

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--			actual (lb/a)	--Nitrogen Fertilizer--		Weed Control	Insecticides
									pH	P	K		form	time		
Arlington	S. Kraak J. Quimby	Plano Silt Loam	Soybean	30	24-Apr	15-Oct	22100	Chisel Field Cultivator	6.2	79	247	150 9	46-0-0 6-24-24	preplant planting	Harness 2.5 pt/A Hornet 3.0 oz/A cultivate	None
Chippewa Falls	J. Clark	Sattre Silt Loam	Soybean	30	3-May	16-Oct	25500	Field Cultivator	6.4	30	111	150 9	28-0-0 6-24-24	preplant planting	Frontier 25 oz/A Hornet 3.0 oz/A cultivate	None
Fond du Lac	M. Rankin D. Boelk	Virgil Silt Loam	Soybean	30	10-May	17-Oct	28500	Moldboard Plow Field Cultivator	7.1	42	100	150 9	82-0-0 6-24-24	preplant planting	Accent Gold 2.9 oz/A Atrazine 0.5 lb/A cultivate	None
Galesville	K. Congdon J. Zander	Downs Silt Loam	Soybean	30	3-May	9-Oct	28400	V-ripper Field Cultivator	6.6	43	161	160 9	46-0-0 6-24-24	preplant planting	Dual II 2.25 pt/A Hornet 3.0 oz/A Clarity 4.0 oz/A cultivate	None
Hancock Irrigated	J. Breuer C. Kostichka	Plainfield Sand	Soybean	30	29-Apr	10-Oct	28400	Moldboard Plow Disk	6.4	120	47	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	26-Apr	11-Oct	28000	Chisel Plow Field Cultivator	6.9	66	229	160 9	28-0-0 6-24-24	preplant planting	Dual II 1.8 pt/A Hornet 4.5 oz/A cultivate	None
Lancaster	T. Wood	Fayette Silt Loam	Soybean	30	26-Apr	14-Oct	25900	Soil Finisher	7.3	57	157	140 9	46-0-0 6-24-24	preplant planting	Aatrex 4L 1.0 qt/A Harness 1.0 qt/A Accent 0.33 oz/A Northstar 4.0 oz/A cultivate	None
Marshfield	M. Bertram T. Drendel	Loyal Silt Loam	Soybean	30	15-May	30-Oct	28900	Chisel Plow Field Cultivator (2x)	6.4	62	172	9 46 6776 gal/A	6-24-24 46-0-0 Manure	planting post preplant	Harness 1.0 qt/A Hornet 2.4 oz/A cultivate	None
Seymour	R. Vanden Heuvel Z. Miller	Clay Loam	Corn	30	16-May	23-Oct	29800	Chisel Plow Soil Finisher	7.4	41	165	9 160	6-24-24 82-0-0	planting post	Accent 0.33 oz/A Northstar 4.5 oz/A cultivate	Force 4.4 lbs/A
Spooner Dryland	R. Rand Y. Berger	Cress Sandy Loam	Alfalfa	30	13-May	23-Oct	21300	Moldboard Plow Disk	6.1	27	73	6 92	5-10-30 46-0-0	planting post	Dual II Mag 1.0 pt/A Northstar 5.0 oz/A	None
Spooner Irrigated	R. Rand Y. Berger	Cress Sandy Loam	Corn	30	7-May	23-Oct	21000	Moldboard Plow Disk (2x)	6.1	32	63	6 184	5-10-30 46-0-0	planting post	Dual II Mag 1.0 pt/A Northstar 5.0 oz/A	None
Spooner Silt Loam	R. Rand Y. Berger	Miami Silt Loam	Soybean	30	17-May	24-Oct	26900	Moldboard Plow Disk (2x)	6.7	29	89	6 138 15	5-10-30 46-0-0 5-10-30	planting post post	Dual II Mag 1.0 pt/A Northstar 5.0 oz/A	None
Valders	S. Hendrickson J. Maney T. & B. Maney	Kewaunee Clay Loam	Corn	30	15-May	17-Oct	28300	Moldboard Plow Field Cultivator	6.8	40	105	9 7500 gal/A	6-24-24 Manure	planting preplant	Surpass 1.0 pt/A Accent Gold 2.0 oz/A Banvel 2.0 oz/A cultivate	Force 4.4 lbs/A
White Lake	J. Wahleithner	Antigo Silt Loam	Soybeans	30	2-May	23-Oct	25900	Disk	6.5	58	144	9 120	6-24-24 28-0-0	planting preplant	Atrazine 1.0 lb/A Lasso 2.0 qt/A cultivate	None

Results: Tables C-3, C-4, C-5, and C-6.

