

TR11-09
December
2011

Colorado State University

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**2011 Colorado Corn
Variety Performance Trials**



Agricultural
Experiment Station

Department of
Soil & Crop Sciences

Extension

Acknowledgments

The authors express their gratitude to the Colorado farmers and Colorado research stations who generously contributed the use of their land, equipment, and time to conduct these trials for the good of all Colorado corn producers:

- Akron – Central Great Plains Research Station
- Burlington – Tim Stahlecker
- Dailey - Mark & Neal Lambert
- Haxtun – Brent Adler
- Rocky Ford – Arkansas Valley Research Center
- Wiggins – Cooksey Farms
- Yuma - Larry Gardner

Research conducted by Colorado State University Crops Testing Program
Department of Soil and Crop Sciences
Colorado State University Extension
Colorado Agricultural Experiment Station

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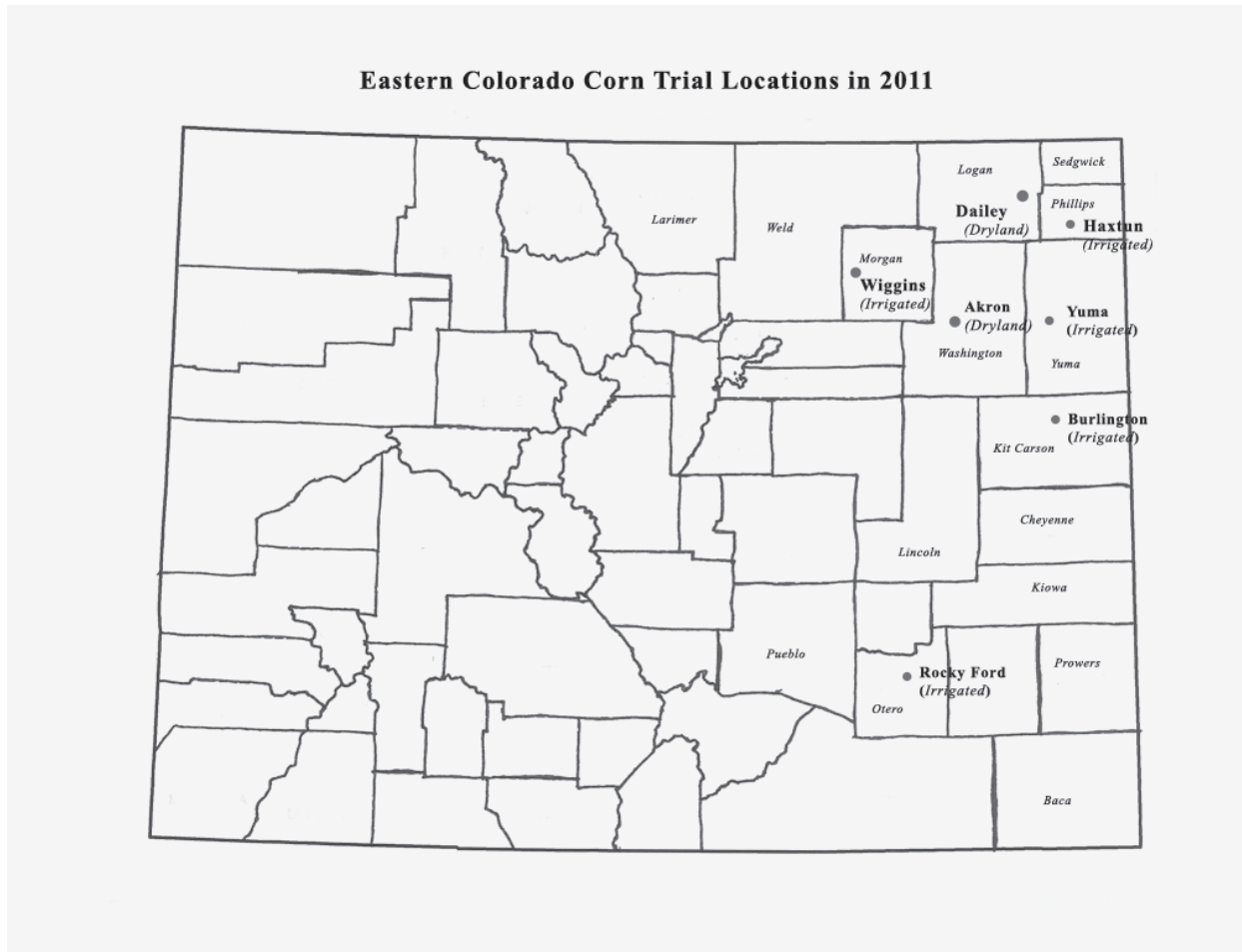
2011 Colorado Corn Hybrid Performance Trials

