

**Herbicide Programs for Glyphosate-Tolerant Field Corn**

**Trial ID: CN Mnsnto Dow 03**      **Study Director:**  
**Location: Ashland Otto East**      **Investigator: David L Regehr**

Crop Description	
Crop 1: ZEAMX Zea mays	Corn
Variety: Asgrow RX718RR	
BBCH Scale: BCOR	Planting Date: 12/May/2003
Planting Method: White 6700	Rate, Unit: 23000 S/A
Depth, Unit: 1.5 in	
Row Spacing, Unit: 30 in	
Seed Bed: Good	Soil Temperature, Unit: 62 F
Soil Moisture: Moist	Emergence Date: 19/May/2003

Pest Description	
Pest 1 Type: W Code: ABUTH	Abutilon theophrasti
Common Name: Velvetleaf	
Description: planted row	
Pest 2 Type: W Code: HELAN	Helianthus annuus
Common Name: Common sunflower	
Description: planted row of oil-seed sunflower	
Pest 3 Type: W Code: IPOHE	Ipomoea hederacea
Common Name: Morningglory, ivyleaf	
Description: planted row	
Pest 4 Type: W Code: SORBI	Sorghum bicolor
Common Name: Rox orange forage sorghum	
Description: planted row of shattercane mimic	
Pest 5 Type: W Code: DIGSA	Digitaria sanguinalis
Common Name: Crabgrass, large	
Description: broadcast over-seeded	
Pest 6 Type: W Code: AMAPA	Amaranthus palmeri
Common Name: Amaranth, Palmer	
Description: broadcast over-seeded	

**Site and Design**  
 Plot Width, Unit: 6.67 FT      Site Type: cropland  
 Plot Length, Unit: 25 FT      Tillage Type: conventional  
 Replications: 3      Study Design: Randomized Complete Block

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.	grain sorghum		2002

Field Prep./Maintenance:  
 all chisel; spring disk; spring field cultivate

**Soil Description**  
 % Sand: 14      % OM: 2.3      Texture: Silt loam  
 % Silt: 62      pH: 6.3      Soil Name: Reading  
 % Clay: 24      CEC: 18      Fert. Level: good

## Kansas State University

## Application Description

	A	B	C	D
Application Date:	12/May/2003	27/May/2003	10/Jun/2003	19/Jun/2003
Time of Day:	6:30 PM	11:30 AM	9:30 AM	12:00 PM
Application Method:	BRDCST	BRDCST	BRDCST	BRDCST
Application Timing:	PRE	EP	MP	2nd FLUSH
Application Placement:	SOIL	FOLIAR	FOLIAR	FOLIAR
Applied By:	J. MILLER	J. MILLER	C. MINIHAN	C. MINIHAN
Air Temperature, Unit:	75 F	76 F	81 F	82 F
% Relative Humidity:	31	31	56	61
Wind Velocity, Unit:	8 SE	6 SW	9 N	1.5 E
Dew Presence (Y/N):	N	N	N	N
Water Hardness:	City H2O	City H2O	City H2O	City H2O
Soil Temperature, Unit:	68 F		72 F	78 F
Soil Moisture:	MOIST	ADEQUATE	ADEQUATE	ADEQUATE
% Cloud Cover:	5	0	30	95

## Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	BBCH	BBCH	BBCH	BBCH
Stage Majority, Percent:		1LF 1COL 100	4LF 4CL 100	26-27 IN 100
Height, Unit:		3 IN	10 IN	27 IN

## Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Disc., Scale:	ABUTH W	ABUTH W	ABUTH W	ABUTH W
Stage Majority, Percent:		1 LF	2 LF	2-4 LF
Height, Unit:		1 IN	2 IN	3 IN
Pest 2 Code, Disc., Scale:	HELAN W	HELAN W	HELAN W	HELAN W
Stage Majority, Percent:		2 LF	6 LF	8 LF
Height, Unit:		2 IN	9 IN	16 IN
Pest 3 Code, Disc., Scale:	IPOHE W	IPOHE W	IPOHE W	IPOHE W
Stage Majority, Percent:		COT	2 LF	4 LF
Height, Unit:		1 IN	2 IN	3 IN
Pest 4 Code, Disc., Scale:	SORBI W	SORBI W	SORBI W	SORBI W
Stage Majority, Percent:		1 LF	3 LF	7 LF
Height, Unit:		1 IN	6 IN	14 IN
Pest 5 Code, Disc., Scale:	DIGSA W	DIGSA W	DIGSA W	DIGSA W
Stage Majority, Percent:		1-2 LF	3-4 lf	tiller
Height, Unit:		0.5 IN	2 IN	4 IN
Pest 6 Code, Disc., Scale:	AMAPA W	AMAPA W	AMAPA W	AMAPA W
Stage Majority, Percent:		2-4 lf		2nd fl
Height, Unit:		0.5 IN	5 IN	1 IN

