

Ohio State University
Horticulture and Crop Science

VALUE OF RESIDUAL HERBICIDES IN ROUNDUP READY SOYBEANS

Trial ID: 08RRSYLD Study Dir.: Anthony F. Dobbels
Location: WESTERN BRANCH E-1 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. ECHCG	Common barnyardgrass	Echinochloa crus-galli
3. ABUTH	Velvetleaf	Abutilon theophrasti
4. AMBTR	Giant ragweed	Ambrosia trifida
5. CYPES	Yellow nutsedge	Cyperus esculentus
6. SIDSP	Prickly sida	Sida spinosa

Crop 1: GLXMA SOYBEAN Variety: SEED CONSULTANTS SC9386
Planting Date: May/22/2008 Planting Method: KINZE 2000
Rate: 175386 SEED/A Depth: 0.5 IN
Row Spacing: 15 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: 3.1 Texture: SILTY CLAY LOAM
pH: 6.2 Soil Name: KOKOMO
CEC: 23.5 Fert. Level: EXCELLENT

APPLICATION DESCRIPTION

	A	B	C
Application Date:	May/23/2008	Jun/25/2008	Aug/04/2008
Time of Day:	7:30 A.M.	9:00 A.M.	9:00 A.M.
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	POST	R3
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	51 F	76 F	78 F
% Relative Humidity:	72	58	67
Wind Velocity, Unit:	1 E	7 NNW	1 W
Soil Temp., Unit:	51 F	65 F	72 F
Soil Moisture:	DRY/MOIST	DRY/MOIST	DRY/DRY
% Cloud Cover:	90	10	5

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	GLXMA V4	GLXMA R3	
Stage Scale:	DESC	DESC	
Height, Unit:	8 IN	26 IN	

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	SETFA SETFA 4-6"	SETFA	
Stage Scale:	5 LVS		
Density, Unit:	236 M2		
Weed 2 Code, Stage:	ECHCG ECHCG 3"	ECHCG	
Stage Scale:	3 LVS		
Density, Unit:	36 M2		
Weed 3 Code, Stage:	ABUTH ABUTH 2"	ABUTH	
Stage Scale:	6 LVS		
Density, Unit:	5 M2		
Weed 4 Code, Stage:	AMBTR AMBTR 24"	AMBTR	
Stage Scale:	32 LVS		
Density, Unit:	3 M2		
Weed 5 Code, Stage:	CYPES CYPES 4-12"	CYPES	
Stage Scale:	6-8 LVS		
Density, Unit:	2 M2		
Weed 6 Code, Stage:	SIDSP SIDSP 3"	SIDSP	
Stage Scale:	8 LVS		
Density, Unit:	1 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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Weed Code		SETFA	ECHCG	AMBTR	CHEAL	ABUTH
Crop Code	GLXMA					
Rating Data Type	PHYTO	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Jun/25/2008	Jun/25/2008	Jun/25/2008	Jun/25/2008	Jun/25/2008	Jun/25/2008
Trt-Eval Interval	AT POST	AT POST	AT POST	AT POST	AT POST	AT POST
# 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	CANOPY	4 oz/a		PRE	A	0 a	92 a	98 a	76 a	100 a	100 a
1	ROUNDUP POWERMAX	22 oz/a		POST	B						
1	AMS	4 qt/a		POST							
2	PROWL H20	2.5 pt/a		PRE	A	0 a	96 a	97 a	0 b	100 a	0 b
2	ROUNDUP POWERMAX	22 oz/a		POST	B						
2	AMS	4 qt/a		POST							
3	ROUNDUP POWERMAX	22 oz/a		POST	B	0 a	0 b	0 b	0 b	0 b	0 b
3	AMS	4 qt/a		POST							
4	PROWL H20	2.5 pt/a		PRE	A	0 a	95 a	94 a	0 b	100 a	0 b
4	ROUNDUP POWERMAX	22 oz/a		POST	B						
4	AMS	4 qt/a		POST							
4	HEADLINE	6 oz/a		R3	C						
4	NIS	6.4 oz/a		R3							
LSD (P=.05)						0.0	14.3	5.0	6.0	0.0	0.0
Standard Deviation						0.0	9.0	3.1	3.8	0.0	0.0
CV						0.0	12.67	4.3	19.67	0.0	0.0
Bartlett's X2						0.0	4.691	0.856	0.0	0.0	0.0
P(Bartlett's X2)						.	0.096	0.652	.	.	.
Replicate F						0.000	0.376	0.561	1.000	0.000	0.000
Replicate Prob(F)						1.0000	0.7729	0.6540	0.4363	1.0000	1.0000
Treatment F						0.000	110.894	961.254	413.444	0.000	0.000
Treatment Prob(F)						1.0000	0.0001	0.0001	0.0001	1.0000	1.0000

