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2001 Corn and Soybean Performance Trials

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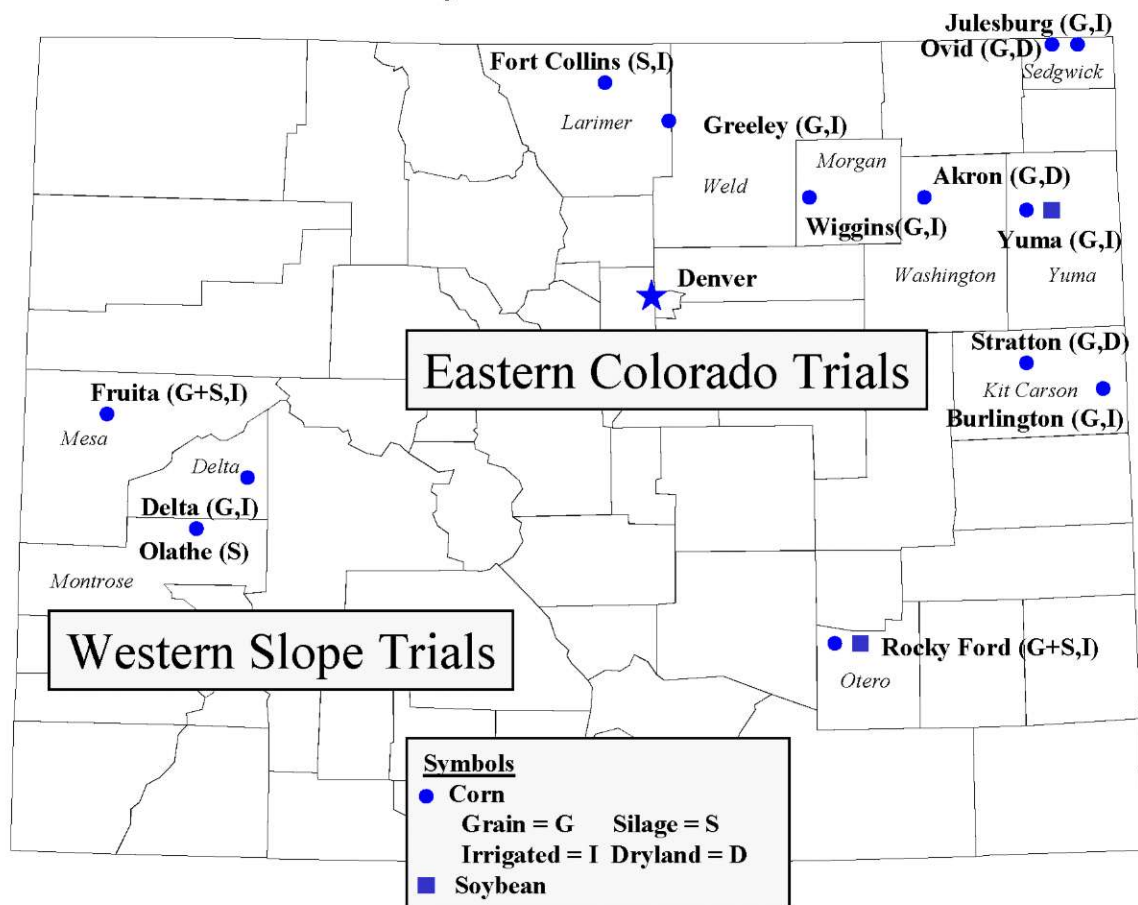
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2001 Colorado Corn and Soybean Variety Performance Trials



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2001 COLORADO CORN HYBRID PERFORMANCE TRIALS

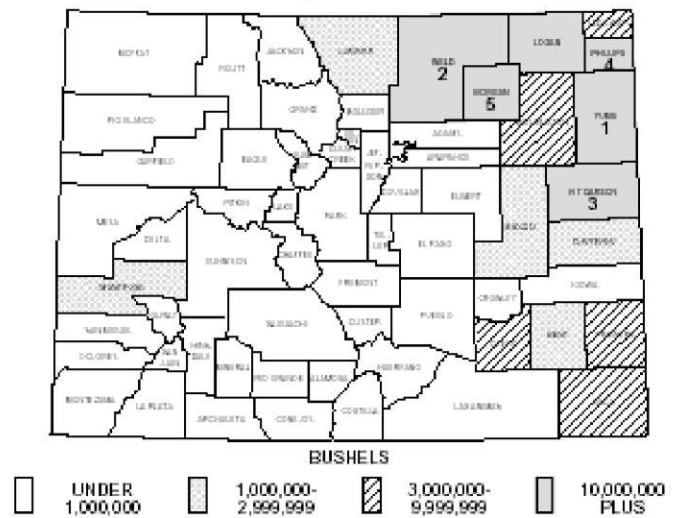
Introduction

The earliest records of corn production in Colorado date back to 1879 when Colorado farmers planted 23,000 acres and yields averaged 20 bu/acre. Colorado corn producers now annually plant approximately one million acres of hybrid corn, for both grain and silage. Hybrid corn seed, valued more than \$30 million, is purchased every year by Colorado corn producers from hybrid seed corn companies. Variable climatic conditions, innovations from biotechnology, acquisitions and mergers of seed companies, and rapid evolution of new hybrid lines means that unbiased performance information is increasingly important to Colorado corn producers.

Colorado State University personnel evaluated commercial corn hybrids under irrigation at six Eastern Colorado locations and three Western Slope locations. Corn hybrids were also tested at three dryland locations in Eastern Colorado and silage hybrids were tested at two Eastern Colorado locations and two Western Slope locations. A randomized complete block field design with three replicates was used at all Eastern Colorado irrigated trials and four replicates were used in all dryland trials. Trial plots were four rows, 36 feet long, with the center two being harvested. Target plant populations for the trials were 32,000 and 15,000 seeds per acre for irrigated and dryland trials, respectively, while irrigated West Slope trials are planted at 33,500 seeds/ac. All grain yields are reported in bushels per acre adjusted to 15.5% moisture content. Silage yields are reported in tons per acre adjusted to 70% moisture content.

40 t/ac in the Fruita silage trial and a record-setting yield of 46.7 t/ac of silage was recorded for the top hybrid.

Corn for Grain: Production by County, Colorado, 2000
with Ranking of First Five Counties



The 2001 Cropping Season

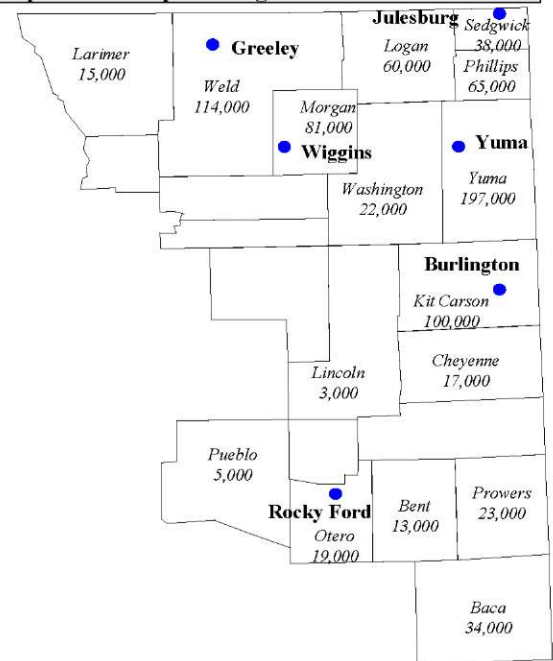
The 2001 corn cropping season in eastern Colorado was conducive to high yields. Average dates of planting followed by later than normal dates of first freeze allowed even later maturing hybrids to reach maturity. There were no widespread disease, insect, or weed problems although yields of the Julesburg irrigated trial were slightly depressed by a weed infestation. The Greeley irrigated trial at Eaton was the only one severely damaged by hail. Prolonged high temperatures during August may have reduced yields in Burlington. The dryland corn trial at Stratton was completely lost to severe and prolonged drought. Conditions were equally conducive to high yields on the West Slope where six hybrids yielded more than

Eastern Colorado Irrigated Grain Corn Performance Data

Each year about 840,000 acres of irrigated corn for grain is planted in Colorado, yielding over 165 bu/acre, and producing upwards of 140 million bushels of corn with a value over \$320 million. Yuma county, the leading producer, harvested an average of 183 bu/acre on 197,000 acres in 2000. Colorado irrigated corn producers spend over \$20 million a year for seed. CSU conducts hybrid performance trials to provide unbiased and reliable information to Colorado producers so they may select the best hybrids for their farming conditions.