Introduction

Colorado State University conducts hybrid performance trials to provide unbiased and reliable information to Colorado corn producers so they can select the best hybrids for their farming conditions. Variable climatic conditions, innovations from plant breeding and biotechnology, acquisitions and mergers of seed companies, new cropping practices and rapid development of new hybrid lines means that unbiased crop performance information is increasingly important to Colorado corn producers.

Colorado State University personnel evaluated commercial corn hybrids under irrigation at five Eastern Colorado locations and two dryland locations in 2011. The results from these trials are presented in the following tables which are intended to be stand-alone and self-explanatory. Personnel salaries and operational costs for conducting these trials come from Colorado State University and entry fees from seed companies.

Results can also be found on our website at: www.csucrops.com.



2011 Irrigated Corn Variety Performance Trial at Burlington

Source	Hybrid	Yield ^a	Moisture	Test Weight	Plant Height	Population	Lodging
		bu/ac	percent	lb/bu	in	plants/ac	percent
Triumph Seed	1204S	228.0	23.5	57.5	89	28,803	0.7
Mycogen Seeds	X21552	225.7	18.5	57.6	91	27,836	1.0
Mycogen Seeds	2V715	225.1	19.9	56.4	90	28,943	4.1
Mycogen Seeds	2V707	224.3	23.9	56.5	95	29,192	0.7
Mycogen Seeds	2D744	222.2	18.5	59.9	89	28,784	0.4
Dekalb	DKC62-97 (GENVT3P)	220.4	21.4	57.8	88	29,040	0.0
Dekalb	DKC59-88 (VT3)	217.9	21.1	58.4	87	27,394	3.5
Triumph Seed	1217S	213.0	22.2	56.5	94	29,524	0.0
Triumph Seed	1002S	210.0	18.2	57.7	90	28,266	4.4
Producers Hybrids	6694VT3Pro	208.9	23.6	57.1	81	28,239	3.7
Dekalb	DKC55-24 (VT3)	199.9	18.3	59.9	85	28,450	4.4
LG Seeds	2552VT3	196.5	20.8	56.7	89	28,978	1.0
Triumph Seed	1157X	194.3	19.8	57.5	94	28,750	3.1
Seeds 2000	3051 G3	190.3	18.2	58.3	97	27,975	2.1
LG Seeds	2549VT3	186.9	20.1	56.5	83	28,653	0.7
Producers Hybrids	6582RR	184.5	17.7	60.9	86	28,141	10.0
Dekalb	DKC63-07	180.0	25.8	55.0	80	28,362	0.3
Dekalb	DKC52-59 (VT3)	175.7	16.7	59.2	78	28,072	2.7
Producers Hybrids	6364GT3	168.2	18.6	59.0	89	27,878	4.5
NuTech Seed LLC	5H-0601™	163.1	20.1	58.0	81	27,588	3.2
NuTech Seed LLC	5H-905™	145.5	21.0	58.1	79	26,938	15.8
Mycogen Seeds	2G500	137.6	16.3	60.6	88	27,491	9.8
Seeds 2000	3141 GT	135.4	19.3	58.9	87	28,126	9.2
Producers Hybrids	5784VT3	103.4	17.7	59.3	82	27,390	3.0
Average		189.9	20.1	58.1	87	28,284	3.7
^{b,c} LSD _{0.30}		13.4					
LSD _{0.05}		25.9					

^aYields corrected to 15.5% moisture. A corn rootworm infestation (spatially variable) was suspected to have led to lower yields of susceptible hybrids.

^bLSD_{0.30} is most useful for producers using these results to select a variety but some collaborators find LSD_{0.05} useful

^cIf the difference between two hybrid yields equals or exceeds the LSD value, the difference is significant; if not, the difference is not significant.