## Application Equipment

	A	B	C	D
Appl. Equipment:	TRACTOR	TRACTOR	TRACTOR	TRACTOR
Operating Pressure:	20	20	20	20
Pressure Unit:	PSI	PSI	PSI	PSI
Nozzle Type:	TURBO TEE	TURBO TEE	TURBO TEE	TURBO TEE
Nozzle Size:	11003	11003	11003	11003
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Boom Height, Unit:	17 IN	20 IN	23 IN	43 IN
Ground Speed, Unit:	4.1 MPH	4.1 MPH	4.1 MPH	4.1 MPH
Carrier:	Water	Water	Water	Water
Spray Volume:	15	15	15	15
Volume Unit:	GAL/AC	GAL/AC	GAL/AC	GAL/AC
Propellant:	Comp. Air	Comp. Air	Comp. Air	Comp. Air

**Herbicide Programs for Glyphosate-Tolerant Field Corn****Trial ID: CN Mnsnto Dow 03**  
**Location: Ashland Otto East****Study Director:**  
**Investigator: David L Regehr**

## Trial Comments

This experiment evaluated several one- and two-pass herbicide programs for weed management in glyphosate-tolerant field corn. There was no crop injury except for scattered plants showing leaf wrapping, stunting, or chlorosis that did not appear to be related to the treatments. Large crabgrass and Palmer amaranth were over-seeded in the front half of the plots, and across the back half of the plots, ivyleaf morningglory, velvetleaf, rox orange forage sorghum, and domestic sunflower seed was planted in rows.

Large crabgrass (DIGSA) control was excellent for all two-shot programs, regardless whether or not they contained residual herbicides. Single applications of glyphosate, or glyphosate plus Hornet or Celebrity Plus, did not give satisfactory crabgrass control. But, single applications of glyphosate with atrazine and an acid amide did give good control. This pattern is consistent with past observations, that unless crabgrass density is very low, a single application of a postemerge herbicide does not give very good control. This is most likely due to larger grass plants intercepting most of the spray, and preventing adequate foliar coverage of smaller plants below, at high weed densities.

Palmer amaranth (AMAPA) control was excellent for all treatments except GlyphoMax Plus and GF-887. These were the only two treatments with no soil residual herbicides, and later emerging amaranth were not controlled.

Ivyleaf morningglory (IPOHE) control was generally excellent, except for treatments with glyphosate only. Increasingly dry soils in July and August allowed little growth even of weeds that were poorly controlled by the herbicides.

Velvetleaf (ABUTH) control was excellent throughout.

Most treatments gave excellent control of rox orange forage sorghum (SORBI). Distinct had enough grass activity for good suppression. GlyphoMax Plus appeared not to finish off the shattercane mimic.

Sunflower (HELAN) is very susceptible to glyphosate, and was completely controlled.

Treatment means for corn yield ranged from 22 to 77 bu/acre. The untreated check yielded 44 bu/acre. A combination of late planting and dry weather kept yields low, and soil moisture variability was very high.