**Table C-3. Comparison of Monsanto Bt and Non Bt Hybrids.
Northern Zone 2002.**

Zone	Location	Hybrid	Specialty	Yield	Moisture	Lodging	Grower return
				bu/A	%	%	\$/A
N		DKC3259	Conventional	131	29.8	0	257
N		DK334BtY	Bt	144	30.1	0	283
N		CS86	Conventional	134	31.2	0	261
N		CS86Bt	Bt	145	31.7	1	281
N		CS85	Conventional	145	31.1	0	284
N		CS85Bt	Bt	145	31.1	0	282
N	Spooner - Dryland			141	28.1	0	280
N	Spooner - Irrigated			139	28.1	0	277
N	Spooner - Silt Loam			141	33.7	0	269
N	White Lake			142	33.4	1	272
N	Spooner - Dryland	DKC3259	Conventional	133	27.5	0	267
N	Spooner - Dryland	DK334BtY	Bt	133	26.8	0	268
N	Spooner - Dryland	CS85	Conventional	156	28.0	0	312
N	Spooner - Dryland	CS85Bt	Bt	141	28.3	0	280
N	Spooner - Dryland	CS86	Conventional	139	29.9	0	273
N	Spooner - Dryland	CS86Bt	Bt	141	27.8	0	282
N	Spooner - Irrigated	DKC3259	Conventional	130	25.6	0	265
N	Spooner - Irrigated	DK334BtY	Bt	152	26.8	0	306
N	Spooner - Irrigated	CS85	Conventional	143	28.2	0	285
N	Spooner - Irrigated	CS85Bt	Bt	148	29.6	0	292
N	Spooner - Irrigated	CS86	Conventional	117	27.9	0	234
N	Spooner - Irrigated	CS86Bt	Bt	144	30.2	0	282
N	Spooner - Silt Loam	DKC3259	Conventional	134	34.1	0	255
N	Spooner - Silt Loam	DK334BtY	Bt	137	32.9	0	263
N	Spooner - Silt Loam	CS85	Conventional	141	35.0	0	266
N	Spooner - Silt Loam	CS85Bt	Bt	143	32.4	0	276
N	Spooner - Silt Loam	CS86	Conventional	146	33.9	0	279
N	Spooner - Silt Loam	CS86Bt	Bt	144	34.1	0	275
N	White Lake	DKC3259	Conventional	125	32.0	1	241
N	White Lake	DK334BtY	Bt	155	34.0	0	296
N	White Lake	CS85	Conventional	142	33.1	2	273
N	White Lake	CS85Bt	Bt	147	34.0	1	280
N	White Lake	CS86	Conventional	134	32.9	2	257
N	White Lake	CS86Bt	Bt	149	34.4	2	283
N	Mean			141	30.8	0	275
Probability(%)							
Hybrid (H)				14.6	9.2	8.8	18.8
Location (L)				96.6	0.0	0.0	74.6
H x L				74.7	0.0	1.6	78.7
LSD (0.10)							
Hybrid (H)				NS	1.0	0	NS
Location (L)				NS	0.6	0	NS
H x L				NS	1.2	1	NS
CV(%)				12	3	173	12