Experimental Design: randomized complete block design with three replications

Plot size: 5' x 30'

Site Information

Collaborator: Tim Stahlecker
 Planting Date: 5/4/2011
 Harvest Date: 10/31/2011
 Previous Crop: Corn
 Fertilizer: N-P-K-S-Zn (220-65-5-15-1.5) lb/ac
 Herbicide: Roundup, Atrazine, Helex GT
 Insecticide: Dimethoate and Brigade
 Irrigation: Pivot
 Tillage: Conventional

2011 Irrigated Corn Variety Performance Trial at Rocky Ford

Source	Hybrid	Yield ^a bu/ac	Moisture percent	Test Weight lb/bu	Plant Height in	Silk Date days after planting	Population plants/ac
Dekalb	DKC 63-07	235.9	31.9	52.7	102	58	34,848
Dekalb	DKC 64-69	234.7	29.2	53.2	100	61	34,320
Dekalb	DKC 62-09	231.6	30.0	51.8	102	60	32,566
Triumph Seed	1217S	225.6	30.1	52.8	105	61	32,492
Triumph Seed	1420X	217.1	30.7	53.2	97	61	31,944
LG Seeds	2602 VT3	217.0	29.6	52.4	104	61	29,473
Dekalb	DKC 64-83	212.4	25.8	55.2	103	59	31,218
LG Seeds	2642 VT3	209.1	33.6	52.3	96	60	30,420
LG Seeds	2636 VT3	208.6	31.0	52.3	103	60	34,848
Dekalb	DKC 62-97	206.6	29.7	52.9	99	58	32,403
Mycogen Seeds	2V738	193.4	32.7	53.1	102	62	30,094
Mycogen Seeds	2V702	192.9	31.1	52.9	100	61	31,064
Dekalb	DKC 63-84	188.6	31.5	52.0	102	60	29,595
Triumph Seed	1157X	187.9	26.9	53.0	107	62	30,815
Mycogen Seeds	2V715	180.3	29.0	51.7	103	63	30,424
Mycogen Seeds	2D744	167.4	25.3	54.2	102	61	30,454
Average		206.8	29.9	52.9	102	61	31,686
^{b,c} LSD _{0.30}		17.8					
LSD _{0.05}		34.8					

^aYields corrected to 15.5% moisture

^bLSD_{0.30} is most useful for producers using these results to select a variety but some collaborators find LSD_{0.05} useful

^cIf the difference between two hybrid yields equals or exceeds the LSD value, the difference is significant; if not, the difference is not significant.

Experimental Design: randomized complete block design with three replications

Plot size: 5' x 30'

Site Information

Collaborator: Arkansas Valley Research Center
 Planting Date: 6/6/2011
 Harvest Date: 10/14/2011
 Previous Crop: Corn
 Fertilizer: Preplant: N-P (22-104 lb/ac) Postplant: 150 lb/ac N
 Irrigation: Furrow
 Soil Type: Rocky Ford Silty Clay Loam

2011 Irrigated Corn Variety Performance Trial at Wiggins

Source	Hybrid	Yield ^a bu/ac	Moisture percent	Test Weight lb/bu	Plant Height in	Population plants/ac	Lodging percent	Ear Drop percent
NuTech Seed LLC	5H-905™	184.9	14.2	57.3	93	28,002	12.9	6.1
NuTech Seed LLC	5H-0601™	181.6	14.7	59.7	91	28,653	11.1	3.0
Dekalb	DKC49-94	163.0	12.7	57.6	91	28,072	8.0	3.5
Mycogen Seeds	X21552	162.2	15.3	59.0	98	27,738	35.0	1.4
Dekalb	DKC52-59 (VT3)	154.2	12.7	57.7	89	27,324	6.1	1.9
Triumph Seed	7830R	149.4	13.9	58.6	92	27,775	4.1	10.9
Producers Hybrids	6694VT3Pro	149.0	14.1	57.7	95	29,130	9.2	8.3
Triumph Seed	3212S	146.7	14.5	59.0	109	28,376	7.8	12.7
LG Seeds	2509GT3000	141.2	15.7	58.2	106	28,362	14.4	19.7
Triumph Seed	9934S	140.0	14.5	58.4	104	27,678	7.5	16.0
NuTech Seed LLC	5N-001	136.9	13.6	56.2	99	27,975	55.7	2.8
Producers Hybrids	6364GT3	136.4	14.5	58.4	106	28,183	17.3	22.8
LG Seeds	2525RR	132.5	15.7	60.0	101	28,556	39.9	16.2
Dekalb	DKC59-88 (VT3)	129.0	15.3	60.0	93	28,404	44.7	2.7
Dekalb	DKC55-24 (VT3)	128.7	13.6	59.5	89	27,097	4.6	23.3
NuTech Seed LLC	5H-501™	118.7	13.4	59.3	103	28,701	21.3	20.1
Mycogen Seeds	2G500	118.4	14.3	57.6	98	27,605	65.3	8.1
Mycogen Seeds	2P616	116.9	16.4	60.2	99	28,072	14.8	18.5
Producers Hybrids	6582RR	113.4	15.4	60.6	102	28,362	21.2	20.8
Mycogen Seeds	2A555	103.0	14.9	60.3	103	28,032	14.0	35.2
Triumph Seed	TRX 09669S	98.9	14.4	59.5	102	27,529	12.9	30.5
NuTech Seed LLC	5N-102	85.3	14.0	58.0	102	27,415	84.1	4.6
Average		135.9	14.4	58.8	98	28,047	23.3	13.1