## Herbicide Programs for Glyphosate-Tolerant Field Corn

Trial ID: CN Mnsnto Dow 03  
Location: Ashland Otto EastStudy Director:  
Investigator: David L Regehr

Pest Type				W Weed DIGSA	W Weed DIGSA	W Weed DIGSA	W Weed DIGSA
Pest Code							
Crop Code							
BBCH Scale							
Rating Date				9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003
Rating Data Type				CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit							
Days After Last Applic.				13	14	29	68
ARM Action Codes							
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage			
					2	10	17
							24
1	RU WeatherMax	22	fl oz/a	ErlyPost	88 abc	96 a	97 a
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
	RU WeatherMax	16	fl oz/a	2ndFlush			
	Ammonium Sulfate	12	lb ai/100 gal	2ndFlush			
2	Degree Xtra	1.5	qt/a	Preemerg	99 a	99 a	99 a
	RU WeatherMax	22	fl oz/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
3	Degree Xtra	1.5	qt/a	ErlyPost	93 ab	91 a	87 b
	RU WeatherMax	22	fl oz/a	ErlyPost			
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
4	Bicep II Magnum	2.1	qt/a	Preemerg	99 a	99 a	99 a
	Spirit	1	oz/a	MidPost			
	Nonionic Surfactant	0.25	% v/v	MidPost			
	UAN 28%	2.5	% v/v	MidPost			
5	Bicep II Magnum	2.1	qt/a	Preemerg	99 a	99 a	99 a
	Distinct	6	oz/a	ErlyPost			
	Nonionic Surfactant	0.25	% v/v	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
6	Bicep II Magnum	1.05	qt/a	Preemerg	99 a	98 a	99 a
	Touchdown IQ	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
7	FulTime	1.5	qt/a	Preemerg	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
8	Bicep II Magnum	1.05	qt/a	Preemerg	99 a	99 a	98 a
	Basis Gold	14	oz/a	ErlyPost			
	Crop Oil Conc	1	qt/a	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
9	Celebrity Plus	4.7	oz/a	ErlyPost	80 c	67 b	73 cd
	Nonionic Surfactant	0.25	% v/v	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
10	Bicep II Magnum	2.1	qt/a	Preemerg	99 a	99 a	99 a
	Callisto	3	oz/a	ErlyPost			
	Atrazine	0.25	qt/a	ErlyPost			
	Crop Oil Conc	1	qt/a	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
11	Bicep II Magnum	1.05	qt/a	Preemerg	99 a	98 a	96 a
	Steadfast	0.75	oz/a	ErlyPost			
	Atrazine	0.75	qt/a	ErlyPost			
	Crop Oil Conc	1	qt/a	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
12	Fieldmaster	3	qt/a	ErlyPost	96 a	95 a	93 a
	RU WeatherMax	9.4	fl oz/a	ErlyPost			
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
13	Untreated check				0 d	0 c	0 e
14	FulTime	2	qt/a	Preemerg	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
15	Keystone	1.6	qt/a	Preemerg	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
16	GlyphoMax Plus	1	qt/a	ErlyPost	83 bc	73 b	68 d
	Hornet WDG 68.5	3	oz/a	ErlyPost			
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
17	GlyphoMax Plus	1	qt/a	ErlyPost	83 bc	67 b	77 c
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			

9/Oct/2003 (CN Mnsnto Dow 03)

Kansas State University

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	DIGSA	DIGSA	DIGSA	DIGSA
Crop Code				
BBCH Scale				
Rating Date	9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003
Rating Data Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit				
Days After Last Applic.	13	14	29	68
ARM Action Codes				
Trt No.	Treatment	Other Rate	Other Rate Unit	Growth Stage
18	GF-887 (Glyphomax HC 5.4) Ammonium Sulfate	1 qt/a 12 lb ai/100 gal		ErlyPost ErlyPost
				2
				10
				17
				24
				83 bc
				67 b
				50 c
				68 d
LSD (P=.05)				7.3
CV				4.96
				10.1
				7.07
				8.1
				5.91
				6.1
				4.25

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

## Herbicide Programs for Glyphosate-Tolerant Field Corn

Trial ID: CN Mnsnto Dow 03  
Location: Ashland Otto EastStudy Director:  
Investigator: David L Regehr