An important climatic factor determining irrigated corn yield is growing degree days. Growing degree days (GDD) calculations are accumulated from May 1 to September 30 based on daily temperatures as the average daily high and low temperature minus 50° F. For calculating the mean daily temperature, a minimum temperature below 50° F is counted as 50° F, and a maximum above 86° F is counted as 86° F. GDD's in 2000 were above the long term average GDD at all locations.

Six eastern Colorado irrigated corn trial locations for 2001 and the 2000 corn acreage harvested in sixteen important corn producing counties of Colorado.



Trial Location	Weather Station	2001 GDD	Long Term Average GDD
Burlington	Burlington	2852	2673
Julesburg	Julesburg	2868	2752
SW Greeley	Fort Collins	2672	2335
Rocky Ford	Rocky Ford	3048	2837
Wiggins	Fort Morgan	2894	2667
Yuma	Yuma	2843	2615

Table 1. Irrigated corn cultural conditions in 2001.

	Burlington	Greeley	Julesburg	Rocky Ford	Wiggins	Yuma
Soil Type	Keith Silt Loam	Weld Loam	Rago & Kuma Silt Loam	Silty Clay Loam	Valentine Sand	Julesburg Loamy Sand
Previous Crop	Corn	Corn	Corn	Onions	Corn	Corn
Fertilization						
N acre ⁻¹	212	125	166	202	220	230
P ₂ O ₅ acre ⁻¹	40	60	40	50	30	50
K ₂ O acre ⁻¹	0	40	0	0	40	15
Zn acre ⁻¹	.5	5	1	0	0	1.5
S acre ⁻¹	0	0	7	0	0	15
Herbicide	Distinct	Distinct	Dual II	Bladex, Dual II Gramoxone	Bisis Prowl	Bicep Light Magnum
Insecticide	None	Counter	Pen Cap	Acaricide Capture	Regert	None
Irrigation	Sprinkler	Furrow	Sprinkler	Furrow	Sprinkler	Sprinkler

Table 2. Irrigated corn performance at Burlington¹ in 2001.

Hybrid ²	Grain		Test Plant		Ear		
	Yield	Moisture	Wt	Ht	Density	Lodging	Drop
	bu/ac	%	lb/bu	in	plants/a	%	%
Novartis N72-J5	202	17.1	59.3	95	30984	3	0
Seedex SX7101	201	19.0	58.9	95	30270	2	0
Grand Valley SX1264	200	17.5	56.7	85	30924	2	0
Seeds 2000 X3171(RR)	192	17.1	59.8	105	31640	25	1
Grand Valley SX1300	192	18.4	60.3	93	31473	1	0
Fontanelle 5051	191	16.5	59.2	92	31816	3	0
Novartis N67-T4	190	17.8	62.0	91	31672	2	0
Grand Valley SX1263	188	16.9	60.5	84	30848	7	0
LG Seeds LG2533	187	15.3	59.3	81	32049	0	0
Grand Valley GVX1298	187	17.9	58.6	91	31495	6	0
DEKALB DKC60-15	184	17.8	59.8	85	29905	13	1
DEKALB DKC53-32(YG)	184	14.9	58.2	97	31751	4	1
ASGROW RX730(RR/YG)	184	18.2	54.8	92	31441	5	0
Triumph 1120(Bt/RR)	183	18.3	58.0	96	32083	8	0
Geertson GS-1117	182	17.9	60.3	94	31853	3	0
Farmer Check	181	16.4	60.6	86	30330	2	0
Garst 8546	181	18.9	59.9	91	31714	5	0
Grand Valley GVX1758	180	17.6	58.2	93	30476	13	1
Producers 716	180	17.8	60.2	88	31662	1	0
LG Seeds LG2585	179	16.7	59.6	92	31672	5	0
Grand Valley GVX8937	176	17.7	58.8	93	30492	13	0
Fontanelle 5301	175	17.9	59.5	98	31218	6	0
Kaystar KX-8950(RR)	173	17.8	60.8	93	31621	20	1
Fontanelle HC7735(Bt/RR)	171	18.0	57.6	92	30256	3	0
DEKALB DKC57-38	166	15.1	61.5	92	30720	10	1
Seedex SX7401	161	14.4	59.2	87	30553	0	0
Wilson 1364	158	16.0	61.5	93	30802	17	1
Wilson 1475(PT/IMI)	156	16.1	55.2	89	31233	10	0
Fontanelle HC7534(RR)	155	15.1	55.5	83	30223	2	1
DEKALB DKC51-88	139	14.6	53.8	94	31394	11	3
Average	179	17.0	58.9	91	31152	7	
LSD _(0.30)	14						

¹Trial conducted on the Don Sircy farm; seeded 5/1 and harvested 10/17.²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

*Farmer check was NC+ 3820.

Table 3. 2-Yr average irrigated corn performance at Burlington, 2000-01.

Hybrid	Grain		Test
	Yield	Moisture	
	bu/ac	%	lb/bu
Grand Valley SX1264	214	19.0	56.6
DEKALB DKC53-32(YG)	208	16.4	56.4
LG Seeds LG2533	205	16.4	56.8
Novartis N67-T4(Bt)	205	20.1	58.1
Geertson GS-1117	203	20.6	56.9
Grand Valley SX1300	203	19.4	57.4
Seedex SX7101	203	21.2	56.0
DEKALB DKC57-38	202	15.9	58.7
Seedex SX7401	187	15.6	56.4
Fontanelle HC7734(RR)	184	17.2	53.7
Wilson 1364	178	16.9	58.7
Average	199	18.1	56.9

Table 4. Irrigated corn performance at Eaton (Greeley)¹ in 2001.

Hybrid ²	Grain		Test	Plant		Ear	
	Yield	Moisture	Wt	Ht	Density	Lodging	Drop
	bu/ac	%	lb/bu	in	plants/a	%	%
Seedex SX6205	171	22.4	57.5	86	32030	4	0
Seedex SX6204	166	19.9	59.5	82	31347	6	0
Geertson GS-1049	165	20.6	60.3	87	30031	3	0
Grand Valley SX1229	164	16.7	58.6	81	30015	3	0
Novartis N43-C4	163	15.7	59.7	78	28995	2	0
Farmer Check	159	16.4	61.2	85	29103	8	0
Grand Valley GVSX2050	158	14.9	59.8	80	29140	3	0
Grand Valley GVSX0316	158	18.4	61.2	83	29727	10	0
LG Seeds LG2474	153	16.5	60.5	79	29169	11	0
Kaystar KX-630	152	19.8	59.2	81	30521	8	1
Grand Valley SX1211	149	14.5	57.8	83	29300	17	0
Seedex SX6201	142	17.5	60.6	80	28895	5	0
Grand Valley GVSX7259	140	16.3	61.3	83	27562	8	0
Seedex SX5701	134	16.3	60.3	83	26782	10	0
Grand Valley GVSX3359	131	18.8	61.0	77	28144	2	0
Average	153	17.6	59.9	82	29384	7	
LSD _(0.30)	15						

¹Trial conducted on the Ed Croissant farm; seeded 4/30 and harvested 10/18.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

*Farmer check was Pioneer 38T27.

Table 5. 2-Yr average irrigated corn performance at Eaton (Greeley), 2000-01.

Hybrid	Grain		Test
	Yield	Moisture	Wt
	bu/ac	%	lb/bu
Seedex 6201	166	17.1	58.7
Grand Valley SX1211	156	14.8	56.4
Seedex 5701	146	15.3	57.8
Average	156	15.7	57.6

Table 6. Irrigated corn performance at Julesburg¹ in 2001.

