

Ohio State University
Horticulture and Crop Science

VALUE OF RESIDUAL WEED CONTROL IN ROUNDUP READY CORN

Trial ID: 08RRCYLD2 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
7. ABUTH	Velvetleaf	Abutilon theophrasti

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/06/2008
Time of Day:	3:00 P.M.	9:30 A.M.	8:30 A.M.
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	POST
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	76 F	63 F	81 F
% Relative Humidity:		45	71
Wind Velocity, Unit:	7 SE	3 E	7 S
Soil Temp., Unit:	74 F	58 F	69 F
Soil Moisture:	DRY/MOIST	DRY/MOIST	WET/WET
% Cloud Cover:	70	0	0

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	17 IN	

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	SETFA SETFA 3"	SETFA 3"	
Stage Scale:	3 LVS	3 LVS	
Density, Unit:	336 M2	336 M2	
Weed 2 Code, Stage:	CHEAL CHEAL 1-2"	CHEAL 2"	
Stage Scale:	4-6 LVS	4 LVS	
Density, Unit:	8 M2	8 M2	
Weed 3 Code, Stage:	AMBTR AMBTR 4-12"	AMBTR 2-16"	
Stage Scale:	6-12 LVS	2-20 LVS	
Density, Unit:	61 M2	61 M2	
Weed 4 Code, Stage:	IPOHE IPOHE 1"	IPOHE	
Stage Scale:	2 LVS		
Density, Unit:	12 M2		
Weed 5 Code, Stage:	SOLPT SOLPT .5"	SOLPT	
Stage Scale:	4 LVS		
Density, Unit:	0.22 M2		
Weed 6 Code, Stage:	POLPY POLPY 2-3"	POLPY	
Stage Scale:	2-3 LVS		
Density, Unit:	1.3 M2		
Weed 7 Code, Stage:	ABUTH ABUTH	ABUTH 3"	
Stage Scale:		5 LVS	
Density, Unit:		3 M2	

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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Location: WESTERN BRANCH E-2 Investigator: Dr. Mark M. Loux

Weed Code					SETFA	AMBTR	CHEAL	AMARE	SETFA	AMBTR	
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit					PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	
Rating Date					Jul/03/2008	Jul/03/2008	Jul/03/2008	Jul/03/2008	Aug/05/2008	Aug/05/2008	
Trt-Eval Interval					27 DA-C	27 DA-C	27 DA-C	27 DA-C	60 DA-C	60 DA-C	
# 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
1	ROUNDUP WEATHERMAX	22 oz/a		5-8" CRN	B	88 a	63 c	70 b	74 b	76 a	30 b
1	AMS	2 qt/a		5-8" CRN							
2	ROUNDUP WEATHERMAX	22 oz/a		5-8" CRN	B	92 a	65 c	80 b	79 b	76 a	28 b
2	STATUS	2.5 oz/a		5-8" CRN							
2	AMS	2 qt/a		5-8" CRN							
3	ROUNDUP WEATHERMAX	22 oz/a		5-8" CRN	B	88 a	72 bc	79 b	85 ab	75 a	40 b
3	STATUS	5 oz/a		5-8" CRN							
3	AMS	2 qt/a		5-8" CRN							
4	GUARDSMAN MAX	2.5 pt/a		PRE	A	96 a	81 ab	100 a	95 a	87 a	64 a
4	ROUNDUP WEATHERMAX	22 oz/a		8-12" CR	C						
4	AMS	2 qt/a		8-12" CR							
5	GUARDSMAN MAX	2.5 pt/a		PRE	A	97 a	86 a	100 a	97 a	88 a	70 a
5	ROUNDUP WEATHERMAX	22 oz/a		8-12" CR	C						
5	STATUS	2.5 oz/a		8-12" CR							
5	AMS	2 qt/a		8-12" CR							
6	GUARDSMAN MAX	2.5 pt/a		PRE	A	97 a	87 a	100 a	99 a	88 a	73 a
6	ROUNDUP WEATHERMAX	22 oz/a		8-12" CR	C						
6	STATUS	5 oz/a		8-12" CR							
6	AMS	2 qt/a		8-12" CR							
LSD (P=.05)						6.6	9.1	10.4	13.3	8.8	10.4
Standard Deviation						4.4	6.1	6.9	8.8	5.9	6.9
CV						4.71	8.04	7.83	10.01	7.16	13.64
Bartlett's X2						9.126	4.677	22.584	15.601	2.645	3.212
P(Bartlett's X2)						0.104	0.457	0.001*	0.008*	0.754	0.523
Replicate F						1.823	3.441	1.149	1.676	4.711	1.769
Replicate Prob(F)						0.1863	0.0440	0.3616	0.2148	0.0165	0.1963
Treatment F						3.365	11.731	14.881	5.695	4.883	35.201
Treatment Prob(F)						0.0309	0.0001	0.0001	0.0039	0.0075	0.0001

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	CHEAL	AMARE
Rating Data Type	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT
Rating Date	Aug/05/2008	Aug/05/2008
Trt-Eval Interval	60 DA-C	60 DA-C
# Subsamples, Dec.	0	0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8
1	ROUNDUP WEATHERMAX	22 oz/a		5-8" CRN	B	60 c	74 a
1	AMS	2 qt/a		5-8" CRN			
2	ROUNDUP WEATHERMAX	22 oz/a		5-8" CRN	B	75 b	78 a
2	STATUS	2.5 oz/a		5-8" CRN			
2	AMS	2 qt/a		5-8" CRN			
3	ROUNDUP WEATHERMAX	22 oz/a		5-8" CRN	B	81 b	78 a
3	STATUS	5 oz/a		5-8" CRN			
3	AMS	2 qt/a		5-8" CRN			
4	GUARDSMAN MAX	2.5 pt/a		PRE	A	99 a	95 a
4	ROUNDUP WEATHERMAX	22 oz/a		8-12" CR	C		
4	AMS	2 qt/a		8-12" CR			
5	GUARDSMAN MAX	2.5 pt/a		PRE	A	98 a	90 a
5	ROUNDUP WEATHERMAX	22 oz/a		8-12" CR	C		
5	STATUS	2.5 oz/a		8-12" CR			
5	AMS	2 qt/a		8-12" CR			
6	GUARDSMAN MAX	2.5 pt/a		PRE	A	100 a	95 a
6	ROUNDUP WEATHERMAX	22 oz/a		8-12" CR	C		
6	STATUS	5 oz/a		8-12" CR			
6	AMS	2 qt/a		8-12" CR			
LSD (P=.05)						8.2	14.1
Standard Deviation						5.4	9.4
CV						6.35	11.05
Bartlett's X2						5.18	3.409
P(Bartlett's X2)						0.269	0.637
Replicate F						3.066	0.772
Replicate Prob(F)						0.0603	0.5275
Treatment F						35.547	4.230
Treatment Prob(F)						0.0001	0.0134

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