

Field Experiment History

Comparison of Monsanto Bt and Non Bt Hybrids.

Location	Cooperators	Soil Type	Previous Crop	Row Width (in)	Planting Date	Harvest Dates	Ave. Final Stand (plants/A)	Tillage Operations	--Soil Test-- pH P K --(ppm)--	--Nitrogen Fertilizer-- actual form time (lb/a)	Weed Control	Insecticides		
Arlington	S.Kraak J. Quimby	Plano Silt Loam	Soybean	30	28-Apr	G:16-Oct GL:25-Oct	G:31026	Fall Chisel Field Cultivator	6.5 125 275	150 9	46-0-0 6-24-24	preplant planting	Harness 2.5 pt/A Permit 0.66 oz/A cultivate	None
Ashland	M. Mlynarek	Allendale Loamy Fine Sand	Corn	30	4-May	G: 21-Sep	G:32845	Moldboard Plow Disk	7.0 165 148	150	46-0-0	preplant	Lasso 2.0 qts/A Bladex 2.0 qts/A Permit 1.33 oz/A cultivate	None
Chippewa Fal	J. Clark	Sattre Silt Loam	Corn	30	26-Apr	G: 17-Oct	G:28791	Chisel Plow Field Cultivator	5.8 27 115	150 9	28-0-0 6-24-24	preplant planting	Harness 1.7 qt/A Hornet 2.4 oz/A cultivate	Lorsban 7lbs/A
Fond du Lac	M. Rankin E. Montsma	Virgil Silt Loam	Soybean	30	#####	G: 29-Oct	G:29589	Moldboard Plow Field Cultivator	6.9 50 98	107 9 69	82-0-0 6-24-24 46-0-0	preplant planting post	Dual II Mag 0.75pt/A Accent Gold 2.9 oz/A Artazine 0.5 lb/A cultivate	None
Galesville	K. Congdon J. Zander	Downs Silt Loam	Soybean	30	26-Apr	G: 17-Oct	G:30122	Field Cultivator	6.2 60 310	160 9	46-0-0 6-24-24	preplant planting	Dual II 2.25 pt/A Hornet 5.0 oz/A	None
Hancock Irrigated	J. Breuer C. Kostichka	Plainfield Sand	Soybean	30	25-Apr	G: 12-Oct	G:29820	Moldboard Plow Disk	5.5 80 67	9 204	6-24-24 34-0-0	planting post	Aatrex 4L 0.75 lb/A Lasso 2.0 qt/A	None
Janesville	B. Jaynes D. Nehring	Plano Silt Loam	Soybean	30	30-Apr	G:11-Oct	G:31014	Chisel Plow Field Cultivator	6.9 69 195	160 9	28-0-0 6-24-24	preplant planting	Harness 2.75 qt/A Hornet 4.5 oz/A cultivate	None
Lancaster	T. Wood D. Heimdahl	Fayette Silt Loam	Soybean	30	27-Apr	G: 15-Oct	G:28598	Soil Finisher	G: 7.2 48 125	140 9	46-0-0 6-24-24	preplant planting	Roundup Ultra 1.0 qt/A Aatrex 4L 1.0 qt/A Harness 1.0 qt/A North star 5.0 oz/A	None
Marshfield	D. Wiersma T. Drendel	Loyal Silt Loam	Soybean	30	#####	G: 5-Nov	G:21581	Field Cultivator 2x	7.2 48 147	9 120	6-24-24 34-0-0	planting post	Harness 1.0 qt/A Hornet 2.4 oz/A cultivate	None
Seymour	R. Vanden Heuvel Z. Miller	Clay Loam	Corn	30	#####	G: 29-Oct	G:29276	Chisel Plow Soil Finisher	7.1 42 210	9 9000 gal/A	6-24-24 Manure	planting preplant	Accent 0.33 oz/A Northstar 4.0 oz/A cultivate	Lorsban 7lbs/A
Spooner Dryland	M. Bertram	Cress Sandy Loam	Alfalfa	30	5-May	G:16-Oct	G:26318	Moldboard Plow Disk	6.5 65 296	6 55 13 Ton Sheep Manure	5-10-30 46-0-0	planting post	Dual II Mag 1.2 pt/A Northstar 5.0 oz/A cultivate	None
Spooner Irrigated	M. Bertram	Cress Sandy Loam	Alfalfa	30	5-May	G: 12-Oct	G:32487	Moldboard Plow Disk	6.5 63 121	6 83 13 Ton Sheep Manure	5-10-30 46-0-0	planting post	Dual II Mag 1.2 pt/A Northstar 5.0 oz/A cultivate	None
Spooner Silt Loam	M. Bertram	Antigo Silt Loam	Corn	30	5-May	G: 17-Oct	G:29265	Moldboard Plow Disk	7.0 11 58	23 69	9-23-30 46-0-0	planting post	Roundup Ultra Max 38 oz/ Dual II Mag 1.2 pt/A Northstar 5.0 oz/A cultivate	None
Valders	S. Hendrickson J. Maney T. & B. Maney	Kewaunee Clay Loam	Corn	30	2-May	G: 1-Nov	G:29242	Moldboard Plow Field Cultivator	7.8 40 204	9 9000 gal/A	6-24-24 Manure	planting preplant	Surpass 1.0 pt/A Accent 0.33 oz/A Distinct 4.0 oz/A cultivate	Lorsban 7lbs/A