Hybrid ²	Grain		Test	Plant	Density	Lodging
	Yield	Moisture	Wt	Ht		
	bu/ac	%	lb/bu	in	plants/a	%
DEKALB DKC57-72(YG)	224	23.3	62.5	114	25553	0
NC+ 3869	214	20.4	54.4	119	23072	0
DEKALB DKC53-32(YG)	213	18.7	54.6	118	24065	0
DEKALB DKC57-38	212	19.3	56.7	102	23962	2
Grand Valley SX1263	204	18.3	56.1	115	24190	0
ASGROW RX634	204	19.9	56.4	122	24772	0
Grand Valley GVX7259	198	16.2	58.0	102	26161	0
Grand Valley GVX4651	196	18.0	56.5	122	23171	0
Wilson 1475(PT/IMI)	194	23.6	54.4	119	24727	0
Seedex SX7101	194	22.4	54.3	114	25959	0
Grand Valley SX1264	193	21.3	59.8	119	23506	1
Kaystar KX-630	192	19.3	57.6	113	24659	1
Triumph 2370RR	190	18.4	57.6	112	24453	0
Fontanelle 5051	190	20.9	54.8	120	23852	0
Wilson 1364	190	19.1	57.2	114	24365	1
Grand Valley GVX8959	189	21.9	52.9	122	23151	0
Fontanelle 5301	188	22.7	55.5	120	25316	0
Seedex SX7401	188	19.8	54.7	105	26637	0
Grand Valley SX1229	186	16.6	56.2	122	23549	0
Geertson GS-1020	185	17.5	57.3	116	22715	0
Fontanelle 4990	182	22.9	55.3	116	24133	1
Seeds 2000 X3171(RR)	181	22.0	53.3	117	28453	0
Fontanelle 4891	179	19.8	56.5	124	24220	0
Grand Valley GVX8937	178	21.2	54.8	119	23712	1
Farmer Check*	178	22.7	54.3	120	24174	1
Average	194	20.2	56.1	116	24501	
LSD _(0.30)	14					

¹Trial conducted on the Gene Bauerle farm; seeded 5/14 and harvested 10/23.
No ear drop.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

*Farmer check was Golden Harvest 9045.

Table 7. 2-Yr average irrigated corn performance at Julesburg, 2000-01.

Hybrid	Grain		Test
	Yield	Moisture	Wt
	bu/ac	%	lb/bu
DEKALB DKC57-72	209	20.3	59.8
DEKALB DKC57-38	203	16.4	56.6
DEKALB DKC53-32	202	15.8	54.5
Grand Valley SX1263	196	16.0	56.7
Fontanelle 4990	192	18.6	55.7
Grand Valley SX1264	189	17.8	58.6
ASGROW RX634	188	16.4	55.8
Seedex 7101	186	18.1	55.0
Wilson 1364	185	16.2	57.6
Grand Valley SX1229	184	14.4	55.4
Fontanelle 4891	180	16.7	57.2
Seedex 7401	171	16.1	54.2
Average	190	16.9	56.4

Table 8. Irrigated corn performance at Rocky Ford¹ in 2001.

Hybrid ²	Grain		Test Plant		Density	Lodging	Silking ³
	Yield	Moisture	Wt	Ht			
	bu/ac	%	lb/bu	in	plants/a	%	date
Pioneer brand 33P67(Bt)	253	13.5	60.7	84	28949	0	199
HYTEST HT7806	231	15.4	58.8	82	29312	2	201
Producers PH 714(Bt)	226	12.2	58.2	79	30401	0	198
Garst 8559(Bt/RR)	217	11.3	56.7	80	29040	0	197
ASGROW RX730(RR/YG)	215	12.1	58.1	75	28768	0	198
Pioneer brand 33B51(Bt)	215	13.7	59.8	78	27830	0	197
Kaystar X1181	211	13.0	59.7	88	26819	2	202
Grand Valley SX1600	211	14.6	59.0	87	26196	3	205
Pioneer brand 33R77	210	14.0	57.8	86	27264	4	201
Pioneer brand 33A72	209	12.4	60.5	82	29131	2	198
Triumph 1120(Bt/RR)	208	12.1	58.0	77	28597	0	199
Producers PH 717(Bt)	204	13.3	59.0	80	27588	0	198
Grand Valley SX1300	204	12.1	58.7	79	28188	0	197
Novartis N67-T4(Bt)	203	12.2	59.0	79	29948	0	198
Grand Valley GVX1758	203	12.7	59.6	80	28159	0	199
Triumph 2020(Bt/RR)	198	14.0	57.5	82	28405	0	202
Grand Valley GVX4426	196	16.2	60.3	87	25397	2	203
Novartis N72-J5	189	12.7	58.4	83	25444	3	198
Grand Valley GVX4478	184	13.0	57.9	84	24775	3	199
DEKALB DKC57-38	181	10.0	60.0	77	28411	3	198
DEKALB DKC60-15	181	12.2	59.0	72	25954	3	196
Kaystar KX-899	179	17.6	58.8	77	27406	2	199
Average	206	13.2	58.9	81	27817	1	199
LSD _(0.30)	10						

¹Trial conducted on the Arkansas Valley Research Center; seeded 4/27 and harvested 10/26. No significant ear drop.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

³Julian date.

Table 9. 2-Yr average irrigated corn performance at Rocky Ford, 2000-01.

Hybrid	Grain		Test Wt
	Yield	Moisture	
	bu/ac	%	lb/bu
Pioneer brand 33P67(Bt)	261	16.9	61.1
Novartis N67-T4(Bt)	235	15.5	58.4
Pioneer brand 33B51(Bt)	230	17.4	59.8
Grand Valley SX1600	229	16.9	59.2
Grand Valley SX1300	223	15.7	58.2
Grand Valley GVX4478	208	16.3	57.7
Average	231	16.4	59.0

Table 10. Irrigated corn performance at Wiggins¹ in 2001.

Hybrid ²	Grain		Test	Plant	Density	Lodging
	Yield	Moisture	Wt	Ht		
	bu/ac	%	lb/bu	in	plants/a	%
DEKALB DKC53-32(YG)	226	13.9	55.8	98	30855	0
DEKALB DKC57-38	226	14.4	56.8	94	32123	3
Farmer Check*	223	15.8	56.0	96	31418	0
LG Seeds LG2533	221	14.5	54.5	91	31605	0
Grand Valley SX1229	217	13.1	56.0	88	32059	1
Seedex SX7101	215	18.1	53.5	94	30799	7
Seedex SX7401	215	15.2	54.8	93	30180	8
Garst 8590(IT/IMI)	211	14.3	57.3	90	31661	7
Novartis N43-C4	210	12.2	55.7	88	26839	1
Geertson GS-1117	208	17.5	53.4	94	31460	3
ASGROW RX634	206	14.5	56.6	103	31018	7
DEKALB DKC57-72(YG)	206	22.3	55.1	89	30805	0
LG Seeds LG2540	203	15.9	53.3	94	28595	0
NC+ 2919	198	16.2	57.1	89	28391	2
Seedex SX5701	198	12.1	57.3	95	28612	1
Grand Valley GVG0316	194	14.0	57.9	100	31629	5
Seedex SX6201	194	14.4	57.3	85	27608	1
Grand Valley GVG8959	191	16.2	56.5	86	31185	1
Seedex SX6204	187	14.5	57.1	94	30656	8
Kaystar KX-630	187	16.0	56.4	87	29084	0
Seedex SX6205	185	16.8	54.7	92	28998	0
Grand Valley GVG3359	182	14.5	57.6	83	27144	1
Average	205	15.3	55.9	92	30124	3
LSD _(0.30)	14					

¹Trial conducted on the Larry Rothe farm; seeded 5/23 and harvested 11/2. No ear drop.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

*Farmer check was Pioneer 35R57.

Table 11. 2-Yr average irrigated corn performance at Wiggins, 2000-01.

Hybrid	Grain		Test
	Yield	Moisture	Wt
	bu/ac	%	lb/bu
DEKALB DKC53-32	231	14.6	56.1
LG Seeds LG2533	222	15.9	54.8
DEKALB DKC57-38	218	16.1	57.1
Geertson GS-1117	213	19.7	54.2
Grand Valley SX1229	213	14.8	56.7
Garst 8590	212	16.6	57.2
ASGROW RX634	207	15.6	56.7
Seedex 6201	205	15.1	57.4
Seedex 5701	204	13.4	57.6
DEKALB DKC57-72	190	24.8	55.6
Average	212	16.6	56.3

Table 12. Irrigated corn performance at Yuma¹ in 2001.