Pest Type				W Weed AMAPA	W Weed AMAPA	W Weed AMAPA	W Weed AMAPA
Pest Code							
Crop Code							
BBCH Scale							
Rating Date				9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003
Rating Data Type				CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit							
Days After Last Applic.				13	14	29	68
ARM Action Codes							
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage			
					3	11	18
							25
1	RU WeatherMax	22	fl oz/a	ErlyPost	96 a	96 a	99 a
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			99 a
	RU WeatherMax	16	fl oz/a	2ndFlush			
	Ammonium Sulfate	12	lb ai/100 gal	2ndFlush			
2	Degree Xtra	1.5	qt/a	Preemerg	99 a	99 a	99 a
	RU WeatherMax	22	fl oz/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
3	Degree Xtra	1.5	qt/a	ErlyPost	99 a	99 a	99 a
	RU WeatherMax	22	fl oz/a	ErlyPost			
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
4	Bicep II Magnum	2.1	qt/a	Preemerg	99 a	99 a	99 a
	Spirit	1	oz/a	MidPost			
	Nonionic Surfactant	0.25	% v/v	MidPost			
	UAN 28%	2.5	% v/v	MidPost			
5	Bicep II Magnum	2.1	qt/a	Preemerg	99 a	99 a	99 a
	Distinct	6	oz/a	ErlyPost			
	Nonionic Surfactant	0.25	% v/v	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
6	Bicep II Magnum	1.05	qt/a	Preemerg	99 a	99 a	99 a
	Touchdown IQ	1	qt/a	MidPost			98 a
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
7	FulTime	1.5	qt/a	Preemerg	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
8	Bicep II Magnum	1.05	qt/a	Preemerg	99 a	99 a	99 a
	Basis Gold	14	oz/a	ErlyPost			
	Crop Oil Conc	1	qt/a	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
9	Celebrity Plus	4.7	oz/a	ErlyPost	99 a	98 a	98 a
	Nonionic Surfactant	0.25	% v/v	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
10	Bicep II Magnum	2.1	qt/a	Preemerg	99 a	99 a	99 a
	Callisto	3	oz/a	ErlyPost			
	Atrazine	0.25	qt/a	ErlyPost			
	Crop Oil Conc	1	qt/a	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
11	Bicep II Magnum	1.05	qt/a	Preemerg	99 a	99 a	99 a
	Steadfast	0.75	oz/a	ErlyPost			
	Atrazine	0.75	qt/a	ErlyPost			
	Crop Oil Conc	1	qt/a	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
12	Fieldmaster	3	qt/a	ErlyPost	99 a	99 a	99 a
	RU WeatherMax	9.4	fl oz/a	ErlyPost			
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
13	Untreated check				0 b	0 c	0 c
14	FulTime	2	qt/a	Preemerg	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
15	Keystone	1.6	qt/a	Preemerg	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
16	GlyphoMax Plus	1	qt/a	ErlyPost	96 a	98 a	99 a
	Hornet WDG 68.5	3	oz/a	ErlyPost			
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
17	GlyphoMax Plus	1	qt/a	ErlyPost	98 a	78 b	68 b
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			77 b

9/Oct/2003 (CN Mnsnto Dow 03)

Kansas State University

Pest Type		W Weed	W Weed	W Weed	W Weed
Pest Code		AMAPA	AMAPA	AMAPA	AMAPA
Crop Code					
BBCH Scale					
Rating Date		9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003
Rating Data Type		CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit					
Days After Last Applic.		13	14	29	68
ARM Action Codes					
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	
18	GF-887 (Glyphomax HC 5.4) Ammonium Sulfate	1	qt/a	ErlyPost	
		12	lb ai/100 gal	ErlyPost	
					3
					11
					18
					25
					91 a
					75 b
					60 b
					72 b
LSD (P=.05)					5.0
CV					3.25
					5.9
					3.93
					11.3
					7.57
					5.5
					3.63

