

Ohio State University Horticulture and Crop Science

POST GLYPHOSATE TIMING IN ROUNDUP READY CORN

Trial ID: 07RRCTIME
Location: WESTERN BRANCH G-2

Study Dir.: Anthony F. Dobbels
Investigator: Dr. Mark M. Loux

GENERAL TRIAL INFORMATION

Study Director: Anthony F. Dobbels
Affiliation: OSU
Investigator: Dr. Mark M. Loux
Affiliation: OSU

TRIAL LOCATION

State/Prov.: Ohio
Country: USA
Conducted Under GLP (Y/N): N
Conducted Under GEP (Y/N): N

Trial Status: yield
Initiation Date: Apr/01/2007

CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name
1. SETFA	Giant foxtail	Setaria faberi
2. IPOHE	Ivyleaf morningglory	Ipomoea hederacea
3. ABUTH	Velvetleaf	Abutilon theophrasti
4. POLPY	Pennsylvania smartweed	Polygonum pensylvanicum
5. AMBTR	Giant ragweed	Ambrosia trifida
6. CHEAL	Common lambsquarters	Chenopodium album

Crop 1: ZEAMX CORN, FIELD
Planting Date: Apr/23/2007
Rate: 32097 SEED/A
Row Spacing: 30 IN

Variety: SEED CONSULTANTS 11BR16RR
Planting Method: JOHN DEERE 7200
Depth: 1.5 IN
Seed Bed: CONVENTIONAL

SITE AND DESIGN

Plot Width, Unit: 10 FT
Tillage Type: CONVENTIONAL

Plot Length, Unit: 40 FT
Reps: 4
Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 3.0
pH: 5.7
CEC: 23.5

Texture: SILTY CLAY LOAM
Soil Name: KOKOMO

Overall Moisture Conditions: POOR

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	Apr/24/2007	May/30/2007	Jun/06/2007	Jun/13/2007
Time of Day:	11:00 A.M.	9:30 A.M.	9:30 A.M.	8:30 A.M.
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	EPO	POST	LPO
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	61 F	71 F	66 F	71 F
% Relative Humidity:	72	73	76	57
Wind Velocity, Unit:	7 NE	3 S	1 S	3 E
Soil Temp., Unit:	60 F	72 F	60 F	65 F
Soil Moisture:	MOIST MOI	DRY/DRY	DRY/MOIST	DRY/DRY
% Cloud Cover:	30	75	10	10

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	ZEAMX .	ZEAMX .	ZEAMX .	ZEAMX .
Stage Scale:	.	5 COLLAR	8 COLLAR	9 COLLARS
Height, Unit:	0. .	12 IN	26 IN	46 IN

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WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	SETFA .	SETFA 1-3"	SETFA 4-6"	SETFA 7-12"
Stage Scale:	.	4 LVS	7 LVS	10 LVS
Density, Unit:	. .	. .	. .	. .
Weed 2 Code, Stage:	IPOHE .	IPOHE .	IPOHE 4-6"	IPOHE 4-6"
Stage Scale:	.	.	8 LVS	8 LVS
Density, Unit:	. .	. .	. .	. .
Weed 3 Code, Stage:	ABUTH .	ABUTH 1-3"	ABUTH 4-6"	ABUTH 7-12"
Stage Scale:	.	4 LVS	6 LVS	10 LVS
Density, Unit:	. .	. .	. .	. .
Weed 4 Code, Stage:	POLPY .	POLPY 1-3"	POLPY 4-6"	POLPY 7-12"
Stage Scale:	.	4 LVS	8 LVS	>12 LVS
Density, Unit:	. .	. .	. .	. .
Weed 5 Code, Stage:	AMBTR .	AMBTR 4-6"	AMBTR 7-12"	AMBTR .
Stage Scale:	.	8 LVS	>12 LVS	.
Density, Unit:	. .	. .	. .	. .
Weed 6 Code, Stage:	CHEAL .	CHEAL 1-3"	CHEAL 4-6"	CHEAL 4-6"
Stage Scale:	.	6 LVS	12 LVS	12 LVS
Density, Unit:	. .	. .	. .	. .