Hybrid ²	Grain		Test	Plant		
	Yield	Moisture	Wt	Ht	Density	Lodging
	bu/ac	%	lb/bu	in	plants/a	%
LG Seeds LG2585	244	15.1	58.4	97	33088	3
Novartis N72-J5	237	14.7	57.2	98	32406	2
DEKALB DKC60-15	234	15.5	58.8	88	33710	3
Grand Valley GVG1298	233	16.3	58.0	97	29718	3
Novartis N67-T4	228	16.0	59.0	100	32297	1
Producers PH 714(Bt)	226	17.2	58.2	93	33973	1
Geertson GS-1117	226	15.7	58.4	96	29905	1
DEKALB DKC53-32(YG)	222	13.6	57.4	94	33509	0
Seedex SX7101	222	15.2	58.6	98	34501	1
Grand Valley SX1300	222	16.1	58.6	100	33295	2
Triumph 1120(Bt/RR)	220	15.4	57.2	97	33800	2
LG Seeds LG2606	219	16.7	57.9	100	34098	1
DEKALB DKC57-38	218	15.0	59.8	95	27029	2
Producers PH 717(Bt)	217	16.3	58.6	99	34237	1
Grand Valley SX1264	208	15.6	60.6	87	31615	2
Fontanelle HC7735(Bt/RR)	207	17.3	56.1	98	33822	1
Garst 8546	206	16.6	58.7	96	31556	2
Kaystar KX-8950(RR)	206	16.6	58.7	97	30784	2
Fontanelle 5301	205	15.0	56.6	99	31056	7
Fontanelle 5051	205	15.6	58.4	89	28426	6
LG Seeds LG2584(Bt)	204	14.9	57.2	98	30478	4
Seedex SX7401	204	12.5	57.6	94	31985	2
DEKALB DKC57-72(YG)	201	16.8	59.1	87	30166	1
Grand Valley SX1263	200	13.2	59.7	93	31742	2
Seeds 2000 X3171(RR)	196	14.3	58.3	107	30671	2
Fontanelle HC7534 (RR)	196	13.3	58.6	88	33146	3
Farmer Check*	193	17.4	58.4	94	30379	1
Grand Valley GVG8937	193	16.0	57.4	91	31284	2
Grand Valley GVG8959	191	13.1	58.6	91	34243	1
ASGROW RX634	187	15.3	58.3	97	33385	2
NC+ 4990B	181	17.7	59.0	92	29000	0
Average	211	15.5	58.3	95	31913	2
LSD _(0.30)	15					

¹Trial conducted on the Byron Weathers farm; seeded 5/11 and harvested 10/24.
No ear drop.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

*Farmer check was 33B50.

Table 13. 2-Yr average irrigated corn performance at Yuma, 2000-01.

Hybrid	Grain		Test
	Yield	Moisture	Wt
	bu/ac	%	lb/bu
Geertson GS-1117	234	16.1	57.4
Seedex SX7101	233	15.2	57.4
DEKALB DKC57-38	232	14.9	59.0
DEKALB DKC57-72	232	18.8	58.3
Grand Valley SX1300	230	15.2	57.6
Producers PH 714(Bt)	228	16.7	57.3
DEKALB DKC53-32	225	13.6	56.8
Grand Valley SX1264	219	15.2	59.9
LG Seeds LG2584(Bt)	214	15.1	56.9
ASGROW RX634	209	14.9	57.9
Seedex SX7401	206	13.6	56.9
Average	224	15.4	57.8

Dryland Grain Corn Performance Data

Northeastern Colorado growers have been adopting more intensive dryland cropping systems as shown by increased dryland corn acreage which rose from 26,000 acres in 1990 to 340,000 acres in 2000. Average dryland corn yield was 31 bu/acre in 2000, down from 69 bu/acre in 1999.

There were two new dryland corn initiatives in 2001. David Baltensperger, University of Nebraska plant breeder working out of Scottsbluff, provided us with 10 synthetic corn varieties that were tested at Akron and Julesburg. The objective is to identify public corn varieties capable of yielding 80-100% of hybrids and whose seed could be saved by dryland corn producers and used in subsequent years. These varieties performed admirably against modern corn hybrids. Synthetic varieties will be tested for at least three years.

In addition, the Maximum Economic Yield Club (a group of Colorado dryland farmers organized through the Akron USDA-ARS Experiment Station) sponsored an enhanced dryland corn hybrid trial at the Akron location. Club members, desiring performance results for the hybrids they plant in their own fields, entered a large number of hybrids in the Akron dryland corn performance trial. They plan to maintain the same hybrids in the trial for a minimum of three years. Hybrid seed company entries and MEY Club entries were compared in a single trial.

Trial Location	2001 GDD	Long Term Average GDD	2001 Precip. 7/15-8/25	% of normal 7/15-8/25
Akron	2687	2493	2.59	80%
Holyoke	2867	2635	3.02	99%

The 2001 dryland trials suffered from below average precipitation. The Stratton location was lost to prolonged drought. Nielsen et al. (1996) determined that 70% of variation in dryland corn yield can be explained by rainfall during the six-week period, from 15 July to 25 August, corresponding to tasseling, silking, and early grain-filling.

Reference: Nielsen, D., Peterson, G., Anderson, R., Ferreira, V., Shawcroft, W. and Remington, K. 1996. Estimating Corn Yields From Precipitation Records. Conservation Tillage Fact Sheet #2-96. USDA-ARS, P.O. Box 400, Akron, CO.

Table 14. Dryland cultural conditions in 2001.

	Akron	Julesburg
Soil Type	Rago Silt Loam	Rago & Kuma Silt Loam
Previous Crop	Wheat	Wheat
Fertilization		
N lb acre ⁻¹	50	110
P ₂ O ₅ lb acre ⁻¹	0	25
Zn acre ⁻¹	0	1
S acre ⁻¹	0	7
Herbicide	Roundup Tuff Atrazine Accent	Roundup Atrazine
Insecticide	None	None

Three northeastern Colorado dryland corn trial locations for 2001 and the 2000 dryland acreage harvested.

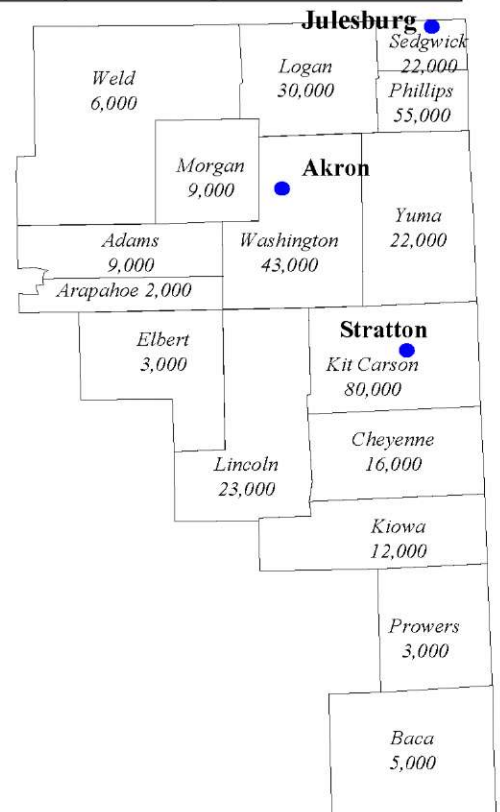


Table 15. Dryland corn performance at Akron¹ in 2001.