^aYields corrected to 15.5% moisture.

Experimental Design: randomized complete block design with three replications

Plot size: 5' x 30'

Data Analysis: Yield trial data could not be interpreted due to the high degree of field variability caused by severe lodging and ear drop due to windstorms in early and mid-October followed by heavy snowfall. Yields reported are for corn that could be harvested. The yield results should not be used by farmers for selecting superior hybrids for planting, but other trial information can be used by farmers and seed companies to help with hybrid selections.

Site Information

Collaborator: Cooksey Farms
 Planting Date: 5/5/2011
 Harvest Date: 11/15/2011
 Previous Crop: Corn
 Fertilizer: Pre-plant: N-P (100-24) lb/ac, planting: N-P-K-S-Zn (20-18-4.5-4.5-1.0) lb/ac, post-plant: N-K-S (90-10-10) lb/ac, Borosol at 1 qt/ac, and Awaken plant nutrient solution at 1 qt/ac
 Herbicide: Post-plant: Makaze (2 applications) and Widematch at 1 qt/ac each
 Irrigation: Pivot

2011 Irrigated Corn Variety Performance Trial at Holyoke

Source	Hybrid	Yield ^a	Moisture	Test Weight	Plant Height	Population	Lodging
		bu/ac	percent	lb/bu	in	plants/ac	percent
Producers Hybrids	6814VT3	240.0	17.5	54.6	95	26,613	2.2
Dekalb	DKC62-97 (GENVT3P)	227.1	18.5	56.8	86	27,629	1.2
Mycogen Seeds	2C641	222.6	18.7	57.2	91	27,751	0.0
Dekalb	DKC55-24 (VT3)	222.1	17.2	59.2	91	26,910	1.5
LG Seeds	2535STX	221.0	20.0	56.1	88	26,187	0.0
NuTech Seed LLC	5H-0601™	220.5	19.7	57.4	86	24,816	0.4
Dekalb	DKC63-07	218.2	24.7	55.8	82	26,620	2.3
Triumph Seed	7830R	216.9	18.6	57.5	87	26,717	0.0
NuTech Seed LLC	5H-501™	215.8	16.9	58.8	93	25,915	0.4
Producers Hybrids	6694VT3Pro	213.7	18.2	57.3	87	25,846	0.4
Mycogen Seeds	X21552	212.3	19.9	56.2	88	26,462	2.5
Producers Hybrids	7014VT3	211.5	18.6	55.0	88	26,323	1.4
NuTech Seed LLC	5H-905™	211.2	18.2	56.4	88	26,972	0.0
Producers Hybrids	6364GT3	209.0	18.3	57.1	89	26,571	1.1
NuTech Seed LLC	5N-001	206.3	16.2	56.1	89	26,814	0.7
Producers Hybrids	7224VT3	205.6	22.0	54.1	96	26,572	1.8
Dekalb	DKC59-88 (VT3)	205.6	21.2	56.8	86	26,516	1.1
Producers Hybrids	7134VT3	197.6	22.3	54.4	85	26,814	2.3
Dekalb	DKC52-59 (VT3)	194.4	15.7	56.9	85	26,547	2.2
Mycogen Seeds	2A555	194.3	16.8	58.2	91	25,407	0.4
Producers Hybrids	6582RR	192.2	17.9	58.8	92	27,004	1.1
Triumph Seed	9934S	191.3	15.8	56.0	103	26,234	0.9
NuTech Seed LLC	5N-102	191.2	15.4	58.2	91	25,832	7.5
Triumph Seed	TRX 09669S	190.1	14.3	57.5	93	25,642	0.4
Mycogen Seeds	2G500	188.7	16.0	58.4	92	26,520	1.9
LG Seeds	2525RR	171.6	18.1	58.7	100	27,104	1.1
Average		207.4	18.3	56.9	90	26,475	1.3
^{b,c} LSD _{0.30}		14.1					
LSD _{0.05}		27.1					

