7	91	60	27,500	36	65	1615	108	E
DYNA-GRO SEED	M71GB01	36.1	75	59	31,800	39	62	1539	103	E
RICHARDSON SEEDS	99773	33.8	70	60	30,000	37	61	1522	101	E
SORGHUM PARTNERS	251	28.0	58	60	26,300	34	64	1589	104	E
DEKALB	DKS38-88	68.3	142	63	30,600	45	75	1883	121	ME
DYNA-GRO SEED	GX13501	55.7	116	61	23,400	44	71	1779	115	ME
DYNA-GRO SEED	722B	50.5	105	60	26,500	33	73	1825	118	ME
SORGHUM PARTNERS	SP3303	45.8	95	63	25,900	40	72	1802	118	ME
SORGHUM PARTNERS	KS310	39.4	82	63	27,500	38	72	1802	117	ME
DEKALB	DKS44-20	63.6	132	62	28,900	41	80	2032	125	M
ALTA	AG1203	53.5	111	62	28,900	42	79	2001	122	M
DYNA-GRO SEED	GX13231	52.6	109	62	25,600	39	79	2001	123	M
DYNA-GRO SEED	766B	51.3	106	53	25,200	41	78	1968	122	M
DYNA-GRO SEED	M72GW14	40.7	84	60	25,200	43	81	2063	128	M
Average		48.2		61	27,600	40	71	1791	115	

^eLSD (P<0.20)

9.5

^aYields corrected to 14% moisture.

^bGDD: Growing degree-days (fahrenheit) 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.

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

Site Information

Collaborator: Plainsman Research Center

Planting Date: 5/30/2014

Harvest Date: 11/5/2014