

Ohio State University
Horticulture and Crop Science

WEED CONTROL SYSTEMS IN CORN WITH IMPACT

08-OH-TPZ-H-100-101A

Trial ID: 08IMPACTGRGR

Location: BLUCK'S

Study Dir.: Anthony F. Dobbels

Investigator: Dr. Mark M. Loux

GENERAL TRIAL INFORMATION

Study Director: Anthony F. Dobbels

Investigator: Dr. Mark M. Loux

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name
1. AMBTR	Giant ragweed	Ambrosia trifida
2. HIBTR	Venice mallow	Hibiscus trionum
3. CHEAL	Common lambsquarters	Chenopodium album

Crop 1: ZEAMX CORN, FIELD

Variety: MYCOGEN 2G779

Planting Date: Apr/25/2008

Planting Method: ALMACO CORN PLANTER

Rate: 32000 SEED/A

Depth: 1.5 IN

Row Spacing: 30 IN

Seed Bed: CONVENTIONAL

SITE AND DESIGN

Plot Width, Unit: 10 FT

Plot Length, Unit: 30 FT

Reps: 4

Tillage Type: CONVENTIONAL

Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% Sand: 24.5	% OM: 2.9	Texture: SILTY CLAY LOAM
% Silt: 48.9	pH: 6.8	Soil Name: KOKOMO
% Clay: 26.6	CEC: 11.7	Fert. Level: GOOD

APPLICATION DESCRIPTION

	A	B
Application Date:	Apr/25/2008	Jun/09/2008
Time of Day:	6:00 P.M.	8:00 A.M.
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Applic. Placement:	BROADCAST	BROADCAST
Air Temp., Unit:	82 F	87 F
% Relative Humidity:	35	65
Wind Velocity, Unit:	8 SW	8 SW
Soil Temp., Unit:	57 F	79 F
Soil Moisture:	DRY/MOIST	DRY/MOIST
% Cloud Cover:	30	1

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX ZEAMX V5	
Stage Scale:	DESC	
Height, Unit:	20 IN	

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	AMBTR AMBTR 2-12"	
Stage Scale:	8-24 LVS	
Density, Unit:	45 M2	
Weed 2 Code, Stage:	HIBTR HIBTR 2-3"	
Stage Scale:	4 LVS	
Density, Unit:	8 M2	
Weed 3 Code, Stage:	CHEAL CHEAL 2-4"	
Stage Scale:	6-8 LVS	
Density, Unit:	5 M2	

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	53	53
Nozzle Type:	DG	DG
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA
Propellant:	CO2	CO2

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Location: BLUCK'S

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Weed Code	SETFA	AMBTR	CHEAL	HIBTR	ZEAMX	ZEAMX					
Crop Code	CONTROL	CONTROL	CONTROL	CONTROL	PHYTO	PHYTO					
Rating Data Type	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT					
Rating Unit	Jun/12/2008	Jun/12/2008	Jun/12/2008	Jun/12/2008	Jun/17/2008	Jun/24/2008					
Rating Date	AT POST	AT POST	AT POST	AT POST	8 DA-B	15 DA-B					
Trt-Eval Interval	0	0	0	0	0	0					
# Subsamples, Dec.											
Trt No.	Treatment Name	Product Rate	Product Unit	Grow Stg	Appl Code	1	2	3	4	5	6
1	UTC					0 b	0 c	0 b	0 c	0 a	0 a
2	BICEP II MAGNUM	2.1 pt/a		PRE	A	100 a	55 b	100 a	55 b	0 a	0 a
3	BICEP II MAGNUM	2.1 pt/a		PRE	A	100 a	58 ab	100 a	72 ab	0 a	0 a
3	IMPACT	0.75 oz/a		MPO	B						
3	ATRAZINE	1 pt/a		MPO							
3	MSO	0.8 qt/a		MPO							
3	28%	2 qt/a		MPO							
4	BICEP II MAGNUM	2.1 pt/a		PRE	A	100 a	63 ab	100 a	68 ab	0 a	0 a
4	IMPACT	0.503 oz/a		POST	B						
4	ROUNDUP POWERMAX	21.3 oz/a		POST							
4	AMS	2 qt/a		POST							
5	BICEP II MAGNUM	2.1 pt/a		PRE	A	100 a	61 ab	100 a	75 ab	0 a	0 a
5	IMPACT	0.503 oz/a		POST	B						
5	ROUNDUP POWERMAX	21.3 oz/a		POST							
5	ATRAZINE	1 pt/a		POST							
5	AMS	2 qt/a		POST							
6	BICEP II MAGNUM	2.1 pt/a		PRE	A	98 a	55 b	100 a	65 ab	0 a	0 a
6	ROUNDUP POWERMAX	21.3 oz/a		POST	B						
6	AMS	2 qt/a		POST							
7	RADIUS	18 oz/a		PRE	A	99 a	58 ab	99 a	60 ab	0 a	0 a
7	LAUDIS	3 oz/a		POST	B						
7	MSO	0.8 qt/a		MPO							
7	28%	2 qt/a		MPO							
8	BAS 781	13 oz/a		PRE	A	100 a	73 a	98 a	80 ab	0 a	0 a
8	ROUNDUP POWERMAX	21.3 oz/a		POST	B						
8	STATUS	2.5 oz/a		POST							
8	NIS	6.4 oz/a		POST							
8	AMS	4 qt/a		POST							
9	BAS 781	13 oz/a		PRE	A	100 a	73 a	99 a	83 a	0 a	0 a
9	ROUNDUP POWERMAX	21.3 oz/a		POST	B						
9	STATUS	5 oz/a		POST							
9	NIS	6.4 oz/a		POST							
9	AMS	4 qt/a		POST							
10	UT					0 b	0 c	0 b	0 c	0 a	0 a
	LSD (P=.05)					2.5	10.3	2.8	17.0	0.0	0.0
	Standard Deviation					1.7	7.1	1.9	11.7	0.0	0.0
	CV					2.14	14.33	2.39	20.99	0.0	0.0
	Bartlett's X2					9.874	5.122	2.02	3.306	0.0	0.0
	P(Bartlett's X2)					0.007*	0.645	0.364	0.77	.	.
	Replicate F					1.862	10.598	1.385	4.343	0.000	0.000
	Replicate Prob(F)					0.1599	0.0001	0.2688	0.0131	1.0000	1.0000
	Treatment F					2428.548	57.288	1945.462	27.296	0.000	0.000
	Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