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

## Herbicide Programs for Glyphosate-Tolerant Field Corn

Trial ID: CN Mnsnto Dow 03  
Location: Ashland Otto East

Study Director:  
Investigator: David L Regehr

Pest Type				W Weed IPOHE	W Weed IPOHE	W Weed IPOHE	W Weed IPOHE	
Pest Code								
Crop Code								
BBCH Scale								
Rating Date				9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003	
Rating Data Type				CONTRO	CONTRO	CONTRO	CONTRO	
Rating Unit								
Days After Last Applic.				13	14	29	68	
ARM Action Codes								
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage				
					4	12	19	
							26	
1	RU WeatherMax Ammonium Sulfate	22 fl oz/a 12 lb ai/100 gal		ErlyPost ErlyPost	93 ab	91 a	86 ab	99 a
	RU WeatherMax Ammonium Sulfate	16 fl oz/a 12 lb ai/100 gal		2ndFlush 2ndFlush				
2	Degree Xtra RU WeatherMax Ammonium Sulfate	1.5 qt/a 22 fl oz/a 12 lb ai/100 gal		Preemerg MidPost MidPost	83 ab	99 a	91 ab	99 a
3	Degree Xtra RU WeatherMax Ammonium Sulfate	1.5 qt/a 22 fl oz/a 12 lb ai/100 gal		ErlyPost ErlyPost ErlyPost	92 ab	87 ab	91 ab	99 a
4	Bicep II Magnum Spirit Nonionic Surfactant UAN 28%	2.1 qt/a 1 oz/a 0.25 % v/v 2.5 % v/v		Preemerg MidPost MidPost MidPost	96 a	99 a	99 a	99 a
5	Bicep II Magnum Distinct Nonionic Surfactant UAN 28%	2.1 qt/a 6 oz/a 0.25 % v/v 2.5 % v/v		Preemerg ErlyPost ErlyPost ErlyPost	99 a	99 a	99 a	99 a
6	Bicep II Magnum Touchdown IQ Ammonium Sulfate	1.05 qt/a 1 qt/a 12 lb ai/100 gal		Preemerg MidPost MidPost	76 b	96 a	96 a	99 a
7	FulTime GlyphoMax Plus Ammonium Sulfate	1.5 qt/a 1 qt/a 12 lb ai/100 gal		Preemerg MidPost MidPost	95 ab	98 a	98 a	99 a
8	Bicep II Magnum Basis Gold Crop Oil Conc UAN 28%	1.05 qt/a 14 oz/a 1 qt/a 2.5 % v/v		Preemerg ErlyPost ErlyPost ErlyPost	99 a	99 a	99 a	99 a
9	Celebrity Plus Nonionic Surfactant UAN 28%	4.7 oz/a 0.25 % v/v 2.5 % v/v		ErlyPost ErlyPost ErlyPost	88 ab	93 a	88 ab	99 a
10	Bicep II Magnum Callisto Atrazine Crop Oil Conc UAN 28%	2.1 qt/a 3 oz/a 0.25 qt/a 1 qt/a 2.5 % v/v		Preemerg ErlyPost ErlyPost ErlyPost ErlyPost	99 a	99 a	99 a	99 a
11	Bicep II Magnum Steadfast Atrazine Crop Oil Conc UAN 28%	1.05 qt/a 0.75 oz/a 0.75 qt/a 1 qt/a 2.5 % v/v		Preemerg ErlyPost ErlyPost ErlyPost ErlyPost	99 a	99 a	99 a	99 a
12	Fieldmaster RU WeatherMax Ammonium Sulfate	3 qt/a 9.4 fl oz/a 12 lb ai/100 gal		ErlyPost ErlyPost ErlyPost	99 a	98 a	99 a	99 a
13	Untreated check				0 c	0 c	0 c	0 b
14	FulTime GlyphoMax Plus Ammonium Sulfate	2 qt/a 1 qt/a 12 lb ai/100 gal		Preemerg MidPost MidPost	91 ab	99 a	98 a	99 a
15	Keystone GlyphoMax Plus Ammonium Sulfate	1.6 qt/a 1 qt/a 12 lb ai/100 gal		Preemerg MidPost MidPost	98 a	99 a	99 a	99 a
16	GlyphoMax Plus Hornet WDG 68.5 Ammonium Sulfate	1 qt/a 3 oz/a 12 lb ai/100 gal		ErlyPost ErlyPost ErlyPost	88 ab	85 ab	82 ab	99 a
17	GlyphoMax Plus Ammonium Sulfate	1 qt/a 12 lb ai/100 gal		ErlyPost ErlyPost	88 ab	80 b	76 b	93 a

## Kansas State University

Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	IPOHE	IPOHE	IPOHE	IPOHE				
Crop Code								
BBCH Scale								
Rating Date	9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003				
Rating Data Type	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit								
Days After Last Applic.	13	14	29	68				
ARM Action Codes								
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	4	12	19	26
18	GF-887 (Glyphomax HC 5.4) Ammonium Sulfate	1	qt/a	ErlyPost ErlyPost	88 ab	78 b	77 b	95 a
		12	lb ai/100 gal					
LSD (P=.05)					11.3	8.4	10.0	4.7
CV					7.75	5.71	6.88	3.01