Note: G=Grain, E=Early Trial, L=Late Trial.

Results: Tables C-8, C-9, C-10, and C-11.

**Table C-8. Comparison of Monsanto Bt and Non Bt Hybrids.
Southern Zone 2001.**

Zone	Loc	Brand	Hybrid	Specialty	Yield	Moisture	Test		Grower return
							Weight	Lodging	
					bu/A	%	lbs/bu	%	\$/A
S		Corn States	CSEX105		217	24.5	54	3	434
S		Corn States	CSEX105Bt	Bt	228	25.8	53	2	453
S		Corn States	CSEX113		225	25.7	52	8	446
S		Corn States	CSEX113Bt	Bt	225	27.0	51	7	442
S		Dekalb	DK537		216	22.3	55	1	441
S		Dekalb	DK585		227	24.8	52	5	454
S	ARL				241	24.0	53	4	486
S	JAN				234	26.7	53	7	462
S	LAN				193	24.3	53	2	387
S	ARL	Corn States	CSEX105		251	23.4	53	0	507
S	ARL	Corn States	CSEX105Bt	Bt	250	24.5	52	3	502
S	ARL	Corn States	CSEX113		246	25.1	52	0	491
S	ARL	Corn States	CSEX113Bt	Bt	230	26.3	51	14	454
S	ARL	Dekalb	DK537		240	21.1	55	0	494
S	ARL	Dekalb	DK585		231	23.7	53	5	466
S	JAN	Corn States	CSEX105		232	26.1	54	5	460
S	JAN	Corn States	CSEX105Bt	Bt	238	27.5	53	1	467
S	JAN	Corn States	CSEX113		232	27.5	53	21	454
S	JAN	Corn States	CSEX113Bt	Bt	228	29.6	51	7	440
S	JAN	Dekalb	DK537		231	23.6	55	2	466
S	JAN	Dekalb	DK585		245	26.0	52	8	486
S	LAN	Corn States	CSEX105		167	23.9	55	5	336
S	LAN	Corn States	CSEX105Bt	Bt	196	25.3	54	0	390
S	LAN	Corn States	CSEX113		196	24.4	52	3	393
S	LAN	Corn States	CSEX113Bt	Bt	216	25.2	51	1	431
S	LAN	Dekalb	DK537		178	22.1	56	1	362
S	LAN	Dekalb	DK585		205	24.7	52	3	411
S	Mean				223	25.0	53	4	445
Probability(%)									
Hybrid (H)					15.0	0.0	0.0	4.7	43.3
Location (L)					0.0	0.0	9.8	4.7	0.0
H x L					0.2	6.0	1.3	3.5	0.1
LSD (0.10)									
Hybrid (H)					NS	0.5	1	4	NS
Location (L)					7	0.4	0	4	13
H x L					16	1.0	1	8	37
CV(%)					5	3	1	135	5

