

Ohio State University  
Horticulture and Crop Science

PERFORMANCE OF HARNESS AND DEGREE APPLIED MPO TO CORN

2007-01-04-02

Trial ID: 08ACET

Study Dir.: Anthony F. Dobbels

Location: WESTERN BRANCH E-2

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. SETFA	Giant foxtail	Setaria faberi
2. CHEAL	Common lambsquarters	Chenopodium album
3. AMBTR	Giant ragweed	Ambrosia trifida
4. ABUTH	Velvetleaf	Abutilon theophrasti
5. AMARE	Redroot pigweed	Amaranthus retroflexus

Crop 1: ZEAMX CORN, FIELD

Variety: DEKABL DKC 61-19

Planting Date: Apr/24/2008

Planting Method: JOHN DEERE 7200

Rate: 32097 SEED/A

Depth: 1.5 IN

Row Spacing: 30 IN

Seed Bed: CONVENTIONAL

SITE AND DESIGN

Plot Width, Unit: 10 FT

Plot Length, Unit: 40 FT

Reps: 4

Tillage Type: CONVENTIONAL

Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM:	2.7	Texture:	SILTY CLAY LOAM
pH:	6.1	Soil Name:	KOKOMO
CEC:	21.6	Fert. Level:	EXCELLENT

APPLICATION DESCRIPTION

	A	B	C
Application Date:	Apr/24/2008	Jun/08/2008	Jun/17/2008
Time of Day:	3:00 P.M.	7:30 P.M.	9:00 A.M.
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	POST	LPO
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	76 F	73 F	60 F
% Relative Humidity:		81	50
Wind Velocity, Unit:	7 SE	7 SW	8 WNW
Soil Temp., Unit:	74 F	69 F	60 F
Soil Moisture:	DRY/MOIST	MOIST/WET	DRY/MOIST
% Cloud Cover:	70	7	35

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	ZEAMX	ZEAMX V6	ZEAMX V8
Stage Scale:	DESC	DESC	
Height, Unit:	20 IN	36 IN	

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	SETFA	SETFA 1-8"	SETFA 2-8"
Stage Scale:		1-6 LVS	1-7 LVS
Density, Unit:		260 M2	260 M2
Weed 2 Code, Stage:	CHEAL	CHEAL 1-8"	CHEAL 3-8"
Stage Scale:		2->12 LVS	4->12LVS
Density, Unit:		30 M2	30 M2
Weed 3 Code, Stage:	AMBTR	AMBTR 4-22"	AMBTR 20-30"
Stage Scale:		4->12 LVS	12-30 LVS
Density, Unit:		34 M2	34 M2
Weed 4 Code, Stage:	ABUTH	ABUTH 2-6"	ABUTH 4-8"
Stage Scale:		2-8 LVS	6-10 LVS
Density, Unit:		3 M2	3 M2
Weed 5 Code, Stage:	AMARE	AMARE 1-2	AMARE 4-6"
Stage Scale:		2 LVS	4-8 LVS
Density, Unit:		5 M2	5 M2

**APPLICATION EQUIPMENT**

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

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Location: WESTERN BRANCH E-2