^aYields corrected to 15.5% moisture

^bLSD_{0.30} is most useful for producers using these results to select a variety but some collaborators find LSD_{0.05} useful

^cIf the difference between two hybrid yields equals or exceeds the LSD value, the difference is significant; if not, the difference is not significant.

Experimental Design: randomized complete block design with three replications

Plot size: 5' x 30'

Site Information

Collaborator: Brent Adler
 Planting Date: 5/10/2011
 Harvest Date: 10/21/2011
 Previous Crop: Corn
 Fertilizer: N-P-K-S (220-65-35-30) lb/ac
 Herbicide: Status, Dual, Roundup
 Irrigation: Sprinkler

2011 Irrigated Corn Variety Performance Trial at Yuma

Source	Hybrid	Yield ^a bu/ac	Moisture percent	Test Weight lb/bu	Plant Height in	Population plants/ac	Lodging percent
Delkalb	DKC62-97 (GENVT3P)	260.1	19.5	58.6	82	30,003	0.9
Mycogen Seeds	2V707	253.3	19.5	57.4	86	28,922	1.5
NuTech Seed	5H-0601™	241.7	17.5	58.8	80	28,137	1.6
Triumph Seed	1217S	237.3	20.2	57.5	83	29,356	0.8
Triumph Seed	1157X	236.8	18.3	56.7	87	28,846	6.9
NuTech Seed	5H-905™	235.2	17.4	58.0	80	28,107	0.4
Triumph Seed	1204S	234.0	20.2	58.2	83	29,911	1.7
LG Seeds	2552VT3	232.0	18.5	55.6	78	29,137	5.1
Triumph Seed	1002S	231.5	17.9	58.4	85	27,838	0.4
Delkalb	DKC59-88 (VT3)	229.5	18.8	59.2	79	29,466	0.4
LG Seeds	2549VT3	227.9	18.4	58.0	78	30,105	0.0
Mycogen Seeds	2V715	226.8	18.4	56.5	87	26,817	9.6
LG Seeds	2544VT3	224.4	18.2	57.1	79	27,291	2.2
Producers Hybrids	6814VT3	218.4	17.8	57.0	73	28,556	2.3
NuTech Seed	5N-001	218.0	15.8	58.4	81	29,305	0.4
Mycogen Seeds	X21552	215.2	17.7	58.4	81	29,061	2.6
Mycogen Seeds	2G500	212.9	16.2	59.9	82	28,887	5.3
Delkalb	DKC63-07	212.2	20.3	58.7	74	28,673	0.0
Seeds 2000	3051 G3	212.1	16.9	58.6	86	26,854	1.5
Producers Hybrids	6364GT3	208.9	17.2	59.4	85	26,926	0.0
Delkalb	DKC55-24 (VT3)	206.9	16.9	60.1	78	29,484	0.4
NuTech Seed	5N-102	206.4	15.8	60.1	84	29,198	1.3
Seeds 2000	3141 GT	204.3	16.2	59.2	86	28,108	2.3
Producers Hybrids	6694VT3Pro	204.2	19.7	57.7	74	27,491	0.5
Delkalb	DKC52-59 (VT3)	203.2	16.3	58.7	76	30,507	0.9
Mycogen Seeds	2D744	202.1	18.6	60.6	84	28,708	1.2
Producers Hybrids	6582RR	184.3	17.7	60.9	80	28,569	1.3
NuTech Seed	5H-501™	181.8	17.6	59.4	83	26,523	5.2
Producers Hybrids	5784VT3	169.1	15.1	59.0	75	27,847	0.0
Average		218.3	17.9	58.5	81	28,574	1.9
^{b,c} LSD _{0.30}		12.2					
LSD _{0.05}		23.4					

^aYields corrected to 15.5% moisture

^bLSD_{0.30} is most useful for producers using these results to select a variety but some collaborators find LSD_{0.05} useful

^cIf the difference between two hybrid yields equals or exceeds the LSD value, the difference is significant; if not, the difference is not significant.