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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						SETFA	ECHCG	AMBTR	CHEAL	ABUTH	SETFA
						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
						PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
						Jul/25/2008	Jul/25/2008	Jul/25/2008	Jul/25/2008	Jul/25/2008	Aug/19/2008
						30 DA-B	30 DA-B	30 DA-B	30 DA-B	30 DA-B	55 DA-B
						0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8	9	10	11	12
1	CANOPY	4 oz/a		PRE	A	99 a	100 a	100 a	100 a	100 a	100 a
1	ROUNDUP POWERMAX	22 oz/a		POST	B						
1	AMS	4 qt/a		POST							
2	PROWL H20	2.5 pt/a		PRE	A	100 a	100 a	93 b	100 a	100 a	100 a
2	ROUNDUP POWERMAX	22 oz/a		POST	B						
2	AMS	4 qt/a		POST							
3	ROUNDUP POWERMAX	22 oz/a		POST	B	100 a	100 a	92 b	100 a	100 a	100 a
3	AMS	4 qt/a		POST							
4	PROWL H20	2.5 pt/a		PRE	A	100 a	99 a	95 ab	100 a	100 a	100 a
4	ROUNDUP POWERMAX	22 oz/a		POST	B						
4	AMS	4 qt/a		POST							
4	HEADLINE	6 oz/a		R3	C						
4	NIS	6.4 oz/a		R3							
LSD (P=.05)						2.0	2.0	5.7	0.8	0.0	0.0
Standard Deviation						1.3	1.3	3.6	0.5	0.0	0.0
CV						1.25	1.25	3.76	0.5	0.0	0.0
Bartlett's X2						0.0	0.0	0.177	0.0	0.0	0.0
P(Bartlett's X2)						.	.	0.915	.	.	.
Replicate F						1.000	1.000	1.523	1.000	0.000	0.000
Replicate Prob(F)						0.4363	0.4363	0.2743	0.4363	1.0000	1.0000
Treatment F						1.000	1.000	4.203	1.000	0.000	0.000
Treatment Prob(F)						0.4363	0.4363	0.0408	0.4363	1.0000	1.0000

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Weed Code	ECHCG	AMBTR	CHEAL	ABUTH
Crop Code				
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Aug/19/2008	Aug/19/2008	Aug/19/2008	Aug/19/2008
Trt-Eval Interval	55 DA-B	55 DA-B	55 DA-B	55 DA-B
# Subsamples, Dec.	0	0	0	0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	13	14	15	16
1	CANOPY	4 oz/a		PRE	A	98 a	98 a	100 a	100 a
1	ROUNDUP POWERMAX	22 oz/a		POST	B				
1	AMS	4 qt/a		POST					
2	PROWL H20	2.5 pt/a		PRE	A	99 a	88 a	100 a	100 a
2	ROUNDUP POWERMAX	22 oz/a		POST	B				
2	AMS	4 qt/a		POST					
3	ROUNDUP POWERMAX	22 oz/a		POST	B	96 a	93 a	99 a	100 a
3	AMS	4 qt/a		POST					
4	PROWL H20	2.5 pt/a		PRE	A	99 a	100 a	100 a	100 a
4	ROUNDUP POWERMAX	22 oz/a		POST	B				
4	AMS	4 qt/a		POST					
4	HEADLINE	6 oz/a		R3	C				
4	NIS	6.4 oz/a		R3					
LSD (P=.05)						3.9	13.1	2.0	0.0
Standard Deviation						2.5	8.2	1.3	0.0
CV						2.51	8.7	1.25	0.0
Bartlett's X2						5.779	1.303	0.0	0.0
P(Bartlett's X2)						0.123	0.521	.	.
Replicate F						8.668	0.093	1.000	0.000
Replicate Prob(F)						0.0051	0.9621	0.4363	1.0000
Treatment F						1.369	1.825	1.000	0.000
Treatment Prob(F)						0.3135	0.2128	0.4363	1.0000

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