**Table C-4. Comparison of Monsanto Bt and Non Bt Hybrids.
North Central Zone 2002.**

Zone	Location	Hybrid	Specialty	Yield bu/A	Moisture %	Test		Grower return \$/A
						Weight lbs/bu	Lodging %	
NC		DKC4270	Conventional	182	26.6	52	1	367
NC		DKC4222	Bt	184	27.1	52	1	370
NC		DK440	Conventional	186	26.7	51	3	374
NC		DKC4442	Bt	197	28.0	51	0	393
NC		DK507	Conventional	183	30.3	51	1	358
NC		DKC5072	Bt	173	31.2	51	1	336
NC	Chippewa Falls			181	25.8	52	2	368
NC	Marshfield			209	31.3	50	1	407
NC	Seymour			205	29.5	50	0	405
NC	Valders			155	27.4	52	1	312
NC	Chippewa Falls	DKC4270	Conventional	187	23.9	53	2	384
NC	Chippewa Falls	DKC4222	Bt	189	24.7	53	1	387
NC	Chippewa Falls	DK440	Conventional	176	24.7	52	7	359
NC	Chippewa Falls	DKC4442	Bt	206	26.5	52	0	416
NC	Chippewa Falls	DK507	Conventional	168	26.8	52	3	339
NC	Chippewa Falls	DKC5072	Bt	161	27.9	52	2	323
NC	Marshfield	DKC4270	Conventional	208	29.8	51	1	410
NC	Marshfield	DKC4222	Bt	210	30.1	50	2	413
NC	Marshfield	DK440	Conventional	216	29.5	49	0	426
NC	Marshfield	DKC4442	Bt	204	31.4	49	1	397
NC	Marshfield	DK507	Conventional	208	33.5	49	0	399
NC	Marshfield	DKC5072	Bt	206	33.8	50	0	393
NC	Seymour	DKC4270	Conventional	189	27.2	51	0	380
NC	Seymour	DKC4222	Bt	195	27.5	50	0	391
NC	Seymour	DK440	Conventional	194	30.5	50	0	380
NC	Seymour	DKC4442	Bt	216	30.7	50	0	422
NC	Seymour	DK507	Conventional	219	30.8	50	0	429
NC	Seymour	DKC5072	Bt	217	30.5	49	0	425
NC	Valders	DKC4270	Conventional	149	25.7	52	2	303
NC	Valders	DKC4222	Bt	150	26.3	52	0	303
NC	Valders	DK440	Conventional	163	24.7	52	4	333
NC	Valders	DKC4442	Bt	175	25.1	52	0	358
NC	Valders	DK507	Conventional	160	30.4	51	1	313
NC	Valders	DKC5072	Bt	136	32.0	51	1	263
NC	Mean			184	28.3	51	1	366
Probability(%)								
	Hybrid (H)			50.7	0.0	3.3	7.7	38.1
	Location (L)			0.0	0.0	0.0	0.1	0.0
	H x L			53.4	1.6	64.9	1.4	56.9
LSD (0.10)								
	Hybrid (H)			NS	0.2	1	1	NS
	Location (L)			10	NS	0	1	22
	H x L			NS	1.5	NS	2	NS
CV(%)								
				10	4	1	134	10

**Table C-5. Comparison of Monsanto Bt and Non Bt Hybrids.
Southern Zone 2002.**

Zone	Location	Hybrid	Specialty	Yield bu/A	Moisture %	Test		Grower return \$/A
						Weight lbs/bu	Lodging %	
S		DK537	Conventional	196	21.3	55	2	411
S		DKC5332	Bt	208	22.7	54	0	431
S		DK567	Conventional	204	23.3	54	3	420
S		DKC5671	Bt	237	23.9	54	2	488
S		DK585	Conventional	220	23.9	53	1	453
S		DK5852	Bt	229	24.7	53	1	470
		RX730IMI	Conventional	205	25.3	52	2	417
S		RX730YG	Bt	229	24.9	53	2	468
S	Arlington			188	25.6	53	2	381
S	Janesville			244	24.5	54	0	499
S	Lancaster			217	21.1	53	3	455
S	Arlington	DK537	Conventional	173	22.3	54	3	360
S	Arlington	DKC5332	Bt	155	25.0	52	1	315
S	Arlington	DK567	Conventional	186	24.7	54	4	380
S	Arlington	DKC5671	Bt	224	25.4	53	2	455
S	Arlington	DK585	Conventional	194	26.3	52	0	392
S	Arlington	DK5852	Bt	196	27.5	52	1	392
S	Arlington	RX730IMI	Conventional	177	26.5	52	2	358
S	Arlington	RX730YG	Bt	187	26.9	53	1	376
S	Janesville	DK537	Conventional	226	21.8	58	0	471
S	Janesville	DKC5332	Bt	242	23.3	55	0	499
S	Janesville	DK567	Conventional	237	25.2	55	0	484
S	Janesville	DKC5671	Bt	255	25.3	55	0	519
S	Janesville	DK585	Conventional	244	24.7	54	0	500
S	Janesville	DK5852	Bt	248	25.0	54	0	507
S	Janesville	RX730IMI	Conventional	241	25.6	53	0	489
S	Janesville	RX730YG	Bt	257	25.1	54	1	525
S	Lancaster	DK537	Conventional	186	19.0	54	4	396
S	Lancaster	DKC5332	Bt	209	20.5	53	1	441
S	Lancaster	DK567	Conventional	188	20.1	54	5	397
S	Lancaster	DKC5671	Bt	233	21.1	54	4	490
S	Lancaster	DK585	Conventional	222	20.6	53	2	468
S	Lancaster	DK5852	Bt	244	21.8	52	2	510
S	Lancaster	RX730IMI	Conventional	191	23.0	52	5	396
S	Lancaster	RX730YG	Bt	244	22.9	52	3	505
S	Mean			217	23.8	53	2	446
Probability(%)								
	Hybrid (H)			0.0	0.0	0.0	21.7	0.0
	Location (L)			0.0	0.0	0.0	0.2	0.0
	H x L			9.9	1.2	6.1	94.2	8.7
LSD (0.10)								
	Hybrid (H)			12	0.6	1	NS	25
	Location (L)			8	0.3	0	1	17
	H x L			23	1	1	NS	48
CV(%)								
				8	3	1	154	8