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.

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						SETFA	AMBTR	CHEAL	HIBTR	SETFA	AMBTR
Weed Code	Crop Code					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Data Type	Rating Unit					PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Trt-Eval Interval					Jun/24/2008	Jun/24/2008	Jun/24/2008	Jun/24/2008	Jul/05/2008	Jul/05/2008
# Subsamples, Dec.						15 DA-B	15 DA-B	15 DA-B	15 DA-B	26 DA-B	26 DA-B
						0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Unit	Grow Stg	Appl Code	7	8	9	10	11	12
1	UTC					0 b	0 e	0 b	0 c	0 b	0 c
2	BICEP II MAGNUM	2.1	pt/a	PRE	A	99 a	28 d	99 a	55 b	85 a	10 c
3	BICEP II MAGNUM	2.1	pt/a	PRE	A	100 a	98 a	100 a	100 a	100 a	72 a
3	IMPACT	0.75	oz/a	MPO	B						
3	ATRAZINE	1	pt/a	MPO							
3	MSO	0.8	qt/a	MPO							
3	28%	2	qt/a	MPO							
4	BICEP II MAGNUM	2.1	pt/a	PRE	A	100 a	78 b	100 a	100 a	100 a	70 a
4	IMPACT	0.503	oz/a	POST	B						
4	ROUNDUP POWERMAX	21.3	oz/a	POST							
4	AMS	2	qt/a	POST							
5	BICEP II MAGNUM	2.1	pt/a	PRE	A	100 a	80 b	100 a	100 a	100 a	73 a
5	IMPACT	0.503	oz/a	POST	B						
5	ROUNDUP POWERMAX	21.3	oz/a	POST							
5	ATRAZINE	1	pt/a	POST							
5	AMS	2	qt/a	POST							
6	BICEP II MAGNUM	2.1	pt/a	PRE	A	100 a	58 c	100 a	96 a	100 a	33 b
6	ROUNDUP POWERMAX	21.3	oz/a	POST	B						
6	AMS	2	qt/a	POST							
7	RADIUS	18	oz/a	PRE	A	100 a	93 a	100 a	95 a	99 a	83 a
7	LAUDIS	3	oz/a	POST	B						
7	MSO	0.8	qt/a	MPO							
7	28%	2	qt/a	MPO							
8	BAS 781	13	oz/a	PRE	A	100 a	97 a	100 a	100 a	100 a	88 a
8	ROUNDUP POWERMAX	21.3	oz/a	POST	B						
8	STATUS	2.5	oz/a	POST							
8	NIS	6.4	oz/a	POST							
8	AMS	4	qt/a	POST							
9	BAS 781	13	oz/a	PRE	A	100 a	95 a	100 a	100 a	100 a	90 a
9	ROUNDUP POWERMAX	21.3	oz/a	POST	B						
9	STATUS	5	oz/a	POST							
9	NIS	6.4	oz/a	POST							
9	AMS	4	qt/a	POST							
10	UT					0 b	0 e	0 b	0 c	0 b	0 c
LSD (P=.05)						1.1	8.8	0.7	10.0	11.0	16.1
Standard Deviation						0.8	6.1	0.5	6.9	7.6	11.1
CV						0.99	9.74	0.59	9.2	9.65	21.53
Bartlett's X2						0.0	12.302	0.0	2.201	25.028	14.557
P(Bartlett's X2)						.	0.091	.	0.333	0.001*	0.042*
Replicate F						1.000	5.119	1.000	0.564	0.973	3.805
Replicate Prob(F)						0.4079	0.0062	0.4079	0.6436	0.4197	0.0214
Treatment F						11343.224	167.667	31546.683	147.208	120.938	44.244
