

Ohio State University  
Horticulture and Crop Science

POST WEEED MANAGEMENT STRATEGIES FOR ROUNDUP READY SOYBEANS  
2008-01-30-17

Trial ID: 08MONGRWPOSTBLUCK Study Dir.: Anthony F. Dobbels  
Location: CLARKSBURG, OHIO 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. AMBTR	Giant ragweed	Ambrosia trifida
2. AMBEL	Common ragweed	Ambrosia artemisiifolia
3. CHEAL	Common lambsquarters	Chenopodium album
4. HIBTR	Venice mallow	Hibiscus trionum

Crop 1: GLXMA SOYBEAN Variety: ASGROW AG3705  
Planting Date: May/06/2008 Planting Method: JOHN DEERE 7200  
Rate: 175000 SEED/A Depth: 1 IN  
Row Spacing: 15 IN Seed Bed: CONVENTIONAL

SITE AND DESIGN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 3  
Tillage Type: CONVENTIONAL Study Design: RANDOMIZED COMPLETE BLOCK

MAINTENANCE

Field Prep./Maintenance: APPLIED BURNDOWN OF GRAMOXONE INTEON AT 3 PT/A + NIS 0.25% V/V ON 5-6-08

SOIL DESCRIPTION

% Sand: 24.5 % OM: 2.9 Texture: SILTY CLAY LOAM  
% Silt: 48.9 pH: 6.8 Soil Name: KOKOMO  
% Clay: 26.6 CEC: 11.7 Fert. Level: GOOD

APPLICATION DESCRIPTION

	A	B
Application Date:	Jun/12/2008	Jun/17/2008
Time of Day:	8:00 A.M.	9:00 A.M.
Application Method:	SPRAY	SPRAY
Application Timing:	POST	POST
Applic. Placement:	BROADCAST	BROADCAST
Air Temp., Unit:	73 F	73 F
% Relative Humidity:	63	49
Wind Velocity, Unit:	2 SE	4 W
Soil Temp., Unit:	69 F	65 F
Soil Moisture:	DRY/MOIST	DRY/MOIST
% Cloud Cover:	3	5

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	GLXMA V2	GLXMA V4
Stage Scale:	DESC	DESC
Height, Unit:	5 IN	8 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	AMBTR 4"	AMBTR 3-11"
Stage Scale:	6 LVS	4->12 LVS
Density, Unit:	45 M2	45 M2
Weed 2 Code, Stage:	AMBEL 2"	AMBEL
Stage Scale:	4 LVS	
Density, Unit:	3 M2	
Weed 3 Code, Stage:	CHEAL 2-3"	CHEAL
Stage Scale:	4 LVS	
Density, Unit:	5 M2	
Weed 4 Code, Stage:	HIBTR 1-2"	HIBTR
Stage Scale:	2 LVS	
Density, Unit:	8 M2	