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	BACKPACK	BACKPACK	BACKPACK	BACKPACK
Operating Pressure:	50	50	50	50
Nozzle Type:	DG	DG	DG	DG
Nozzle Size:	11002	11002	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA	20 GPA
Propellant:	CO2	CO2	CO2	CO2

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Weed Code	SETFA	CHEAL	ABUTH	AMBTR	POLPY	SETFA
Crop Code						
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	May/30/2007	May/30/2007	May/30/2007	May/30/2007	May/30/2007	Jul/02/2007
Trt-Eval Interval	AT APPL	AT APPL	AT APPL	AT APPL	AT APPL	19 DA-D
ARM Action Codes						
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Product	Product Rate	Product Unit	Appl Code	1	2	3	4	5	6
12	LEXAR	2.78 lb ai/a	3 qt/a			A	87 a	96 a	98 a	96 a	100 a	99 a
12	ROUNDUP ORIGINAL MAX	0.75 lb ae/a	21.3 oz/a			D						
12	NIS	0.25 % v/v	6.4 oz/a									
12	AMS	5 % v/v	4 qt/a									
LSD (P=.05)							18.9	23.7	31.8	42.1	48.2	8.7
Standard Deviation							13.1	16.4	22.0	29.2	33.4	6.0
CV							24.02	25.45	58.63	100.3	62.79	6.29
Bartlett's X2							4.838	13.282	13.24	15.056	6.027	54.574
P(Bartlett's X2)							0.775	0.102	0.104	0.058	0.537	0.001*
Replicate F							0.078	0.456	1.175	0.491	0.391	1.475
Replicate Prob(F)							0.9714	0.7150	0.3340	0.6910	0.7600	0.2398
Treatment F							26.071	23.629	10.611	4.428	5.050	2.928
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0004	0.0001	0.0087

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	ABUTH	AMBTR	POLPY	IPOHE	SETFA
Crop Code						
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Jun/25/2007	Jun/25/2007	Jun/25/2007	Jun/25/2007	Jun/25/2007	Oct/01/2007
Trt-Eval Interval	19 DA-D	19 DA-D	19 DA-D	19 DA-D	19 DA-D	HARVEST
ARM Action Codes						
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Product	Product	Appl	7	8	9	10	11	12
		Rate	Rate	Rate	Code						
	LSD (P=.05)					10.1	9.6	17.8	15.0	23.8	4.5
	Standard Deviation					7.0	6.7	12.3	10.4	16.5	3.1
	CV					7.21	7.01	15.21	11.76	27.71	3.24
	Bartlett's X2					68.114	7.984	17.607	14.925	11.887	24.208
	P(Bartlett's X2)					0.001*	0.239	0.091	0.061	0.372	0.012*
	Replicate F					2.028	2.110	0.407	0.932	0.839	0.622
	Replicate Prob(F)					0.1297	0.1184	0.7487	0.4365	0.4831	0.6060
	Treatment F					4.060	4.170	5.403	6.101	4.387	4.337
	Treatment Prob(F)					0.0009	0.0008	0.0001	0.0001	0.0006	0.0005