Hybrid ²	Grain		Test		Cob	
	Yield	Moisture	Wt	Density	Silking ³	Height
	bu/ac	%	lb/bu	plants/a	date	in
DEKALB DKC48-83	111	13.3	55.9	16117	212	34
Pioneer brand 3655	99	14.7	56.5	16553	212	32
Triumph 9066(RR)	99	13.4	57.8	15952	213	34
Seedex SX5701	97	12.2	54.9	15113	214	34
DEKALB DK440(RR/YG)	97	12.2	55.0	16002	212	31
DEKALB DK520(RR/YG)	95	13.2	54.4	16548	213	29
Novartis N43-C4	93	12.6	55.3	15504	212	29
DEKALB DKC53-32(YG)	92	14.0	54.1	17043	214	32
DEKALB DK46-28(RR)	90	13.7	56.7	15523	213	31
Pioneer brand 37M81	90	13.3	55.9	16332	212	31
DEKALB DK493(RR)	90	12.9	55.7	15573	212	30
Novartis N3030(Bt/YG/LL)	90	14.1	57.1	16550	212	28
Triumph 2370RR	90	13.9	56.3	16063	216	29
Garst 8686(IT/IMI)	88	17.1	58.2	16281	215	34
Pioneer brand 35R57	87	13.4	56.2	16546	213	31
Pioneer brand 37M34	87	13.6	56.9	16063	213	30
Novartis NK Brand 4424	87	14.1	57.1	17152	211	28
Novartis N4242	87	13.5	57.8	16274	211	29
DEKALB DKC46-26	87	13.0	56.9	15731	213	30
Pioneer brand 3752	87	14.2	58.3	16436	211	29
Novartis N4242(Bt/YG/LL)	87	13.9	57.8	16150	212	30
Pioneer brand 38K06	86	13.5	58.0	16057	212	33
Cropland 481(RR)	86	14.9	55.6	15765	213	34
Seeds 2000 X3132	85	13.8	57.2	16279	216	34
NC+ 2021(RR)	85	12.3	53.5	16008	216	33
DEKALB DKC51-88	85	15.3	57.6	16063	216	30
Triumph 9907(RR)	85	12.5	54.5	15780	213	31
Triumph 1321(RR)	84	16.8	57.3	16498	216	38
Cropland 441	84	14.3	56.2	16281	214	29
Garst 8590(IT/IMI)	83	14.8	57.1	17314	217	36
Triumph 4542(Bt)	82	17.5	56.1	17043	217	39
Triumph 1120(Bt/RR)	82	20.8	56.0	17097	219	41
Novartis N45T5	81	12.5	54.7	15774	211	31
NC+ 2300	80	13.9	55.6	16606	216	31
Garst 8756(RR)	78	12.1	53.6	16498	214	32
Pioneer brand 34G81	76	16.4	56.6	15954	215	31
AgriPro 9313	71	13.3	55.5	16159	216	32
AgriPro 9340	67	13.9	55.5	16318	216	30
Average	87	14.1	56.2	16237	214	32
LSD _(0.30)	9.2					

¹Trial conducted on the Central Great Plains Research Center; seeded 5/18 and harvested 10/20. No significant lodge or ear drop.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry1Ab corn borer resistance.

³Julian date.

Table 16. 2-Yr average dryland corn performance at Akron, 2000-01.

Hybrid	Grain		Test
	Yield	Moisture	
	bu/ac	%	lb/bu
DEKALB DKC48-83	87	13.5	55.2
DEKALB DKC53-32	85	14.0	54.0
Seedex SX5701	82	12.6	54.7
Garst 8756(RR)	81	12.5	53.8
Novartis N43-C4(Bt)	79	13.3	55.1
Garst 8590	71	17.4	56.7
AgriPro 9313	65	13.4	55.2
Average	79	13.8	54.9

Table 17. Dryland synthetic varieties performance at Akron¹ in 2001.

Hybrid	Grain		Test		Silking ²
	Yield	Moisture	Wt	Density	
	bu/ac	%	lb/bu	plants/a	date
HPAL C-8	78	14.6	57.6	16199	213
HPAL C-7	77	14.5	58.0	16521	213
HPAL C-10	76	15.5	57.8	15709	214
HPAL C-1	73	14.2	57.1	16539	213
HPAL C-9	71	15.6	57.5	16173	214
HPAL C-5	71	15.2	57.1	17283	215
HPAL C-4	71	14.7	57.0	16534	213
HPAL C-2	71	15.1	58.1	15849	215
HPAL C-6	70	15.2	57.4	15765	212
HPAL C-3	68	14.8	57.6	15908	213
Average	73	15.0	57.5	16248	213
LSD _(0.30)	6				

¹Trial conducted on the Central Great Plains Research Center; seeded 5/18 and harvested 10/21.

²Julian date.

Table 18. Dryland corn performance at Julesburg¹ in 2001.

Hybrid ²	Grain		Test		Cob		Ear
	Yield	Moisture	Wt	Density	Ht	Lodging	Drop
	bu/ac	%	lb/bu	plants/a	in	%	%
Seeds 2000 X3132	51	17.0	50.6	16297	36	0	0
Grand Valley GVX2050	48	16.7	55.0	16260	37	0	1
Triumph 2370RR	47	16.5	55.1	16880	35	0	0
DEKALB DKC53-32(YG)	47	16.5	53.1	17492	35	0	1
Grand Valley SX1264	45	15.8	56.4	16675	38	0	0
Grand Valley SX1211	44	16.8	54.0	17079	31	2	0
DEKALB DK507	44	16.0	57.1	16607	34	0	0
DEKALB DKC51-88	43	16.0	55.5	16811	38	0	0
Garst 8590(IT/IMI)	43	15.2	55.9	15790	40	0	0
Garst 8686(IT/IMI)	42	15.2	58.0	15987	38	0	0
DEKALB DKC46-26	42	17.2	50.2	15918	38	6	0
Seedex SX5701	41	16.4	54.3	14987	35	0	0
Farmer Check*	39	16.4	52.2	16113	33	0	0
Grand Valley GVX8959	38	16.0	55.6	15586	36	1	0
Kaystar KX-630	37	16.3	54.4	15632	36	0	0
ASGROW RX601(RR/YG)	36	15.6	55.4	14895	40	0	0
AgriPro 9340	35	16.2	54.5	16199	37	0	0
Grand Valley SX1229	33	15.8	55.4	16539	34	0	0
AgriPro 9313	31	16.2	56.0	16675	38	0	0
Garst 8756(RR)	31	16.9	51.4	15314	40	1	0
Grand Valley GVX4651	31	16.5	54.5	15707	35	0	0
Grand Valley GVX7259	28	15.6	55.4	14796	37	0	0
NC+ 3820	23	15.3	59.9	16063	37	0	3
Average	39	16.2	54.8	16100	36		
LSD _(0.30)	5						

¹Trial conducted on the Josh Lechman farm; seeded 5/15 and harvested 10/22.²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry IAb corn borer resistance.

*Farmer check was DEKALB 520.

Table 19. 2-Yr average dryland corn performance at Julesburg, 2000-01.

Hybrid	Grain		Test
	Yield	Moisture	Wt
	lb/ac	%	lb/bu
DEKALB DKC53-32	51	21.6	52.4
Grand Valley SX1264	51	19.9	55.9
Seedex SX5701	50	15.9	54.3
DEKALB DK507	48	16.4	57.1
Grand Valley SX1229	46	15.2	55.0
Garst 8590	46	22.2	55.2
Garst 8756(RR)	46	16.3	52.3
AgriPro 9313	43	17.7	55.2
Average	48	18.2	54.7

Table 20. Dryland synthetic varieties performance at Julesburg¹ in 2001.

Hybrid	Grain		Test		Cob		Ear
	Yield	Moisture	Wt	Density	Ht	Lodging	Drop
	bu/ac	%	lb/bu	plants/a	in	%	%
HPAL C-8	42	16.5	55.7	16692	37	1	0
HPAL C-1	40	16.3	56.4	16600	34	1	0
HPAL C-7	36	16.4	56.4	16335	32	1	0
HPAL C-2	36	16.4	55.2	15965	36	2	0
HPAL C-5	35	16.5	55.3	16321	35	1	0
HPAL C-6	35	16.7	54.6	16063	33	2	1
HPAL C-4	34	16.5	55.1	15294	35	0	0
HPAL C-3	33	16.6	54.9	16423	32	1	0
HPAL C-9	31	16.4	56.4	15404	34	1	1
HPAL C-10	28	16.5	56.2	15861	31	2	0
Average	35	16.5	55.6	16096	34	1	
LSD _(0.30)	5						

¹Trial conducted on the Josh Lechman farm; seeded 5/15 and harvested 10/22.

Western Slope Grain Corn Performance Data

Over 3,000,000 bushels of corn grain are produced on some 30,000 acres of irrigated farmland on the Western Slope every year, bringing in over \$8 million to local producers. Calvin Pearson of the Colorado Agricultural Experiment Station evaluates long-season and short-season corn grain hybrids to provide reliable and unbiased information to Western Slope producers.

Growing season conditions in 2001 on the Western Slope were favorable for corn production with above average GDD.