**Table C-6. Comparison of Monsanto Bt and Non Bt Hybrids.
South Central Zone 2002.**

Zone	Location	Hybrid	Specialty	Yield bu/A	Moisture %	Test		Grower return \$/A
						Weight lbs/bu	Lodging %	
SC		DKC4270	Conventional	206	21.0	57	2	433
SC		DKC4222	Bt	223	20.8	56	2	468
SC		DK440	Conventional	203	20.1	55	2	428
SC		DKC4442	Bt	220	21.3	55	2	460
SC		DK507	Conventional	212	23.1	54	1	438
SC		DKC5072	Bt	220	23.7	54	0	453
SC		DK537	Conventional	226	24.7	53	2	462
SC		DKC5332	Bt	232	27.1	52	0	465
SC	Fond du lac			188	20.8	55	3	396
SC	Galesville			230	22.8	56	0	478
SC	Hancock			234	24.6	52	0	479
SC	Fond du lac	DKC4270	Conventional	180	19.2	58	3	382
SC	Fond du lac	DKC4222	Bt	191	19.3	57	4	406
SC	Fond du lac	DK440	Conventional	174	18.2	55	4	373
SC	Fond du lac	DKC4442	Bt	189	19.4	56	6	401
SC	Fond du lac	DK507	Conventional	182	21.5	55	4	380
SC	Fond du lac	DKC5072	Bt	194	22.5	55	0	402
SC	Fond du lac	DK537	Conventional	195	21.6	54	6	407
SC	Fond du lac	DKC5332	Bt	205	24.6	53	0	419
SC	Galesville	DKC4270	Conventional	220	21.4	59	0	460
SC	Galesville	DKC4222	Bt	224	21.0	59	1	470
SC	Galesville	DK440	Conventional	203	20.3	57	0	429
SC	Galesville	DKC4442	Bt	244	21.7	56	0	511
SC	Galesville	DK507	Conventional	228	22.7	57	0	474
SC	Galesville	DKC5072	Bt	235	23.3	56	0	485
SC	Galesville	DK537	Conventional	244	24.9	54	0	498
SC	Galesville	DKC5332	Bt	246	26.7	53	0	495
SC	Hancock	DKC4270	Conventional	219	22.3	54	1	456
SC	Hancock	DKC4222	Bt	254	22.1	53	0	529
SC	Hancock	DK440	Conventional	231	21.7	52	0	482
SC	Hancock	DKC4442	Bt	226	22.7	52	0	468
SC	Hancock	DK507	Conventional	226	25.2	52	0	461
SC	Hancock	DKC5072	Bt	233	25.4	52	0	473
SC	Hancock	DK537	Conventional	241	27.5	51	0	482
SC	Hancock	DKC5332	Bt	245	29.9	50	0	482
SC	Mean			218	22.7	54	1	451
Probability(%)								
	Hybrid (H)			0.0	0.0	0.0	7.4	0.4
	Location (L)			0.0	0.0	0.0	0.0	0.0
	H x L			45.9	0.1	6.9	2.1	36.3
LSD (0.10)								
	Hybrid (H)			7	0.5	0	1	17
	Location (L)			8	0.3	0	1	15
	H x L			NS	0.8	1	2	NS
CV(%)								
				7	3	2	116	7