

Ohio State University Horticulture and Crop Science

POSTEMERGENCE WEED CONTROL IN ROUNDUP READY CORN WITH PERMIT AND YUKON

Trial ID: 07POCBLF2

Study Dir.: Anthony F. Dobbels

Location: WESTERN BRANCH BIG E

Investigator: Dr. Mark M. Loux

GENERAL TRIAL INFORMATION

Study Director: Anthony F. Dobbels

Affiliation: OSU

Investigator: Dr. Mark M. Loux

Affiliation: OSU

TRIAL LOCATION

Trial Status: yield

State/Prov.: Ohio

Initiation Date: Apr/01/2007

Country: USA

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. POLPY	Pennsylvania smartweed	Polygonum pensylvanicum
5. AMARE	Redroot pigweed	Amaranthus retroflexus
6. ABUTH	Velvetleaf	Abutilon theophrasti

Crop 1: ZEAMX CORN, FIELD

Variety: DEKALB DKC63-74

Planting Date: May/02/2007

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 Repts: 4

Tillage Type: CONVENTIONAL

Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM:	2.2	Texture:	SILTY CLAY LOAM
pH:	6.1	Soil Name:	KOKOMO
CEC:	13.8		

Overall Moisture Conditions: POOR

APPLICATION DESCRIPTION

	A	B
Application Date:	May/03/2007	Jun/01/2007
Time of Day:	3:00 PM	7:30 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Applic. Placement:	BROADCAST	BROADCAST
Air Temp., Unit:	70 F	71 F
% Relative Humidity:	40	68
Wind Velocity, Unit:	6 E	2 S
Soil Temp., Unit:	61 F	72 F
Soil Moisture:	DRY MOIST	MOIST MOI
% Cloud Cover:	5	100

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMX .	ZEAMX .
Stage Scale:	.	5 COLLAR
Height, Unit:		15 IN

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WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	SETFA .	SETFA 3-5"
Stage Scale:	. .	2-3 LVS
Density, Unit:	. .	8.25 M2
Weed 2 Code, Stage:	CHEAL .	CHEAL 2-3"
Stage Scale:	. .	6-8 LVS
Density, Unit:	. .	33 M2
Weed 3 Code, Stage:	AMBTR .	AMBTR 10"
Stage Scale:	. .	6-12 LVS
Density, Unit:	. .	5.25 M2
Weed 4 Code, Stage:	POLPY .	POLPY 2"
Stage Scale:	. .	5 LVS
Density, Unit:	. .	10.5 M2
Weed 5 Code, Stage:	AMARE .	AMARE 2-4"
Stage Scale:	. .	6-10 LVS
Density, Unit:	. .	0.33 M2
Weed 6 Code, Stage:	ABUTH .	ABUTH 3"
Stage Scale:	. .	5 LVS
Density, Unit:	. .	0.75 M2

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	50	50
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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Weed Code	ZEAMX	ZEAMX	ZEAMX
Crop Code	WEIGHT	MOISTURE	YIELD
Rating Data Type	LBS	PERCENT	BU
Rating Unit	Oct/12/2007	Oct/12/2007	Oct/12/2007
Rating Date	HARVEST	HARVEST	HARVEST
Trt-Eval Interval			TY1
ARM Action Codes			
# Subsamples, Dec.	1	1	1

Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Unit	Appl Code	19	20	21
1	DUAL II MAGNUM	0.64	lb ai/a	0.67	pt/a	A	46.0 a	14.4 a	240.3 a
1	YUKON	0.127	lb ai/a		3 oz/a	B			
1	ROUNDUP WEATHERMAX	0.77	lb ae/a		22 oz/a				
1	NIS	0.125	% v/v		3.2 oz/a				
2	DUAL II MAGNUM	0.64	lb ai/a	0.67	pt/a	A	49.1 a	14.5 a	255.9 a
2	YUKON	0.169	lb ai/a		4 oz/a	B			
2	ROUNDUP WEATHERMAX	0.77	lb ae/a		22 oz/a				
2	NIS	0.125	% v/v		3.2 oz/a				
3	DUAL II MAGNUM	0.64	lb ai/a	0.67	pt/a	A	43.8 a	14.3 a	229.0 a
3	PERMIT	0.0234	lb ai/a		0.5 oz/a	B			
3	ROUNDUP WEATHERMAX	0.77	lb ae/a		22 oz/a				
3	NIS	0.125	% v/v		3.2 oz/a				
4	DUAL II MAGNUM	0.64	lb ai/a	0.67	pt/a	A	48.8 a	14.6 a	254.4 a
4	PERMIT	0.031	lb ai/a		0.66 oz/a	B			
4	ROUNDUP WEATHERMAX	0.77	lb ae/a		22 oz/a				
4	NIS	0.125	% v/v		3.2 oz/a				
5	DUAL II MAGNUM	0.64	lb ai/a	0.67	pt/a	A	45.1 a	15.0 a	233.4 a
5	CALLISTO	0.094	lb ai/a		3 oz/a	B			
5	ROUNDUP WEATHERMAX	0.77	lb ae/a		22 oz/a				
5	NIS	0.125	% v/v		3.2 oz/a				
6	DUAL II MAGNUM	0.64	lb ai/a	0.67	pt/a	A	45.8 a	15.6 a	235.5 a
6	LAUDIS	0.082	lb ai/a		3 oz/a	B			
6	ROUNDUP WEATHERMAX	0.77	lb ae/a		22 oz/a				
6	NIS	0.125	% v/v		3.2 oz/a				
7	DUAL II MAGNUM	0.64	lb ai/a	0.67	pt/a	A	47.1 a	15.4 a	243.4 a
7	IMPACT	0.0164	lb ai/a		0.75 oz/a	B			
7	ROUNDUP WEATHERMAX	0.77	lb ae/a		22 oz/a				
7	NIS	0.125	% v/v		3.2 oz/a				
8	DUAL II MAGNUM	0.64	lb ai/a	0.67	pt/a	A	42.2 a	14.7 a	219.4 a
8	STATUS	0.115	lb ai/a		3 oz/a	B			
8	ROUNDUP WEATHERMAX	0.77	lb ae/a		22 oz/a				
8	NIS	0.125	% v/v		3.2 oz/a				
9	DUAL II MAGNUM	0.64	lb ai/a	0.67	pt/a	A	42.7 a	14.7 a	222.0 a
9	ROUNDUP WEATHERMAX	0.77	lb ae/a		22 oz/a	B			
9	NIS	0.125	% v/v		3.2 oz/a				
10	UTC						16.3 b	13.9 a	85.3 b
LSD (P=.05)							7.47	1.38	38.93
Standard Deviation							5.15	0.95	26.83
CV							12.07	6.5	12.09
Bartlett's X2							12.247	22.782	12.617
P(Bartlett's X2)							0.20	0.007*	0.181

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Weed Code			
Crop Code	ZEAMX	ZEAMX	ZEAMX
Rating Data Type	WEIGHT	MOISTURE	YIELD
Rating Unit	LBS	PERCENT	BU
Rating Date	Oct/12/2007	Oct/12/2007	Oct/12/2007
Trt-Eval Interval	HARVEST	HARVEST	HARVEST
ARM Action Codes			TY1
# Subsamples, Dec.	1	1	1

Trt No.	Treatment Name	Rate	Rate Unit	Product Rate	Product Rate Unit	Appl Code	19	20	21
Replicate F							1.628	1.611	1.788
Replicate Prob(F)							0.2062	0.2099	0.1733
Treatment F							13.781	1.193	13.609
Treatment Prob(F)							0.0001	0.3389	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.

ARM Action Codes

TY1 = $5.185714 * [19] * (100 - [20]) / 85$