Table 21. Western Slope irrigated corn cultural conditions in 2001.

	Delta	Fruita Short Season	Fruita Long Season
Soil Type	Mesa Loam	Billings Silty Clay Loam	Billings Silty Clay Loam
Previous Crop	Sweet Corn	Alfalfa	Alfalfa
Fertilization			
N lb acre ⁻¹	180	182	182
P ₂ O ₅ acre ⁻¹	58	104	104
Herbicide	Clarity	Bladex 4L	Bladex 4L
Insecticide	Comite Dimethoate Lorsban	Comite II Dimethoate	Comite II Dimethoate
Irrigation	Furrow	Furrow	Furrow

Trial Location	2001 GDD	Long Term Average GDD
Fruita	2892	2673
Delta	2933	2590

Two Western Slope corn grain and silage trial locations for 2001 and the 2000 acreage harvested in four important corn producing counties of the Western Slope.

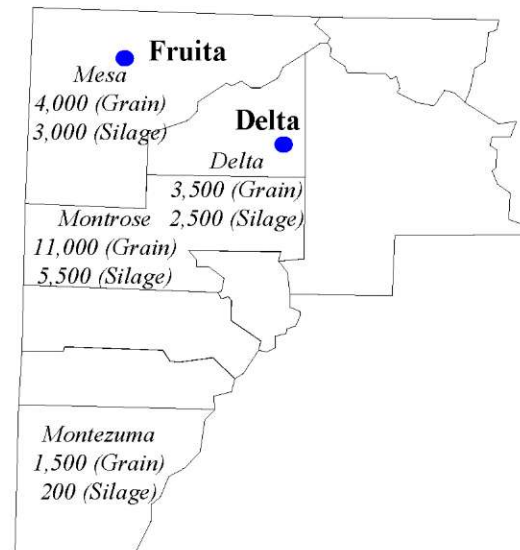


Table 22. Irrigated short season corn performance at Delta¹ in 2001.

Hybrid ²	Grain		Test		
	Yield	Moisture	Wt	Density	Lodging
	bu/ac	%	lb/bu	plants/a	%
Geertson GS-1117	279	14.4	58.4	32538	4
HYTEST HT7550	246	13.0	59.0	34068	17
DEKALB DKC53-32(YG)	241	13.0	59.0	32213	1
Grand Valley G VX4651	237	13.0	58.6	33186	0
Grand Valley SX1229	236	12.5	57.7	32213	3
Grand Valley G VX8959	235	13.2	59.5	31611	0
Grand Valley G VX0316	226	12.8	60.4	33465	2
DEKALB DK507	223	12.6	59.4	35365	1
Grand Valley G VX3359	205	12.8	59.8	29062	1
Grand Valley SX1211	204	12.8	58.7	27439	4
Grand Valley G VX2050	204	12.5	58.8	34253	5
DEKALB DKC46-26	196	12.5	59.3	33928	4
Grand Valley G VX7259	179	12.6	58.9	22063	2
Average	224	12.9	59.0	31646	3
LSD _(0.30)	13.3				

¹Trial conducted on the Wayne Brew farm; seeded 4/27 and harvested 11/15. No ear drop.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

Table 24. Irrigated short season corn performance at Fruita¹ in 2001.

Hybrid ²	Grain		Test		
	Yield	Moisture	Wt	Density	Lodging
	bu/ac	%	lb/bu	plants/a	%
Grand Valley SX1300	253	16.8	58.0	34530	2
DEKALB RX634	234	13.6	60.8	34894	2
Grand Valley G VX8937	222	13.3	59.6	32625	4
HYTEST HT7512	209	13.4	59.6	33124	2
DEKALB DKC57-72	193	15.0	61.3	34349	10
DEKALB DKC53-32(YG)	182	12.8	60.2	34758	16
Grand Valley G VX8959	180	12.9	61.2	32171	2
DEKALB DKC57-38	172	13.3	60.7	33941	15
Average	206	13.9	60.2	33799	6
LSD _(0.30)	13				

¹Trial conducted on the Western Colorado Research Center; seeded 5/2 and harvested 10/30. No ear drop.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

Table 23. 2-Yr average irrigated short season corn performance at Delta, 2000-01.

Hybrid	Grain		Test Wt
	Yield	Moisture	
	bu/ac	%	lb/bu
Geertson GS-1117	283	14.8	58.9
Grand Valley SX4651	250	13.6	58.9
Grand Valley SX1229	239	12.8	58.2
Grand Valley SX1211	214	13.2	59.1
Average	246	13.6	58.8

Table 25. 2-Yr average irrigated short season corn performance at Fruita, 2000-01.

Hybrid	Grain		Test Wt
	Yield	Moisture	
	bu/ac	%	lb/bu
Grand Valley SX1300	249	18.3	57.2

Table 26. Irrigated long season corn performance at Fruita¹ in 2001.

Hybrid ²	Grain		Test		Lodging
	Yield	Moisture	Wt	Density	
	bu/ac	%	lb/bu	plants/a	%
HYTEST HT7806	290	18.7	58.5	34531	0
Grand Valley GVX4426	270	20.7	58.0	29540	2
Grand Valley SX1600	249	18.0	58.6	30628	0
Grand Valley GVX4478	246	17.8	56.4	32534	2
Zimmerman 1851W	243	21.7	55.8	34394	5
Wilson 1788	225	17.9	59.4	34440	3
ASGROW RX730(RR/YG)	215	17.6	58.0	33396	7
DEKALB DKC60-15	167	16.4	58.9	32716	25
DEKALB DKC57-38	156	14.2	60.3	33034	30
Average	229	18.1	58.2	32801	8
LSD _(0.30)	18				

¹Trial conducted on the Western Colorado Research Center; seeded 5/2 and harvested 10/30. No ear drop.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

Corn Silage Performance Data for Eastern Colorado and the Western Slope

Colorado farmers cut more than 100,000 acres of corn for silage each year. Corn seed required for seeding this crop represents annual sales of about \$3 million. Colorado State University personnel evaluate commercial corn silage hybrids at multiple locations to provide Colorado farmers with reliable and unbiased hybrid performance information. In 2001, corn silage hybrids were evaluated at Fruita and Delta on the West Slope and at Fort Collins and Rocky Ford in eastern Colorado. The silage yields given below are reported in tons per acre adjusted to 70% moisture content. The

moisture content at the time of harvest is also reported as an indicator of hybrid maturity at harvest. The highest yield for 2001 for a single hybrid in one trial was obtained on the West Slope at Fruita and tipped the scales at almost 47 tons per acre. This is believed to be the highest silage yield in the last ten years in all Colorado trials!

Trial Location	2001 GDD	Long Term Average GDD
Fruita	2892	2673
Delta (Olathe)	2933	2590
Fort Collins	2672	2335
Rocky Ford	3048	2837

Table 28. Corn silage cultural conditions in 2001.

	Fort Collins	Fruita	Olathe	Rocky Ford
Soil Type	Fort Collins Clay Loam	Billings Silty Clay Loam	Sandy Loam	Silty Clay Loam
Previous Crop	Pinto beans	Alfalfa	Silage corn	Onions
Fertilization				
N lb acre ⁻¹	150	182	227	202
P ₂ O ₅ lb acre ⁻¹	50	104	98	50
Herbicide	Frontier Prowl	Bladex 4L	Harness	Bladex, Dual II Gramoxone
Insecticide	None	Comite II Dimethoate	None	Acaricide Capture
Irrigated	Sprinkler	Furrow	Furrow	Furrow

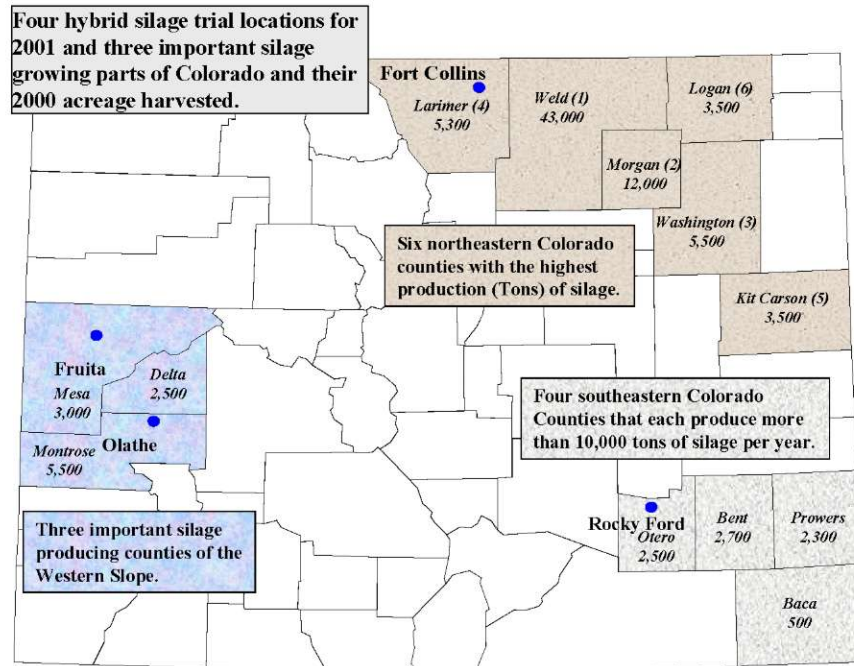


Table 29. Corn silage performance at Fort Collins¹ in 2001.