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Weed Code				ECHCG	CHEAL	POLPY	SIDSP		
Crop Code									
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL		
Rating Unit				PERCENT	PERCENT	PERCENT	PERCENT		
Rating Date				Oct/01/2007	Oct/01/2007	Oct/01/2007	Oct/01/2007		
Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST		
ARM Action Codes									
# Subsamples, Dec.				0	0	0	0		
Trt No.	Treatment Name	Rate	Product	Product	Appl	13	14	15	16
		Rate Unit	Rate	Rate Unit	Code				
1	ROUNDUP ORIGINAL MAX	0.77 lb ae/a	22 oz/a		B	91 b	81 b	93 a	91 a
1	NIS	0.25 % v/v	6.4 oz/a						
1	AMS	5 % v/v	4 qt/a						
2	ATRAZINE	1 lb ai/a	1 qt/a		A	91 b	91 ab	100 a	95 a
2	ROUNDUP ORIGINAL MAX	0.77 lb ae/a	22 oz/a		B				
2	NIS	0.25 % v/v	6.4 oz/a						
2	AMS	5 % v/v	4 qt/a						
3	BICEP II MAGNUM	1.65 lb ai/a	1.2 qt/a		A	97 ab	98 a	100 a	96 a
3	ROUNDUP ORIGINAL MAX	0.77 lb ae/a	22 oz/a		B				
3	NIS	0.25 % v/v	6.4 oz/a						
3	AMS	5 % v/v	4 qt/a						
4	LEXAR	2.78 lb ai/a	3 qt/a		A	100 a	98 a	100 a	98 a
4	ROUNDUP ORIGINAL MAX	0.77 lb ae/a	22 oz/a		B				
4	NIS	0.25 % v/v	6.4 oz/a						
4	AMS	5 % v/v	4 qt/a						
5	ROUNDUP ORIGINAL MAX	0.75 lb ae/a	21.3 oz/a		C	98 a	88 ab	95 a	86 a
5	NIS	0.25 % v/v	6.4 oz/a						
5	AMS	5 % v/v	4 qt/a						
6	ATRAZINE	1 lb ai/a	1 qt/a		A	96 ab	91 ab	99 a	100 a
6	ROUNDUP ORIGINAL MAX	0.75 lb ae/a	21.3 oz/a		C				
6	NIS	0.25 % v/v	6.4 oz/a						
6	AMS	5 % v/v	4 qt/a						
7	BICEP II MAGNUM	1.65 lb ai/a	1.2 qt/a		A	100 a	99 a	98 a	95 a
7	ROUNDUP ORIGINAL MAX	0.75 lb ae/a	21.3 oz/a		C				
7	NIS	0.25 % v/v	6.4 oz/a						
7	AMS	5 % v/v	4 qt/a						
8	LEXAR	2.78 lb ai/a	3 qt/a		A	100 a	100 a	100 a	94 a
8	ROUNDUP ORIGINAL MAX	0.75 lb ae/a	21.3 oz/a		C				
8	NIS	0.25 % v/v	6.4 oz/a						
8	AMS	5 % v/v	4 qt/a						
9	ROUNDUP ORIGINAL MAX	0.75 lb ae/a	21.3 oz/a		D	94 ab	86 ab	91 a	90 a
9	NIS	0.25 % v/v	6.4 oz/a						
9	AMS	5 % v/v	4 qt/a						
10	ATRAZINE	1 lb ai/a	1 qt/a		A	99 a	98 a	100 a	100 a
10	ROUNDUP ORIGINAL MAX	0.75 lb ae/a	21.3 oz/a		D				
10	NIS	0.25 % v/v	6.4 oz/a						
10	AMS	5 % v/v	4 qt/a						
11	BICEP II MAGNUM	1.65 lb ai/a	1.2 qt/a		A	95 ab	93 ab	93 a	70 a
11	ROUNDUP ORIGINAL MAX	0.75 lb ae/a	21.3 oz/a		D				
11	NIS	0.25 % v/v	6.4 oz/a						
11	AMS	5 % v/v	4 qt/a						
12	LEXAR	2.78 lb ai/a	3 qt/a		A	100 a	100 a	100 a	100 a
12	ROUNDUP ORIGINAL MAX	0.75 lb ae/a	21.3 oz/a		D				
12	NIS	0.25 % v/v	6.4 oz/a						
12	AMS	5 % v/v	4 qt/a						

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Weed Code	ECHCG	CHEAL	POLPY	SIDSP
Crop Code				
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Oct/01/2007	Oct/01/2007	Oct/01/2007	Oct/01/2007
Trt-Eval Interval	HARVEST	HARVEST	HARVEST	HARVEST
ARM Action Codes				
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Rate	Product	Product Rate	Appl Unit	Code	13	14	15	16
	LSD (P=.05)						4.0	9.0	9.3	22.4
	Standard Deviation						2.8	6.2	6.5	15.5
	CV						2.86	6.67	6.64	16.67
	Bartlett's X2						9.1	11.387	17.896	42.923
	P(Bartlett's X2)						0.334	0.25	0.006*	0.001*
	Replicate F						1.228	0.367	1.902	1.173
	Replicate Prob(F)						0.3151	0.7773	0.1485	0.3348
	Treatment F						5.590	3.841	1.145	1.162
	Treatment Prob(F)						0.0001	0.0013	0.3608	0.3491

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