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

## Herbicide Programs for Glyphosate-Tolerant Field Corn

Trial ID: CN Mnsnto Dow 03  
Location: Ashland Otto EastStudy Director:  
Investigator: David L Regehr

Pest Type				W Weed	W Weed	W Weed	W Weed	
Pest Code				ABUTH	ABUTH	ABUTH	ABUTH	
Crop Code								
BBCH Scale								
Rating Date				9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003	
Rating Data Type				CONTRO	CONTRO	CONTRO	CONTRO	
Rating Unit								
Days After Last Applic.				13	14	29	68	
ARM Action Codes								
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	5	13	20	27
1	RU WeatherMax	22	fl oz/a	ErlyPost	96 a	99 a	98 a	99 a
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				
	RU WeatherMax	16	fl oz/a	2ndFlush				
	Ammonium Sulfate	12	lb ai/100 gal	2ndFlush				
2	Degree Xtra	1.5	qt/a	Preemerg	90 ab	99 a	99 a	99 a
	RU WeatherMax	22	fl oz/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
3	Degree Xtra	1.5	qt/a	ErlyPost	96 a	96 a	97 a	93 a
	RU WeatherMax	22	fl oz/a	ErlyPost				
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				
4	Bicep II Magnum	2.1	qt/a	Preemerg	98 a	99 a	99 a	99 a
	Spirit	1	oz/a	MidPost				
	Nonionic Surfactant	0.25	% v/v	MidPost				
	UAN 28%	2.5	% v/v	MidPost				
5	Bicep II Magnum	2.1	qt/a	Preemerg	99 a	98 a	98 a	98 a
	Distinct	6	oz/a	ErlyPost				
	Nonionic Surfactant	0.25	% v/v	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
6	Bicep II Magnum	1.05	qt/a	Preemerg	98 a	99 a	99 a	99 a
	Touchdown IQ	1	qt/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
7	FulTime	1.5	qt/a	Preemerg	95 ab	98 a	98 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
8	Bicep II Magnum	1.05	qt/a	Preemerg	98 a	99 a	99 a	99 a
	Basis Gold	14	oz/a	ErlyPost				
	Crop Oil Conc	1	qt/a	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
9	Celebrity Plus	4.7	oz/a	ErlyPost	88 b	95 a	94 a	95 a
	Nonionic Surfactant	0.25	% v/v	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
10	Bicep II Magnum	2.1	qt/a	Preemerg	99 a	99 a	99 a	99 a
	Callisto	3	oz/a	ErlyPost				
	Atrazine	0.25	qt/a	ErlyPost				
	Crop Oil Conc	1	qt/a	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
11	Bicep II Magnum	1.05	qt/a	Preemerg	99 a	96 a	96 a	98 a
	Steadfast	0.75	oz/a	ErlyPost				
	Atrazine	0.75	qt/a	ErlyPost				
	Crop Oil Conc	1	qt/a	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
12	Fieldmaster	3	qt/a	ErlyPost	99 a	99 a	99 a	99 a
	RU WeatherMax	9.4	fl oz/a	ErlyPost				
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				
13	Untreated check				0 c	0 b	0 c	0 b
14	FulTime	2	qt/a	Preemerg	99 a	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
15	Keystone	1.6	qt/a	Preemerg	98 a	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
16	GlyphoMax Plus	1	qt/a	ErlyPost	95 ab	96 a	99 a	96 a
	Hornet WDG 68.5	3	oz/a	ErlyPost				
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				
17	GlyphoMax Plus	1	qt/a	ErlyPost	96 a	90 a	86 b	92 a
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				



## Herbicide Programs for Glyphosate-Tolerant Field Corn

Trial ID: CN Mnsnto Dow 03  
Location: Ashland Otto EastStudy Director:  
Investigator: David L Regehr

