

Ohio State University
Horticulture and Crop Science

PRE POST WEED CONTROL IN ROUNDUP READY CORN WITH YUKON AND PERMIT

Trial ID: 08PRPORRC1 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. IPOHE	Ivyleaf morningglory	Ipomoea hederacea
5. SOLPT	Eastern black nightshade	Solanum ptycanthum
6. POLPY	Pennsylvania smartweed	Polygonum pensylvanicum

Crop 1: ZEAMX CORN, FIELD Variety: SEED CONSULTANTS SC11BR16
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	May/29/2008	Jun/08/2008
Time of Day:	3:00 P.M.	9:30 A.M.	7:30 A.M.
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	20" CORN
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	76 F	63 F	73 F
% Relative Humidity:		45	81
Wind Velocity, Unit:	7 SE	3 E	7 SW
Soil Temp., Unit:	74 F	58 F	69 F
Soil Moisture:	DRY/MOIST	DRY/MOIST	MOIST/WET
% Cloud Cover:	70	0	7

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	ZEAMX ZEAMX V4	ZEAMX V6	
Stage Scale:	DESC	DESC	
Height, Unit:	8 IN	22 IN	

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	SETFA SETFA 3"	SETFA 4-10"	
Stage Scale:	3 LVS	7 LVS	
Density, Unit:	236 M2	236 M2	
Weed 2 Code, Stage:	CHEAL CHEAL 1-2"	CHEAL 1-10"	
Stage Scale:	4-6 LVS	8-10 LVS	
Density, Unit:	30 M2	30 M2	
Weed 3 Code, Stage:	AMBTR AMBTR 4-12"	AMBTR 4-22"	
Stage Scale:	6-12 LVS	12-20 LVS	
Density, Unit:	34 M2	34 M2	
Weed 4 Code, Stage:	IPOHE IPOHE 1"	IPOHE 2"	
Stage Scale:	2 LVS	5 LVS	
Density, Unit:	1.3 M2	1.3 M2	
Weed 5 Code, Stage:	SOLPT SOLPT .5"	SOLPT 1"	
Stage Scale:	4 LVS	6 LVS	
Density, Unit:	0.3 M2	0.3 M2	
Weed 6 Code, Stage:	POLPY POLPY 2-3"	POLPY 4-6"	
Stage Scale:	2-3 LVS	8-10 LVS	
Density, Unit:	0.33 M2	0.33 M2	

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APPLICATION EQUIPMENT

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

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Trial ID: 08PRPORRC1 Study Dir.: Anthony F. Dobbels
Location: WESTERN BRANCH E-2 Investigator: Dr. Mark M. Loux

					SETFA	AMBTR	CHEAL			SETFA	
					ZEAMX				ZEAMX		
					PHYTO	CONTROL	CONTROL	CONTROL	PHYTO	CONTROL	
					PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	
					Jun/11/2008	Jun/11/2008	Jun/11/2008	Jun/11/2008	Jun/25/2008	Jun/25/2008	
					13 DA-B	13 DA-B	13 DA-B	13 DA-B	27 DA-B	27 DA-B	
					0	0	0	0	0	0	
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
1	HARNESS XTRA 5.6	2.25	qt/a	PRE	A	1 b	100 a	89 ab	100 a	0 a	96 a
1	YUKON	4	oz/a	12" CRN	B						
2	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	3 b	98 a	98 a	100 a	0 a	96 a
2	YUKON	4	oz/a	12" CRN	B						
2	ROUNDUP WEATHERMAX	22	oz/a	12" CRN							
2	NIS	3.2	oz/a	12" CRN							
2	AMS	4	qt/a	12" CRN							
3	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	3 b	100 a	93 a	100 a	0 a	90 a
3	PERMIT	0.66	oz/a	12" CRN	B						
3	ROUNDUP WEATHERMAX	22	oz/a	12" CRN							
3	NIS	3.2	oz/a	12" CRN							
3	AMS	4	qt/a	12" CRN							
4	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	0 b	100 a	86 ab	100 a	0 a	90 a
4	STATUS	5	oz/a	12" CRN	B						
4	ROUNDUP WEATHERMAX	22	oz/a	12" CRN							
4	NIS	3.2	oz/a	12" CRN							
4	AMS	4	qt/a	12" CRN							
5	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	0 b	99 a	76 abc	100 a	0 a	92 a
5	ROUNDUP WEATHERMAX	22	oz/a	12" CRN	B						
5	AMS	4	qt/a	12" CRN							
6	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	1 b	99 a	81 abc	96 a	0 a	95 a
6	YUKON	4	oz/a	20" CRN	C						
6	ROUNDUP WEATHERMAX	22	oz/a	20" CRN							
6	NIS	3.2	oz/a	20" CRN							
6	AMS	4	qt/a	20" CRN							
7	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	1 b	100 a	69 bc	100 a	0 a	99 a
7	ROUNDUP WEATHERMAX	22	oz/a	20" CRN	C						
7	AMS	4	qt/a	20" CRN							
8	SAMSON	12	oz/a	12" CRN	B	3 b	96 a	79 abc	92 a	0 a	89 a
8	IMPACT	0.75	oz/a	12" CRN							
8	AMS	2	qt/a	12" CRN							
9	SAMSON	12	oz/a	12" CRN	B	3 b	97 a	64 c	100 a	0 a	89 a
9	CALLISTO	3	oz/a	12" CRN							
9	AMS	2	qt/a	12" CRN							
10	SAMSON	12	oz/a	12" CRN	B	9 a	99 a	92 a	99 a	1 a	91 a
10	CLARITY	16	oz/a	12" CRN							
10	AMS	2	qt/a	12" CRN							
11	SAMSON	12	oz/a	12" CRN	B	0 b	100 a	30 d	93 a	0 a	100 a
11	AATREX	15	oz/a	12" CRN							
11	AMS	2	qt/a	12" CRN							
12	UTC					0 b	0 b	0 e	0 b	0 a	0 b
LSD (P=.05)						3.0	3.6	14.4	7.6	0.6	9.5
Standard Deviation						2.1	2.5	10.0	5.3	0.4	6.6
CV						113.51	2.77	14.02	5.87	692.82	7.74
Bartlett's X2						8.704	21.122	29.165	16.769	0.0	12.255
P(Bartlett's X2)						0.275	0.004*	0.001*	0.002*	.	0.199
Replicate F						1.886	0.885	1.022	1.707	1.000	1.131
Replicate Prob(F)						0.1512	0.4592	0.3961	0.1847	0.4051	0.3508
Treatment F						5.597	517.262	33.239	116.212	1.000	67.543
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.4671	0.0001