**Table C-9. Comparison of Monsanto Bt and Non Bt Hybrids.
South Central Zone 2001.**

Zone	Loc	Brand	Hybrid	Specialty	Yield	Moisture	Test		Grower return
							Weight	Lodging	
					bu/A	%	lbs/bu	%	\$/A
SC		Corn States	CSEXSC095		179	20.6	55	1	371
SC		Corn States	CSEXSC095Bt	Bt	182	21.2	54	1	374
SC		Corn States	CSEXSC100		181	24.4	54	1	364
SC		Corn States	CSEXSC100Bt	Bt	183	24.5	52	3	369
SC		Dekalb	DK440		182	22.1	54	3	372
SC		Asgrow	RX452		192	24.2	54	2	388
SC	FON				147	25.9	50	2	292
SC	GAL				195	20.9	54	2	402
SC	HAN				207	21.7	58	2	424
SC	FON	Corn States	CSEXSC095		145	21.4	51	2	298
SC	FON	Corn States	CSEXSC095Bt	Bt	152	23.1	50	1	308
SC	FON	Corn States	CSEXSC100		136	28.9	49	1	263
SC	FON	Corn States	CSEXSC100Bt	Bt	146	29.8	47	0	280
SC	FON	Dekalb	DK440		153	23.8	50	3	308
SC	FON	Asgrow	RX452		151	28.0	51	3	295
SC	GAL	Corn States	CSEXSC095		194	20.1	55	0	402
SC	GAL	Corn States	CSEXSC095Bt	Bt	194	19.7	55	1	403
SC	GAL	Corn States	CSEXSC100		197	21.8	54	1	404
SC	GAL	Corn States	CSEXSC100Bt	Bt	189	21.2	53	7	388
SC	GAL	Dekalb	DK440		204	20.4	55	0	422
SC	GAL	Asgrow	RX452		192	22.1	55	2	391
SC	HAN	Corn States	CSEXSC095		199	20.2	60	1	412
SC	HAN	Corn States	CSEXSC095Bt	Bt	199	20.6	58	0	409
SC	HAN	Corn States	CSEXSC100		209	22.4	57	1	425
SC	HAN	Corn States	CSEXSC100Bt	Bt	216	22.5	56	0	438
SC	HAN	Dekalb	DK440		188	22.1	57	6	385
SC	HAN	Asgrow	RX452		234	22.5	58	1	476
SC	Mean				183	22.8	54	2	373
Probability(%)									
Hybrid (H)					37.5	0.0	0.0	47.6	55.2
Location (L)					0.0	0.0	0.0	87.1	0.0
H x L					4.8	3.6	78.1	2.1	7.8
LSD (0.10)									
Hybrid (H)					NS	0.8	1	NS	NS
Location (L)					8	1.0	1	NS	16
H x L					18	2.4	NS	3	23
CV(%)									
					7	8	2	135	8

