

Ohio State University
Horticulture and Crop Science

VALUE OF EARLY SEASON SOYBEAN RESIDUAL IN NO-TILL SOYBEANS

Trial ID: 08NTSYLD Study Dir.: Anthony F. Dobbels
Location: WESTERN BRANCH F-9 W 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. STEME	Common chickweed	Stellaria media
2. LAMPU	Purple deadnettel	Lamium purpureum
3. ERICA	Horseweed	Conyza canadensis
4. SETFA	Giant foxtail	Setaria faberi
5. CHEAL	Common lambsquarters	Chenopodium album
6. AMBTR	Giant ragweed	Ambrosia trifida
7. AMBEL	Common ragweed	Ambrosia artemisiifolia elatio

Crop 1: GLXMA SOYBEAN Variety: ASGROW AG3705
Planting Date: May/01/2008 Planting Method: KINZE 2000
Rate: 177642 SEED/A Depth: 0.5 IN
Row Spacing: 15 IN Seed Bed: NO-TILL

SITE AND DESIGN

Plot Width, Unit: 10 FT Plot Length, Unit: 40 FT Reps: 4
Tillage Type: NO-TILL Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 2.8 Texture: SILTY CLAY LOAM
pH: 5.7 Soil Name: KOKOMO
CEC: 20.7 Fert. Level: GOOD

APPLICATION DESCRIPTION

	A	B	C
Application Date:	Apr/16/2008	Jun/17/2008	Aug/04/2008
Time of Day:	9:00 A.M.	9:00 A.M.	9:00 A.M.
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	14 EPP	POST	R3
Applic. Placement:	BROADCAST	BROADCAST	BROADCAST
Air Temp., Unit:	54 F	60 F	78 F
% Relative Humidity:	40	50	67
Wind Velocity, Unit:	10 S	8 WNW	1 w
Soil Temp., Unit:	44 F	60 F	72 F
Soil Moisture:	DRY/MOIST	DRY/MOIST	DRY/dry
% Cloud Cover:	2	35	5

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	GLXMA	GLXMA V3	GLXMA R3
Stage Scale:	DESC	DESC	
Height, Unit:	4	IN 26	in

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	STEME 8-12"	STEME	STEME
Stage Scale:	>12 LVS		
Density, Unit:	12 M2		
Weed 2 Code, Stage:	LAMPU 4-6"	LAMPU	LAMPU
Stage Scale:	>12 LVS		
Density, Unit:	12 M2		
Weed 3 Code, Stage:	ERICA 1-2"	ERICA 4-6"	ERICA
Stage Scale:	>12 LVS	>12 LVS	
Density, Unit:	9 M2	9 M2	
Weed 4 Code, Stage:	SETFA	SETFA 8-12"	SETFA
Stage Scale:		7 LVS	
Density, Unit:		520 M2	
Weed 5 Code, Stage:	CHEAL	CHEAL 8"	CHEAL
Stage Scale:		16 LVS	
Density, Unit:		12 M2	
Weed 6 Code, Stage:	AMBTR	AMBTR 7-13"	AMBTR
Stage Scale:		12-20 LVS	
Density, Unit:		10 M2	
Weed 7 Code, Stage:	AMBEL	AMBEL 4-7"	AMBEL
Stage Scale:		8-12 LVS	
Density, Unit:		17 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	22	23	24
1	ROUNDUP POWERMAX	22 oz/a		14 EPP	A	20.83 a	14.16 a	59.7 a
1	2,4-D	1 pt/a		14 EPP				
1	AMS	4 qt/a		14 EPP				
1	ROUNDUP POWERMAX	22 oz/a		POST	B			
1	AMS	4 qt/a		POST				
2	SCEPTER	2.8 oz/a		14 EPP	A	23.24 a	13.62 a	67.0 a
2	ROUNDUP POWERMAX	22 oz/a		14 EPP				
2	2,4-D	1 pt/a		14 EPP				
2	AMS	4 qt/a		14 EPP				
2	ROUNDUP POWERMAX	22 oz/a		POST	B			
2	AMS	4 qt/a		POST				
3	EXTREME	3 pt/a		14 EPP	A	23.88 a	13.39 a	69.0 a
3	ROUNDUP POWERMAX	22 oz/a		14 EPP				
3	2,4-D	1 pt/a		14 EPP				
3	AMS	4 qt/a		14 EPP				
3	ROUNDUP POWERMAX	22 oz/a		POST	B			
3	AMS	4 qt/a		POST				
3	HEADLINE	6 oz/a		R3	C			
3	NIS	6.4 oz/a		R3				
4	CANOPY	4 oz/a		14 EPP	A	22.09 a	13.64 a	63.7 a
4	ROUNDUP POWERMAX	22 oz/a		14 EPP				
4	2,4-D	1 pt/a		14 EPP				
4	AMS	4 qt/a		14 EPP				
4	ROUNDUP POWERMAX	22 oz/a		POST	B			
4	AMS	4 qt/a		POST				
LSD (P=.05)						2.500	1.176	7.42
Standard Deviation						1.563	0.735	4.64
CV						6.94	5.37	7.15
Grand Mean						22.51	13.7	64.86
Bartlett's X2						1.509	3.597	1.185
P(Bartlett's X2)						0.68	0.308	0.757
Replicate F						1.891	0.641	1.898
Replicate Prob(F)						0.2016	0.6079	0.2004
Treatment F						2.955	0.789	3.100
Treatment Prob(F)						0.0905	0.5297	0.0819

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

$$TY1 = 2.904 * [22] * (100 - [23]) / 87$$