Pest Type				W Weed	W Weed	W Weed	W Weed
Pest Code				SORBI	SORBI	SORBI	SORBI
Crop Code							
BBCH Scale							
Rating Date				9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003
Rating Data Type				CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit							
Days After Last Applic.				13	14	29	68
ARM Action Codes							
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage			
					6	14	21
					28		
1	RU WeatherMax	22	fl oz/a	ErlyPost	99 a	99 a	99 a
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
	RU WeatherMax	16	fl oz/a	2ndFlush			
	Ammonium Sulfate	12	lb ai/100 gal	2ndFlush			
2	Degree Xtra	1.5	qt/a	Preemerg	38 c	98 a	98 a
	RU WeatherMax	22	fl oz/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
3	Degree Xtra	1.5	qt/a	ErlyPost	99 a	98 a	99 a
	RU WeatherMax	22	fl oz/a	ErlyPost			
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
4	Bicep II Magnum	2.1	qt/a	Preemerg	87 a	99 a	99 a
	Spirit	1	oz/a	MidPost			
	Nonionic Surfactant	0.25	% v/v	MidPost			
	UAN 28%	2.5	% v/v	MidPost			
5	Bicep II Magnum	2.1	qt/a	Preemerg	63 abc	65 b	91 a
	Distinct	6	oz/a	ErlyPost			
	Nonionic Surfactant	0.25	% v/v	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
6	Bicep II Magnum	1.05	qt/a	Preemerg	47 bc	98 a	99 a
	Touchdown IQ	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
7	FulTime	1.5	qt/a	Preemerg	70 ab	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
8	Bicep II Magnum	1.05	qt/a	Preemerg	98 a	99 a	99 a
	Basis Gold	14	oz/a	ErlyPost			
	Crop Oil Conc	1	qt/a	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
9	Celebrity Plus	4.7	oz/a	ErlyPost	93 a	99 a	99 a
	Nonionic Surfactant	0.25	% v/v	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
10	Bicep II Magnum	2.1	qt/a	Preemerg	96 a	89 a	86 a
	Callisto	3	oz/a	ErlyPost			
	Atrazine	0.25	qt/a	ErlyPost			
	Crop Oil Conc	1	qt/a	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
11	Bicep II Magnum	1.05	qt/a	Preemerg	98 a	99 a	99 a
	Steadfast	0.75	oz/a	ErlyPost			
	Atrazine	0.75	qt/a	ErlyPost			
	Crop Oil Conc	1	qt/a	ErlyPost			
	UAN 28%	2.5	% v/v	ErlyPost			
12	Fieldmaster	3	qt/a	ErlyPost	98 a	95 a	98 a
	RU WeatherMax	9.4	fl oz/a	ErlyPost			
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
13	Untreated check				0 d	0 c	0 b
14	FulTime	2	qt/a	Preemerg	75 ab	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
15	Keystone	1.6	qt/a	Preemerg	75 ab	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost			
	Ammonium Sulfate	12	lb ai/100 gal	MidPost			
16	GlyphoMax Plus	1	qt/a	ErlyPost	96 a	80 ab	76 a
	Hornet WDG 68.5	3	oz/a	ErlyPost			
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			
17	GlyphoMax Plus	1	qt/a	ErlyPost	93 a	90 a	77 a
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost			

## Kansas State University

Pest Type	W Weed	W Weed	W Weed	W Weed				
Pest Code	SORBI	SORBI	SORBI	SORBI				
Crop Code								
BBCH Scale								
Rating Date	9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003				
Rating Data Type	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit								
Days After Last Applic.	13	14	29	68				
ARM Action Codes								
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	6	14	21	28
18	GF-887 (Glyphomax HC 5.4) Ammonium Sulfate	1 12	qt/a lb ai/100 gal	ErlyPost ErlyPost	98 a	99 a	98 a	99 a
LSD (P=.05)					21.8	16.4	15.1	13.8
CV					16.55	11.07	10.08	9.12

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

## Herbicide Programs for Glyphosate-Tolerant Field Corn

Trial ID: CN Mnsnto Dow 03  
Location: Ashland Otto EastStudy Director:  
Investigator: David L Regehr

