

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	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	

## 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			
Crop Code	GLXMA	GLXMA	GLXMA
Rating Data Type	YIELD	MOISTURE	YIELD
Rating Unit	LBS	PERCENT	BU
Rating Date	Oct/03/2008	Oct/03/2008	Oct/03/2008
Trt-Eval Interval	HARVEST	HARVEST	HARVEST
ARM Action Codes			TY1
# Subsamples, Dec.	2	2	1

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	17	18	19
1	CANOPY	4 oz/a		PRE	A	20.87 b	13.20 a	60.5 b
1	ROUNDUP POWERMAX	22 oz/a		POST	B			
1	AMS	4 qt/a		POST				
2	PROWL H20	2.5 pt/a		PRE	A	21.01 b	13.49 a	60.7 b
2	ROUNDUP POWERMAX	22 oz/a		POST	B			
2	AMS	4 qt/a		POST				
3	ROUNDUP POWERMAX	22 oz/a		POST	B	21.60 ab	13.14 a	62.6 ab
3	AMS	4 qt/a		POST				
4	PROWL H20	2.5 pt/a		PRE	A	22.39 a	13.09 a	65.0 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)						1.045	1.072	3.29
Standard Deviation						0.653	0.671	2.06
CV						3.04	5.07	3.31
Grand Mean						21.47	13.23	62.19
Bartlett's X2						0.623	6.962	0.555
P(Bartlett's X2)						0.891	0.073	0.907
Replicate F						13.113	0.863	11.715
Replicate Prob(F)						0.0012	0.4948	0.0018
Treatment F						4.504	0.287	4.112
Treatment Prob(F)						0.0342	0.8336	0.0430

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

ARM Action Codes

$$TY1 = 2.904 * [17] * (100 - [18]) / 87$$