Experimental Design: randomized complete block design with three replications

Plot size: 5' x 30'

Site Information

Collaborator: Larry Gardner
 Planting Date: 5/3/2011
 Harvest Date: 11/7/2011
 Previous Crop: Corn
 Fertilizer: N-P-K-S-Zn-Fe-Mn (245-20-10-10-0.5-0.25-0.25) lb/ac
 Herbicide: Roundup
 Irrigation: Pivot

2011 Dryland Corn Variety Performance Trial at Akron

Source	Hybrid	Yield ^a bu/ac	Moisture percent	Test Weight lb/bu	Ear Height in	Population plants/ac	Lodging percent	Ear Drop percent
Dekalb	DKC43-27 (VT3)	27.8	11.5	52.9	26	12,487	5.2	6.6
Dekalb	DKC42-72 (VT3)	25.1	10.9	51.8	26	12,995	5.0	1.1
Dekalb	DKC52-59 (VT3)	21.4	11.4	53.0	28	12,269	5.7	2.3
Seeds 2000	3051 G3	19.2	12.7	53.3	30	11,191	13.8	4.3
Dekalb	DKC48-37	18.8	12.1	52.3	25	13,358	4.1	5.8
Triumph Seed	TRX 09669S	15.9	11.2	51.6	30	12,539	5.1	10.2
Triumph Seed	9934S	15.9	13.5	51.9	34	11,761	9.3	15.2
Seeds 2000	3141 GT	14.5	14.1	52.8	31	11,040	14.3	6.6
Average		19.8	12.2	52.5	29	12,205	7.8	6.5

^aYields corrected to 15.5% moisture

Experimental Design: randomized complete block design with four replications

Plot size: 5' x 30'

Data Analysis: Yield trial data could not be interpreted due to the high degree of field variability caused by severe drought conditions from 7/15 to 9/14. The trial only received .27 inches of precipitation during this time. There are no significant yield differences among the hybrids in this trial. The yield results should not be used for selecting a superior hybrid, but other trial information can be used by farmers and seed companies to help with hybrid selections.

Site Information

Collaborator: Central Great Plains Research Station

Planting Date: 5/31/2011

Harvest Date: 10/19/2011

Previous Crop: Wheat (fallow)

Fertilizer: 40 lb/ac N as dry broadcast

Herbicide: Roudup and Lumax

Tillage: No-till

Soil Type: Platner Loam

2011 Dryland Corn Variety Performance Trial at Dailey

Source	Hybrid	Yield ^a bu/ac	Moisture percent	Test Weight lb/bu	Ear Height in	Population plants/ac	Ear Drop percent
Dekalb	DKC52-59 (VT3)	104.4	21.2	57.6	37	13,981	0.94
Triumph Seed	9934S	99.8	19.7	56.4	39	13,279	0.54
Dekalb	DKC43-27 (VT3)	93.3	16.9	59.1	31	14,192	0.97
Dekalb	DKC48-37	91.3	16.8	59.6	35	14,388	0.00
Dekalb	DKC42-72 (VT3)	86.5	16.6	58.8	29	14,824	0.00
Triumph Seed	TRX 09669S	82.6	15.9	58.5	35	13,144	2.62
Average		93.0	17.9	58.3	34	13,968	0.85
^{b,c} LSD _{0.30}		6.1					
LSD _{0.05}		12.1					

^aYields corrected to 15.5% moisture

^bLSD_{0.30} is most useful for producers using these results to select a variety but some collaborators find LSD_{0.05} useful

^cIf the difference between two hybrid yields equals or exceeds the LSD value, the difference is significant; if not, the difference is not significant.

Experimental Design: randomized complete block design with four replications

Plot size: 5' x 31'

Site Information

Collaborator: Mark & Neal Lambert
 Planting Date: 5/31/2011
 Harvest Date: 10/18/2011
 Previous Crop: Wheat (fallow)
 Fertilizer: N-P (80-40) lb/ac
 Herbicide: Roundup, Atrazine, Status
 Tillage: No-till

Colorado State University

Crops
Testing



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E16

A handwritten signature in black ink, appearing to read "Jerry Johnson".

Jerry Johnson, Extension Specialist Crop Production

<http://www.csucrops.com>