Pest Type				W Weed	W Weed	W Weed	W Weed	
Pest Code				HELAN	HELAN	HELAN	HELAN	
Crop Code								
BBCH Scale								
Rating Date				9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003	
Rating Data Type				CONTRO	CONTRO	CONTRO	CONTRO	
Rating Unit								
Days After Last Applic.				13	14	29	68	
ARM Action Codes								
Trt No.	Treatment Name	Other Rate	Other Rate Unit	Growth Stage	7	15	22	29
1	RU WeatherMax	22	fl oz/a	ErlyPost	96 a	98 a	99 a	99 a
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				
	RU WeatherMax	16	fl oz/a	2ndFlush				
	Ammonium Sulfate	12	lb ai/100 gal	2ndFlush				
2	Degree Xtra	1.5	qt/a	Preemerg	10 cd	99 a	99 a	99 a
	RU WeatherMax	22	fl oz/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
3	Degree Xtra	1.5	qt/a	ErlyPost	96 a	96 a	99 a	96 a
	RU WeatherMax	22	fl oz/a	ErlyPost				
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				
4	Bicep II Magnum	2.1	qt/a	Preemerg	86 a	99 a	99 a	99 a
	Spirit	1	oz/a	MidPost				
	Nonionic Surfactant	0.25	% v/v	MidPost				
	UAN 28%	2.5	% v/v	MidPost				
5	Bicep II Magnum	2.1	qt/a	Preemerg	98 a	99 a	99 a	99 a
	Distinct	6	oz/a	ErlyPost				
	Nonionic Surfactant	0.25	% v/v	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
6	Bicep II Magnum	1.05	qt/a	Preemerg	20 cd	98 a	99 a	99 a
	Touchdown IQ	1	qt/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
7	FulTime	1.5	qt/a	Preemerg	32 bc	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
8	Bicep II Magnum	1.05	qt/a	Preemerg	99 a	99 a	99 a	99 a
	Basis Gold	14	oz/a	ErlyPost				
	Crop Oil Conc	1	qt/a	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
9	Celebrity Plus	4.7	oz/a	ErlyPost	92 a	98 a	99 a	99 a
	Nonionic Surfactant	0.25	% v/v	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
10	Bicep II Magnum	2.1	qt/a	Preemerg	99 a	99 a	99 a	99 a
	Callisto	3	oz/a	ErlyPost				
	Atrazine	0.25	qt/a	ErlyPost				
	Crop Oil Conc	1	qt/a	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
11	Bicep II Magnum	1.05	qt/a	Preemerg	99 a	99 a	99 a	99 a
	Steadfast	0.75	oz/a	ErlyPost				
	Atrazine	0.75	qt/a	ErlyPost				
	Crop Oil Conc	1	qt/a	ErlyPost				
	UAN 28%	2.5	% v/v	ErlyPost				
12	Fieldmaster	3	qt/a	ErlyPost	99 a	99 a	99 a	99 a
	RU WeatherMax	9.4	fl oz/a	ErlyPost				
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				
13	Untreated check				0 d	0 b	0 b	0 b
14	FulTime	2	qt/a	Preemerg	53 b	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
15	Keystone	1.6	qt/a	Preemerg	32 bc	99 a	99 a	99 a
	GlyphoMax Plus	1	qt/a	MidPost				
	Ammonium Sulfate	12	lb ai/100 gal	MidPost				
16	GlyphoMax Plus	1	qt/a	ErlyPost	99 a	99 a	99 a	99 a
	Hornet WDG 68.5	3	oz/a	ErlyPost				
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				
17	GlyphoMax Plus	1	qt/a	ErlyPost	96 a	98 a	96 a	99 a
	Ammonium Sulfate	12	lb ai/100 gal	ErlyPost				

## Kansas State University

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	HELAN	HELAN	HELAN	HELAN
Crop Code				
BBCH Scale				
Rating Date	9/Jun/2003	24/Jun/2003	9/Jul/2003	26/Aug/2003
Rating Data Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit				
Days After Last Applic.	13	14	29	68
ARM Action Codes				
Trt No.	Treatment	Other Rate	Other Rate Unit	Growth Stage
18	GF-887 (Glyphomax HC 5.4) Ammonium Sulfate	1 qt/a 12 lb ai/100 gal		ErlyPost ErlyPost
				7
				15
				22
				29
				99 a
				99 a
				99 a
				99 a
LSD (P=.05)				20.2
CV				16.71
				2.6
				1.7
				2.0
				1.31
				2.0
				1.31

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.