Hybrid ²	Yield t/ac	Moisture %	Plant	
			Height in	Density plants/a
Garst 7850	31.5	69.1	104	35434
FR1064 x Lfy 419L	31.5	66.6	112	34995
NC+ 3709	28.2	66.9	99	33987
Seedex SX7101	27.3	65.0	94	37416
MBS3811 x Lfy 497L	27.2	73.2	117	36936
Geertson GS-1099	26.9	67.1	98	31325
Seedex SX7401	26.3	67.1	89	37263
Seedex SX5701	25.9	61.5	92	32443
Grand Valley G VX4478	25.3	71.7	98	37491
Grand Valley SX1356	25.2	67.9	99	36755
Garst 8396(IT/IMI)	24.3	73.1	98	33349
Grand Valley SX1550	23.9	73.4	103	30055
Garst 8640(IT/IMI)	23.5	68.7	97	34632
Grand Valley SX1256	23.4	67.6	94	34745
MBS3811 x Lfy 669L	21.3	78.6	117	34979
Average	26.1	69.2	101	34787
LSD _(0.30)	3.4			

¹Trial conducted on the Agricultural Research Development and Education Center; seeded 4/30 and harvested 9/14.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry I Ab corn borer resistance.

Table 30. 2-Yr average corn silage performance at Fort Collins, 2000-01.

Hybrid	Yield		Moisture
	t/ac	%	
FR1064 x Lfy 419L	31	68.8	
Geertson GS-1099	30	66.4	
Seedex 7101	28	67.0	
Seedex 7401	28	66.7	
MBS3811 x Lfy 497L	28	74.6	
Grand Valley SX1550	27	72.2	
Garst 8640	27	67.8	
Grand Valley G VX4478	27	71.8	
Grand Valley SX1356	27	69.5	
Grand Valley SX1256	26	67.4	
Seedex 5701	26	62.5	
Average	28	68.6	

Table 31. Corn silage performance at Rocky Ford¹ in 2001.

Hybrid ²	Plant				
	Yield	Moisture	Height	Density	Silking ³
	t/ac	%	in	plants/a	date
Grand Valley SX1602	37.9	62.2	98	30421	204
HYTEST HT7820	36.9	62.8	100	28805	205
Wilson 1980	36.7	62.9	92	26197	207
AgriPro HY 9646	36.6	61.5	94	27406	204
Zimmerman 1851W	35.8	61.9	90	30401	205
HYTEST HT7815	35.5	65.7	88	30946	207
Asgrow RX938	35.4	63.0	88	28223	207
MBS3811 x Lfy 497L	35.1	60.0	106	29222	206
HYTEST TNT118	34.6	61.7	87	28858	204
Pioneer brand 31B13(Bt)	34.5	58.4	87	29131	203
Grand Valley GVX0116	34.4	64.7	92	28768	204
DEKALB DK743	33.6	64.3	90	27860	203
Pioneer brand 32P76(Bt)	33.5	58.8	87	28211	200
Pioneer brand 31G98	33.2	62.4	88	28223	203
MBS3811 x Lfy 669L	31.9	68.2	111	26553	213
FR1064 x Lfy 419L	31.2	57.3	95	28314	203
Garst 8315(IT/IMI)	31.1	63.2	89	27871	205
Wilson 1788	28.0	56.0	86	28968	198
Average	34.2	61.9	93	28577	204
LSD _(0.30)	2.2				

¹Trial conducted on the Arkansas Valley Research Center; seeded 4/27 and harvested 9/11.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

³Julian date.

Table 32. 2-Yr average corn silage performance at Rocky Ford, 2000-01.

Hybrid	Yield	Moisture
	t/ac	%
AgriPro HY9646	40	57.9
MBS3811 x Lfy 497L	40	56.1
Wilson 1980	40	59.3
Grand Valley SX1602	39	58.1
Pioneer brand 31B13(Bt)	37	58.0
Pioneer brand 31G98	36	59.4
Garst 8315	36	59.4
FR1064 x Lfy 419L	34	55.8
Average	37	57.8

Table 33. Corn silage performance at Fruita¹ in 2001.

Hybrid ²	Yield	Moisture	Ear	Plant	Density
			Height	Height	
	t/ac	%	ft	ft	plants/a
HYTEST HT7820	46.8	66.2	5.6	11.6	33458
Grand Valley SX1602	44.4	63.2	5.4	11.3	34106
Grand Valley SX1550	42.7	63.5	5.2	11.2	33411
HYTEST HT7815	42.1	66.2	5.5	10.6	34523
AgriPro HY 9646	40.6	66.8	5.4	11.3	32577
Grand Valley SX1545M	40.4	64.8	5.4	11.6	32948
Grand Valley GVGX0116	39.7	69.0	5.1	11.2	32160
Asgrow RX938	39.0	70.8	5.4	10.8	35126
Garst 8315(IT/IMI)	37.4	63.5	5.5	10.6	33457
DEKALB DK743	36.6	68.5	4.8	11.0	32484
Zimmerman 1851W	36.5	68.8	4.9	11.0	34014
Wilson 1980	36.3	69.4	5.4	11.2	30631
Wilson 1788	33.8	57.5	4.7	10.8	35079
Geertson GS-1117	31.9	58.8	4.0	9.5	31326
Average	39.2	65.5	5.2	11.0	33236
LSD _(0.30)	3.3				

¹Trial conducted on the Western Colorado Research Center; seeded 5/2 and harvested 9/13.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

Table 35. Corn silage performance at Olathe¹ in 2001.

Hybrid ²	Yield	Moisture	Plant	Ear	Density
			Height	Height	
	t/ac	%	ft	ft	plants/a
Grand Valley SX1545M	34.8	66.0	10.8	5.2	32624
Grand Valley SX1550	30.6	63.5	10.9	5.1	32808
HYTEST HT7820	29.6	69.4	11.1	5.2	32530
HYTEST HT7815	29.0	71.0	10.0	5.2	35311
Grand Valley SX1602	28.9	67.9	10.6	5.0	32021
Grand Valley SX1356	28.4	63.2	10.1	4.2	33458
Grand Valley GVGX4478	28.3	61.0	9.8	3.4	31743
Garst 8640(IT/IMI)	26.9	56.7	9.5	3.8	33411
DEKALB DK551	26.6	46.8	9.0	3.4	35867
Garst 8396(IT/IMI)	26.4	67.4	10.3	4.3	33921
Grand Valley SX1600	26.1	65.5	10.2	4.6	32716
DEKALB DKC53-32(YG)	25.6	49.0	9.1	3.2	35543
Average	28.4	62.3	10.1	4.4	33496
LSD _(0.30)	2.5				

¹Trial conducted on Earl Seymour farm; seeded 5/1 and harvested 9/17.

²Abbreviations used with corn hybrids: Bt = transgenic corn borer protection, IR, IMI, IMT, PT = Imidazolinone Resistant (Pursuit, Resolve, Contour), LL = Liberty Link/Glufosinate herbicide tolerance, RR = Roundup Ready/roundup herbicide tolerance, YG = YieldGard/Cry 1Ab corn borer resistance.