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Weed Code		SETFA	AMBTR	CHEAL		SETFA
Crop Code	ZEAMX				ZEAMX	
Rating Data Type	PHYTO	CONTROL	CONTROL	CONTROL	PHYTO	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Jun/11/2008	Jun/11/2008	Jun/11/2008	Jun/11/2008	Jun/25/2008	Jun/25/2008
Trt-Eval Interval	13 DA-B	13 DA-B	13 DA-B	13 DA-B	27 DA-B	27 DA-B
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
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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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					AMBTR	CHEAL	SETFA	AMBTR	CHEAL	
Weed Code					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Crop Code					PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	
Rating Data Type					Jun/25/2008	Jun/25/2008	Jul/25/2008	Jul/25/2008	Jul/25/2008	
Rating Unit					27 DA-B	27 DA-B	57 DA-B	57 DA-B	57 DA-B	
Rating Date					0	0	0	0	0	
Trt-Eval Interval										
# Subsamples, Dec.										
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8	9	10	11
1	HARNESS XTRA 5.6	2.25	qt/a	PRE	A	80 ab	99 a	95 a	83 abc	99 a
1	YUKON	4	oz/a	12"	CRN B					
2	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	86 ab	100 a	93 a	89 ab	100 a
2	YUKON	4	oz/a	12"	CRN B					
2	ROUNDUP WEATHERMAX	22	oz/a	12"	CRN					
2	NIS	3.2	oz/a	12"	CRN					
2	AMS	4	qt/a	12"	CRN					
3	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	87 ab	99 a	93 a	81 abc	94 a
3	PERMIT	0.66	oz/a	12"	CRN B					
3	ROUNDUP WEATHERMAX	22	oz/a	12"	CRN					
3	NIS	3.2	oz/a	12"	CRN					
3	AMS	4	qt/a	12"	CRN					
4	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	73 abc	100 a	93 a	80 abc	96 a
4	STATUS	5	oz/a	12"	CRN B					
4	ROUNDUP WEATHERMAX	22	oz/a	12"	CRN					
4	NIS	3.2	oz/a	12"	CRN					
4	AMS	4	qt/a	12"	CRN					
5	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	60 bc	100 a	91 a	64 bc	96 a
5	ROUNDUP WEATHERMAX	22	oz/a	12"	CRN B					
5	AMS	4	qt/a	12"	CRN					
6	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	92 a	93 a	92 a	93 a	96 a
6	YUKON	4	oz/a	20"	CRN C					
6	ROUNDUP WEATHERMAX	22	oz/a	20"	CRN					
6	NIS	3.2	oz/a	20"	CRN					
6	AMS	4	qt/a	20"	CRN					
7	HARNESS XTRA 5.6	1.125	qt/a	PRE	A	66 abc	100 a	97 a	71 abc	96 a
7	ROUNDUP WEATHERMAX	22	oz/a	20"	CRN C					
7	AMS	4	qt/a	20"	CRN					
8	SAMSON	12	oz/a	12"	CRN B	65 abc	75 b	94 a	75 abc	78 b
8	IMPACT	0.75	oz/a	12"	CRN					
8	AMS	2	qt/a	12"	CRN					
9	SAMSON	12	oz/a	12"	CRN B	50 c	99 a	92 a	60 c	98 a
9	CALLISTO	3	oz/a	12"	CRN					
9	AMS	2	qt/a	12"	CRN					
10	SAMSON	12	oz/a	12"	CRN B	73 abc	100 a	88 a	79 abc	99 a
10	CLARITY	16	oz/a	12"	CRN					
10	AMS	2	qt/a	12"	CRN					
11	SAMSON	12	oz/a	12"	CRN B	30 d	100 a	97 a	54 c	95 a
11	AATREX	15	oz/a	12"	CRN					
11	AMS	2	qt/a	12"	CRN					
12	UTC					0 e	0 c	0 b	0 d	0 c
LSD (P=.05)					17.1	10.0	6.1	17.9	8.3	
Standard Deviation					11.8	7.0	4.2	12.4	5.8	
CV					18.63	7.84	4.93	17.96	6.6	
Bartlett's X2					22.544	25.267	9.992	23.307	8.447	
P(Bartlett's X2)					0.013*	0.001*	0.441	0.01*	0.49	
Replicate F					1.245	0.064	2.774	1.672	1.904	
Replicate Prob(F)					0.3101	0.9787	0.0568	0.1932	0.1481	
Treatment F					19.950	68.782	164.916	15.803	95.215	
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001	0.0001	

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