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Weed Code					SETFA	CHEAL	AMBTR	ABUTH		ZEAMX	ZEAMX
Crop Code					CONTROL	CONTROL	CONTROL	CONTROL		PHYTO	PHYTO
Rating Data Type					PERCENT	PERCENT	PERCENT	PERCENT		PERCENT	PERCENT
Rating Unit					Jun/07/2008	Jun/07/2008	Jun/07/2008	Jun/07/2008		Jun/16/2008	Jun/23/2008
Rating Date					AT POST	AT POST	AT POST	AT POST		8 DA-B	6 DA-C
Trt-Eval Interval					0	0	0	0		0	0
# Subsamples, Dec.											
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
1	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	95 a	74 a	65 ab	73 bc	0 b	1 ab
1	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"	B						
1	AMS	4 qt/a		V-6 20"							
2	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	97 a	81 a	66 ab	73 bc	0 b	0 b
2	HARNESS	1.5 pt/a		V-6 20"	B						
2	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"							
2	AMS	4 qt/a		V-6 20"							
3	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	97 a	71 a	63 b	74 bc	0 b	0 b
3	HARNESS	3 pt/a		V-6 20"	B						
3	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"							
3	AMS	4 qt/a		V-6 20"							
4	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	97 a	78 a	66 ab	76 bc	0 b	1 ab
4	HARNESS	1.5 pt/a		V-8 30"	C						
4	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-8 30"							
4	AMS	4 qt/a		V-8 30"							
5	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	96 a	73 a	65 ab	68 c	1 b	0 b
5	HARNESS	3 pt/a		V-8 30"	C						
5	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-8 30"							
5	AMS	4 qt/a		V-8 30"							
6	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	94 a	74 a	74 ab	69 c	2 a	1 a
6	CALLISTO	3 oz/a		V-6 20"	B						
6	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"							
6	AMS	4 qt/a		V-6 20"							
7	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	96 a	71 a	64 ab	68 c	0 b	0 b
7	STATUS	2.5 oz/a		V-6 20"	B						
7	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"							
7	AMS	4 qt/a		V-6 20"							
8	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	97 a	80 a	75 ab	89 ab	0 b	0 ab
8	IMPACT	0.5 oz/a		V-6 20"	B						
8	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"							
8	AMS	4 qt/a		V-6 20"							
9	HARNESS XTRA 5.6	2.6 qt/a		PRE	A	99 a	85 a	74 ab	96 a	0 b	0 b
10	LEXAR	3 qt/a		PRE	A	99 a	93 a	80 a	99 a	0 b	0 b
LSD (P=.05)						3.7	13.9	10.4	13.2	0.7	0.6
Standard Deviation						2.6	9.6	7.2	9.1	0.5	0.4
CV						2.67	12.32	10.35	11.65	235.7	161.47
Bartlett's X2						24.659	5.427	4.932	19.35	0.0	1.018
P(Bartlett's X2)						0.003*	0.796	0.765	0.022*	.	0.797
Replicate F						0.628	1.744	2.194	0.671	0.000	0.205
Replicate Prob(F)						0.6029	0.1817	0.1118	0.5770	1.0000	0.8923
Treatment F						1.435	2.082	2.769	6.768	4.200	3.409
Treatment Prob(F)						0.2228	0.0682	0.0195	0.0001	0.0018	0.0064

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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Weed Code		SETFA	CHEAL	AMBTR	ABUTH				
Crop Code									
Rating Data Type		CONTROL	CONTROL	CONTROL	CONTROL				
Rating Unit		PERCENT	PERCENT	PERCENT	PERCENT				
Rating Date		Aug/27/2008	Aug/27/2008	Aug/27/2008	Aug/27/2008				
Trt-Eval Interval		HARVEST	HARVEST	HARVEST	HARVEST				
# Subsamples, Dec.		0	0	0	0				
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8	9	10
1	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	98 a	99 a	95 a	99 a
1	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"	B				
1	AMS	4 qt/a		V-6 20"					
2	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	100 a	100 a	98 a	100 a
2	HARNESS	1.5 pt/a		V-6 20"	B				
2	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"					
2	AMS	4 qt/a		V-6 20"					
3	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	100 a	100 a	91 ab	100 a
3	HARNESS	3 pt/a		V-6 20"	B				
3	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"					
3	AMS	4 qt/a		V-6 20"					
4	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	100 a	93 a	90 ab	100 a
4	HARNESS	1.5 pt/a		V-8 30"	C				
4	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-8 30"					
4	AMS	4 qt/a		V-8 30"					
5	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	100 a	94 a	93 a	100 a
5	HARNESS	3 pt/a		V-8 30"	C				
5	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-8 30"					
5	AMS	4 qt/a		V-8 30"					
6	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	97 a	100 a	100 a	100 a
6	CALLISTO	3 oz/a		V-6 20"	B				
6	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"					
6	AMS	4 qt/a		V-6 20"					
7	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	100 a	99 a	99 a	100 a
7	STATUS	2.5 oz/a		V-6 20"	B				
7	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"					
7	AMS	4 qt/a		V-6 20"					
8	HARNESS XTRA 5.6	1.5 qt/a		PRE	A	100 a	98 a	92 ab	100 a
8	IMPACT	0.5 oz/a		V-6 20"	B				
8	ROUNDUP ORIGINAL MAX	21.3 oz/a		V-6 20"					
8	AMS	4 qt/a		V-6 20"					
9	HARNESS XTRA 5.6	2.6 qt/a		PRE	A	99 a	96 a	74 c	100 a
10	LEXAR	3 qt/a		PRE	A	99 a	92 a	83 b	100 a
LSD (P=.05)						2.5	5.2	7.4	0.5
Standard Deviation						1.7	3.6	5.1	0.3
CV						1.72	3.66	5.58	0.33
Bartlett's X2						23.632	47.504	23.996	1.166
P(Bartlett's X2)						0.001*	0.001*	0.004*	0.28
Replicate F						0.753	0.554	1.604	1.862
Replicate Prob(F)						0.5303	0.6497	0.2115	0.1599
Treatment F						1.479	2.868	9.676	2.172
Treatment Prob(F)						0.2058	0.0164	0.0001	0.0577

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.