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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					CHEAL	HIBTR	SETFA	AMBTR	CHEAL	HIBTR	
					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
					PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	
					Jul/05/2008	Jul/05/2008	Aug/06/2008	Aug/06/2008	Aug/06/2008	Aug/06/2008	
					26 DA-B	26 DA-B	58 DA-B	58 DA-B	58 DA-B	58 DA-B	
					0	0	0	0	0	0	
Trt No.	Treatment Name	Product Rate	Product Unit	Grow Stg	Appl Code	13	14	15	16	17	18
1	UTC					0 b	0 c	0 c	0 d	0 b	0 c
2	BICEP II MAGNUM	2.1	pt/a	PRE	A	100 a	53 b	81 b	0 d	100 a	55 b
3	BICEP II MAGNUM	2.1	pt/a	PRE	A	100 a	100 a	100 a	86 ab	100 a	100 a
3	IMPACT	0.75	oz/a	MPO	B						
3	ATRAZINE	1	pt/a	MPO							
3	MSO	0.8	qt/a	MPO							
3	28%	2	qt/a	MPO							
4	BICEP II MAGNUM	2.1	pt/a	PRE	A	100 a	96 a	100 a	76 b	100 a	100 a
4	IMPACT	0.503	oz/a	POST	B						
4	ROUNDUP POWERMAX	21.3	oz/a	POST							
4	AMS	2	qt/a	POST							
5	BICEP II MAGNUM	2.1	pt/a	PRE	A	100 a	100 a	100 a	83 ab	100 a	100 a
5	IMPACT	0.503	oz/a	POST	B						
5	ROUNDUP POWERMAX	21.3	oz/a	POST							
5	ATRAZINE	1	pt/a	POST							
5	AMS	2	qt/a	POST							
6	BICEP II MAGNUM	2.1	pt/a	PRE	A	100 a	95 a	100 a	39 c	100 a	100 a
6	ROUNDUP POWERMAX	21.3	oz/a	POST	B						
6	AMS	2	qt/a	POST							
7	RADIUS	18	oz/a	PRE	A	100 a	85 a	100 a	95 a	100 a	95 a
7	LAUDIS	3	oz/a	POST	B						
7	MSO	0.8	qt/a	MPO							
7	28%	2	qt/a	MPO							
8	BAS 781	13	oz/a	PRE	A	100 a	98 a	100 a	97 a	100 a	100 a
8	ROUNDUP POWERMAX	21.3	oz/a	POST	B						
8	STATUS	2.5	oz/a	POST							
8	NIS	6.4	oz/a	POST							
8	AMS	4	qt/a	POST							
9	BAS 781	13	oz/a	PRE	A	100 a	100 a	100 a	95 a	100 a	100 a
9	ROUNDUP POWERMAX	21.3	oz/a	POST	B						
9	STATUS	5	oz/a	POST							
9	NIS	6.4	oz/a	POST							
9	AMS	4	qt/a	POST							
10	UT					0 b	0 c	0 c	0 d	0 b	0 c
	LSD (P=.05)					0.0	13.7	11.0	12.1	0.0	6.8
	Standard Deviation					0.0	9.5	7.6	8.3	0.0	4.7
	CV					0.0	13.01	9.69	14.57	0.0	6.29
	Bartlett's X2					0.0	9.363	0.0	6.368	0.0	0.0
	P(Bartlett's X2)					.	0.053	.	0.383	.	1.00
	Replicate F					0.000	1.145	1.000	1.403	0.000	0.000
	Replicate Prob(F)					1.0000	0.3487	0.4079	0.2633	1.0000	1.0000
	Treatment F					0.000	74.793	120.758	105.790	0.000	316.000
	Treatment Prob(F)					1.0000	0.0001	0.0001	0.0001	1.0000	0.0001

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