**Table C-10. Comparison of Monsanto Bt and Non Bt Hybrids.
North Central Zone 2001.**

Zone	Loc	Brand	Hybrid	Specialty	Yield	Moisture	Test		Grower return	
							Weight	Lodging		
					bu/A	%	lbs/bu	%	\$/A	
NC		Corn States	CSEXNC087		123	20.8	54	1	254	
NC		Corn States	CSEXNC087Bt	Bt	126	20.7	53	1	260	
NC		Corn States	CSEXNC090		144	21.6	55	1	295	
NC		Corn States	CSEXNC090Bt	Bt	133	20.5	56	2	274	
NC		Dekalb	DK440		145	23.6	52	4	293	
NC		Asgrow	RX452		155	25.5	52	2	310	
NC	CHP				156	20.8	55	2	322	
NC	MAR				142	23.9	50	3	286	
NC	SEY				156	22.2	53	3	317	
NC	VAL				83	22.6	54	1	169	
NC	CHP	Corn States	CSEXNC087		141	20.1	55	1	293	
NC	CHP	Corn States	CSEXNC087Bt	Bt	138	19.9	54	0	286	
NC	CHP	Corn States	CSEXNC090		155	20.4	57	0	320	
NC	CHP	Corn States	CSEXNC090Bt	Bt	149	19.9	57	0	309	
NC	CHP	Dekalb	DK440		169	20.8	54	4	347	
NC	CHP	Asgrow	RX452		175	23.7	54	1	353	
NC	MAR	Corn States	CSEXNC087		125	22.5	51	2	254	
NC	MAR	Corn States	CSEXNC087Bt	Bt	126	24.0	48	0	253	
NC	MAR	Corn States	CSEXNC090		132	24.2	49	2	266	
NC	MAR	Corn States	CSEXNC090Bt	Bt	152	20.9	53	1	312	
NC	MAR	Dekalb	DK440		161	26.1	50	6	319	
NC	SEY	Corn States	CSEXNC087		132	20.7	54	1	272	
NC	SEY	Corn States	CSEXNC087Bt	Bt	156	19.8	52	1	323	
NC	SEY	Corn States	CSEXNC090		152	20.8	56	1	313	
NC	SEY	Corn States	CSEXNC090Bt	Bt	146	19.9	56	6	303	
NC	SEY	Dekalb	DK440		161	24.3	51	3	324	
NC	SEY	Asgrow	RX452		182	25.8	52	4	362	
NC	VAL	Corn States	CSEXNC087		95	19.8	56	0	198	
NC	VAL	Corn States	CSEXNC087Bt	Bt	84	21.3	54	1	173	
NC	VAL	Corn States	CSEXNC090		123	20.0	60	0	255	
NC	VAL	Corn States	CSEXNC090Bt	Bt	68	22.0	57	1	139	
NC	VAL	Dekalb	DK440		69	24.0	52	2	139	
NC	VAL	Asgrow	RX452		86	27.9	51	0	168	
NC	Mean				138	22.2	53	2	281	
Probability(%)										
					Hybrid (H)	4.3	0.0	0.0	0.3	8.5
					Location (L)	0.0	0.0	0.0	5.2	0.0
					H x L	7.0	7.0	1.5	53.2	7.8
LSD (0.10)										
					Hybrid (H)	13	1.0	0	1	25
					Location (L)	10	0.7	1	1	21
					H x L	27	1.9	2	NS	56
CV(%)										
						14	6	2	110	14

**Table C-11. Comparison of Monsanto Bt and Non Bt Hybrids.
Northern Zone 2001.**

Zone	Loc	Brand	Hybrid	Specialty	Yield	Moisture	Lodging	Grower return
					bu/A	%	%	\$/A
N		Corn States	CSEXN077		118	24.8	1	237
N		Corn States	CSEXN077Bt	Bt	114	25.5	0	228
N		Corn States	CSEXN081		129	23.3	3	261
N		Corn States	CSEXN081Bt	Bt	97	24.6	3	195
N	SPD				121	24.6	1	242
N	SPI				136	22.8	1	276
N	SPS				116	25.7	0	230
N	WHL				71	25.0	7	142
N	SPD	Corn States	CSEXN077		115	25.8	0	228
N	SPD	Corn States	CSEXN077Bt	Bt	105	25.0	2	210
N	SPD	Corn States	CSEXN081		146	22.4	1	297
N	SPD	Corn States	CSEXN081Bt	Bt	118	25.1	2	235
N	SPI	Corn States	CSEXN077		137	23.4	2	277
N	SPI	Corn States	CSEXN077Bt	Bt	153	23.6	0	308
N	SPI	Corn States	CSEXN081		146	21.5	2	299
N	SPI	Corn States	CSEXN081Bt	Bt	109	22.9	0	220
N	SPS	Corn States	CSEXN077		120	25.6	0	239
N	SPS	Corn States	CSEXN077Bt	Bt	107	26.5	0	211
N	SPS	Corn States	CSEXN081		139	23.8	1	279
N	SPS	Corn States	CSEXN081Bt	Bt	98	26.9	0	192
N	WHL	Corn States	CSEXN077		68	23.7	0	137
N	WHL	Corn States	CSEXN077Bt	Bt	47	29.5	0	91
N	WHL	Corn States	CSEXN081		86	25.5	7	171
N	WHL	Corn States	CSEXN081Bt	Bt	65	23.5	12	131
N	Mean				115	24.5	2	230
Probability(%)								
Hybrid (H)					2.6	6.2	8.3	1.9
Location (L)					0.0	0.0	6.8	0.0
H x L					33.3	5.6	25.6	31.2
LSD (0.10)								
Hybrid (H)					13	1.1	2	26
Location (L)					13	0.9	2	26
H x L					NS	1.8	NS	NS
CV(%)					16	5	173	16