Table 34. 2-Yr average corn silage performance at Fruita, 2000-01.

Hybrid	Yield	Moisture
	t/ac	%
Grand Valley SX1602	43	62.2
Grand Valley SX1545M	39	62.4
Wilson 1980	37	66.1
Grand Valley SX1550	37	63.4
Average	39	63.5

Table 36. 2-Yr average corn silage performance at Olathe, 2000-01.

Hybrid	Yield	Moisture
	t/ac	%
Grand Valley SX1356	28	66.1
Grand Valley GVGX4478	28	64.4
Grand Valley SX1600	27	68.2
Average	28	66.2

2001 Colorado Soybean Variety Performance Results

Growing interest in the production of soybeans in Colorado gave rise to soybean variety testing on a statewide basis in 2001. Colorado State University began this testing effort to provide unbiased and reliable variety information to Colorado soybean producers to help them make better variety decisions.

2001 was the first year of testing soybean varieties at Yuma. This sprinkler irrigated trial on soils with pH in the range of 7.0 – 7.4 included only Roundup Ready varieties. Yuma has a relatively long growing season (average 2615 corn growing degree days) and is appropriate for Group 2 maturity varieties. Our first attempt at soybean variety testing was marred by a severe hail storm during the first week of September. Our collaborating grower thinks yields were reduced by 40% due to the storm.

Rocky Ford, site of soybean variety trials for several years, has a longer growing season (2837 corn growing degree days) and can produce late Group 3 or early Group 4 maturity soybeans. The trial was furrow irrigated with a soil pH of 7.8. Both conventional and

Roundup Ready varieties were included, and conventional herbicides were used. Plots in both trials consisted of four rows, each 36 ft long. Yields are expressed at 13% grain moisture as bu/ac with 60 lbs of soybeans in one bushel.

Table 37. Soybean cultural conditions in 2001.

	Rocky Ford	Yuma
Soil Type	Silty Clay Loam	Kuma-Kieth Silt Loam
Previous Crop	Cabbage	Corn
Fertilization		
N lb acre ⁻¹	10.6	5
P ₂ O ₅ lb acre ⁻¹	50	54
Zn	0	.5
Herbicide	Dual II M GlyStar Basagran Blazer Prast Cropcil	Dual II Magnum
Insecticide	None	None
Irrigation	Furrow	Sprinkler

Table 38. Soybean performance at Rocky Ford¹ in 2001.

Variety ²	Yield	Moisture	Plant Height	Leaf Drop
	bu/ac	%	in	date ³
DG 3399(RR)	72.9	7.2	35	275
Pioneer brand 93B85	72.1	7.0	33	275
Garst 355(RR)	70.8	6.8	36	273
Pioneer brand 93B72	69.9	6.9	32	274
Pioneer brand 93B53	69.1	6.9	34	273
Garst 437(RR/N)	68.8	7.7	38	277
DG 3388(RR)	68.5	7.2	37	0*
Asgrow AG3903	67.9	7.4	35	275
Asgrow AG3902	67.8	7.5	36	0*
Garst 381(RR/STS)	67.6	6.9	35	273
DEKALB DKB40-51	61.8	7.6	37	277
Average	68.8	7.2	35	225
LSD _(0.30)	4.4			

¹Trial conducted on the Arkansas Valley Research Center; seeded 6/4 and harvested 10/10. No shatter.

²Abbreviations used with soybean variety traits: RR = Roundup Resistant, RR/N = Not Roundup Resistant, STS = Sulfonylurea Tolerance

³Julian date.

*Frosted before leaf drop.

Table 39. Soybean performance at Yuma¹ in 2001.

Variety ²	Yield	Moisture	Plant Height	Shatter
	bu/ac	%	in	rating ³
DG 3270(RR)	47.6	13.4	34	2.3
Syngenta S29-C9	45.7	11.2	31	2.0
Prairie Brand PB-2717(RR)	42.8	11.8	34	2.0
Asgrow AG2703	41.2	13.5	33	2.0
Asgrow AG2402	36.6	12.7	36	3.0
Syngenta S24-K2	35.0	14.5	36	2.7
Garst 198(RR)	32.6	12.7	30	3.0
Prairie Brand PB-2131(RR)	32.5	12.6	34	3.0
DG 3263(RR)	31.6	12.9	37	2.3
DEKALB DKB26-51	30.8	11.5	31	2.3
Garst 2547(RR)	29.9	12.4	32	3.3
DEKALB DKB23-51	28.5	13.0	33	3.0
Asgrow AG2302	28.0	11.0	33	3.0
Garst 2603(RR)	25.0	13.5	34	3.0
Garst 2112(RR/N)	24.9	12.3	29	3.0
Average	34.2	12.6	33	2.7
LSD _(0.30)	4.4			

¹Trial conducted on the Joe Harper farm; seeded 6/6 and harvested 9/25.

²Abbreviations used with soybean variety traits: RR = Roundup Resistant, RR/N = Not Roundup Resistant, STS = Sulfonylurea Tolerance

³Rating scale 0-10, with 0 = no shattering and 10 = 100% shattering. Shatter was due to hail damage on 9/15/01.

Seed Company Entrants in the 2001 Colorado Corn Performance Trials

Entrant	Brand/Hybrid	Address	Telephone
Fontanelle Hybrids	Fontanelle	10981 8 th Street, Fontanelle, NE 68044-2505	(402) 721-1410
Garst Seed Co.	Garst	2369 330 th Street, PO Box 500, Slater, IA 50244	(800) 831-6630
Geertson Seed Farms	Geertson	1665 Burroughs Road, Adrian, OR 97901	(541) 339-3768
Grand Valley Hybrids, Inc.	Grand Valley	840 23 Road, Grand Junction, CO 81505	(970) 243-3115
HYTEST Seeds	HYTEST	1404 Colorado Street, Suite 124, Boulder City, NV 89005	(702) 293-3046
Kaystar Seed	Kaystar	702 3 rd Street SW, PO Box 947, Huron, SD 57350	(605) 352-8791
Lfy, L.L.C.	Lfy	1281 Fourth Street, Monterey, CA 93940	(831) 657-9002
LG Seeds	LG	1620 Hwy 10, Gibbon, NE 68840	(877) 505-7313
Monsanto	DEKALB/ASGROW	3100 Sycamore Road, Dekalb, IL 60115	(800) 833-5252
NC+ Hybrids	NC+	PO Box 4407, Lincoln, NE 68504	(402) 467-2517
Pioneer Hi-Bred Int'l., Inc.	Pioneer	1616 So. Kentucky Street, Ste C-150, Amarillo, TX 79102	(806) 356-0160
Prairie Brand Seed Co.	Prairie Brand	15 X Avenue, Story City, IA 50248	(515) 733-2101
Producers Hybrids, Inc.	Producers Hybrids	PO Box C, Battle Creek, NE 68715	(888) 675-3190
Seedex	SEDEX	PO Box 1477, Longmont, CO 80502	(303) 678-7333
Seeds 2000	Seeds 2000	Box 200, Breckenridge, MN 56520	(218) 643-2410
Syngenta Seeds	Novartis	1060 Wheatland Drive, Buhler, KS 67522	(316) 543-2707
Triumph Seed Co, Inc.	Triumph	PO Box 1050, Hwy 62 Bypass, Ralls, TX 79357	(806) 253-2584
UAP - Pueblo	DG	2502 John Street, Garden City, KS 67846	(620) 275-6127
Wilson Genetics, L.L.C.	Wilson	PO Box 391, Harlan, IA 51537	(712) 755-3841

Entry Forms for 2002 Trials

Entry forms for 2002 trials may be obtained from the Department of Soil and Crop Sciences, Colorado State University, Cynthia Johnson, C-4 Plant Science Building, Fort Collins, CO 80523-1170; Telephone (970) 491-1914; Fax (970) 491-2758; e-mail cjohnson@agsci.colostate.edu or web site <http://www.colostate.edu/Depts/SoilCrop/extension/CropVar/index.html>.

Additional copies of this report may be ordered from the Department of Soil and Crop Sciences, Colorado State University, Cynthia Johnson, C-4 Plant Science Building, Fort Collins, CO 80523-1170; Telephone (970) 491-1914; Fax (970) 491-2758; or e-mail cjohnson@agsci.colostate.edu.

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