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	53	53
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						AMBTR	CHEAL	HIBTR		AMBTR	
Crop Code						GLXMA				GLXMA	
Rating Data Type						PHYTO	CONTROL	CONTROL	CONTROL	PHYTO	
Rating Unit						PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	
Rating Date						Jun/24/2008	Jun/24/2008	Jun/24/2008	Jun/24/2008	Jul/01/2008	
Trt-Eval Interval						12 DA-A	12 DA-A	12 DA-A	12 DA-A	19 DA-A	
# Subsamples, Dec.						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 POWERMAX	21.3 oz/a		LPO	B	0 c	33 d	77 a	87 a	2 c	27 cd
1	AMS	4 qt/a		LPO							
2	ROUNDUP POWERMAX	21.3 oz/a		POST	A	0 c	37 d	100 a	100 a	0 c	23 d
2	AMS	4 qt/a		POST							
3	ROUNDUP POWERMAX	21.3 oz/a		POST	A	20 a	83 a	100 a	100 a	8 b	73 ab
3	COBRA	9.7 oz/a		POST							
3	AMS	4 qt/a		POST							
4	ROUNDUP POWERMAX	21.3 oz/a		POST	A	0 c	53 bc	100 a	100 a	1 c	33 cd
4	FIRSTRATE	0.305 oz/a		POST							
4	AMS	4 qt/a		POST							
5	ROUNDUP POWERMAX	21.3 oz/a		POST	A	0 c	33 d	100 a	93 a	1 c	27 cd
5	RAPTOR	3.97 oz/a		POST							
5	AMS	4 qt/a		POST							
6	ROUNDUP POWERMAX	21.3 oz/a		POST	A	10 b	70 b	100 a	100 a	3 c	57 bc
6	FLEXSTAR	20 oz/a		POST							
6	AMS	4 qt/a		POST							
7	ROUNDUP POWERMAX	21.3 oz/a		POST	A	7 bc	65 b	98 a	100 a	3 c	43 cd
7	ULTRA BLAZER	10 oz/a		POST							
7	AMS	4 qt/a		POST							
8	ROUNDUP POWERMAX	21.3 oz/a		POST	A	5 bc	63 b	100 a	97 a	2 c	32 cd
8	RESOURCE	8 oz/a		POST							
8	AMS	4 qt/a		POST							
9	ROUNDUP POWERMAX	21.3 oz/a		POST	A	0 c	40 cd	99 a	100 a	2 c	32 cd
9	CLASSIC	0.75 oz/a		POST							
9	AMS	4 qt/a		POST							
10	ROUNDUP POWERMAX	21.3 oz/a		POST	A	9 b	47 cd	100 a	93 a	8 b	33 cd
10	HARMONY GT	0.16 oz/a		POST							
10	AMS	4 qt/a		POST							
11	ROUNDUP POWERMAX	21.3 oz/a		POST	A	2 c	62 b	83 a	100 a	3 c	53 bcd
11	BASAGRAN	32 oz/a		POST							
11	AMS	4 qt/a		POST							
12	ROUNDUP POWERMAX	21.3 oz/a		POST	A	17 a	68 b	36 b	37 b	20 a	83 a
12	2,4-DB	16.1 oz/a		POST							
12	AMS	4 qt/a		POST							
LSD (P=.05)						5.4	12.3	16.4	10.1	2.7	19.5
Standard Deviation						3.2	7.3	9.7	5.9	1.6	11.5
CV						54.39	13.35	10.59	6.45	36.82	26.81
Bartlett's X2						2.434	7.994	14.925	1.855	2.822	16.494
P(Bartlett's X2)						0.786	0.629	0.005*	0.762	0.971	0.124
Replicate F						2.144	2.748	2.460	2.200	11.917	1.551
Replicate Prob(F)						0.1411	0.0860	0.1097	0.1346	0.0003	0.2344
Treatment F						14.504	15.305	11.488	27.486	37.333	8.519
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001	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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						CHEAL	HIBTR	AMBTR	CHEAL	HIBTR
						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
						PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
						Jul/01/2008	Jul/01/2008	Jul/08/2008	Jul/08/2008	Jul/08/2008
						19 DA-A	19 DA-A	26 DA-A	26 DA-A	26 DA-A
						0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8	9	10	11
1	ROUNDUP POWERMAX	21.3 oz/a		LPO	B	82 a	90 a	23 d	89 a	100 a
1	AMS	4 qt/a		LPO						
2	ROUNDUP POWERMAX	21.3 oz/a		POST	A	100 a	100 a	17 d	100 a	97 a
2	AMS	4 qt/a		POST						
3	ROUNDUP POWERMAX	21.3 oz/a		POST	A	100 a	97 a	70 b	100 a	98 a
3	COBRA	9.7 oz/a		POST						
3	AMS	4 qt/a		POST						
4	ROUNDUP POWERMAX	21.3 oz/a		POST	A	100 a	100 a	33 cd	100 a	100 a
4	FIRSTRATE	0.305 oz/a		POST						
4	AMS	4 qt/a		POST						
5	ROUNDUP POWERMAX	21.3 oz/a		POST	A	97 a	92 a	17 d	100 a	100 a
5	RAPTOR	3.97 oz/a		POST						
5	AMS	4 qt/a		POST						
6	ROUNDUP POWERMAX	21.3 oz/a		POST	A	100 a	100 a	53 bc	100 a	100 a
6	FLEXSTAR	20 oz/a		POST						
6	AMS	4 qt/a		POST						
7	ROUNDUP POWERMAX	21.3 oz/a		POST	A	100 a	100 a	35 cd	100 a	99 a
7	ULTRA BLAZER	10 oz/a		POST						
7	AMS	4 qt/a		POST						
8	ROUNDUP POWERMAX	21.3 oz/a		POST	A	98 a	98 a	20 d	100 a	100 a
8	RESOURCE	8 oz/a		POST						
8	AMS	4 qt/a		POST						
9	ROUNDUP POWERMAX	21.3 oz/a		POST	A	97 a	100 a	17 d	97 a	93 a
9	CLASSIC	0.75 oz/a		POST						
9	AMS	4 qt/a		POST						
10	ROUNDUP POWERMAX	21.3 oz/a		POST	A	100 a	100 a	30 cd	100 a	100 a
10	HARMONY GT	0.16 oz/a		POST						
10	AMS	4 qt/a		POST						
11	ROUNDUP POWERMAX	21.3 oz/a		POST	A	82 a	100 a	43 cd	93 a	100 a
11	BASAGRAN	32 oz/a		POST						
11	AMS	4 qt/a		POST						
12	ROUNDUP POWERMAX	21.3 oz/a		POST	A	50 b	27 b	90 a	26 b	30 b
12	2,4-DB	16.1 oz/a		POST						
12	AMS	4 qt/a		POST						
LSD (P=.05)						22.8	12.9	19.2	9.1	10.0
Standard Deviation						13.5	7.6	11.3	5.3	5.9
CV						14.64	8.28	30.32	5.81	6.33
Bartlett's X2						13.763	5.672	11.192	1.222	12.083
P(Bartlett's X2)						0.017*	0.225	0.427	0.748	0.017*
Replicate F						2.168	0.804	3.090	0.754	2.614
Replicate Prob(F)						0.1382	0.4604	0.0657	0.4829	0.0958
Treatment F						3.672	22.530	12.720	47.322	34.456
Treatment Prob(F)						0.0046	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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