

Ohio State University  
Horticulture and Crop Science

KIH-485 EARLY PREPLANT WEED CONTROL IN NO-TILL SOYBEAN

Trial ID: 08KIHNTSOY 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. SETFA	Giant foxtail	Setaria faberi
4. CHEAL	Common lambsquarters	Chenopodium album
5. AMBTR	Giant ragweed	Ambrosia trifida
6. AMBEL	Common ragweed	Ambrosia artemisiifolia

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: 6.67 FT Plot Length, Unit: 30 FT Reps: 3  
Tillage Type: NO-TILL Study Design: RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 1.2 Texture: SILT LOAM  
pH: 5.8 Soil Name: CROSBY  
CEC: 10.8 Fert. Level: GOOD

APPLICATION DESCRIPTION

A

Application Date: Apr/02/2008  
Time of Day: 10:00 A.M  
Application Method: SPRAY  
Application Timing: 30 EPP  
Applic. Placement: BROADCAST  
Air Temp., Unit: 38 F  
% Relative Humidity: 70  
Wind Velocity, Unit: 5 E  
Soil Temp., Unit: 38 F  
Soil Moisture: MOIST/MOI  
% Cloud Cover: 3

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: GLXMA

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code, Stage: STEME 4" DIA  
Stage Scale: >12 LVS  
Density, Unit: 42.6 M2  
Weed 2 Code, Stage: LAMPU 2-3" DIA  
Stage Scale: >12 LVS  
Density, Unit: 16 M2  
Weed 3 Code, Stage: SETFA  
Density, Unit: 93.3 M2  
Weed 4 Code, Stage: CHEAL  
Density, Unit: 136 M2  
Weed 5 Code, Stage: AMBTR  
Density, Unit: 14.6 M2  
Weed 6 Code, Stage: AMBEL  
Density, Unit: 46.6 M2

APPLICATION EQUIPMENT

A

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

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Trial ID: 08KIHNTSOY Study Dir.: Anthony F. Dobbels  
Location: WESTERN BRANCH F-9 W Investigator: Dr. Mark M. Loux

Weed Code				SETFA	CHEAL	AMBEL	AMBTR	SETFA			
Crop Code				CONTROL	CONTROL	CONTROL	CONTROL	GLYMX	CONTROL		
Rating Data Type				PERCENT	PERCENT	PERCENT	PERCENT	PHYTO	PERCENT		
Rating Unit				Apr/29/2008	Apr/29/2008	Apr/29/2008	Apr/29/2008	Jun/02/2008	Jun/02/2008		
Rating Date				27 DA-A	27 DA-A	27 DA-A	27 DA-A	61 DA-A	61 DA-A		
Trt-Eval Interval				0	0	0	0	0	0		
# 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	ROUNDUP POWERMAX	22 oz/a		30 EPP	A	63 b	20 b	0 b	0 c	0 a	17 d
1	AMS	4 qt/a		30 EPP							
2	KIH-485	2.77 oz/a		30 EPP	A	75 ab	87 a	80 a	40 abc	3 a	65 b
2	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
2	AMS	4 qt/a		30 EPP							
3	KIH-485	3.5 oz/a		30 EPP	A	88 a	87 a	80 a	40 abc	0 a	82 ab
3	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
3	AMS	4 qt/a		30 EPP							
4	KIH-485	4.2 oz/a		30 EPP	A	93 a	100 a	93 a	73 a	2 a	91 a
4	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
4	AMS	4 qt/a		30 EPP							
5	KIH-485	7 oz/a		30 EPP	A	100 a	100 a	100 a	57 ab	0 a	98 a
5	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
5	AMS	4 qt/a		30 EPP							
6	DUAL II MAGNUM	1.68 pt/a		30 EPP	A	83 ab	63 a	10 b	20 bc	0 a	76 ab
6	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
6	AMS	4 qt/a		30 EPP							
7	OUTLOOK	18 oz/a		30 EPP	A	77 ab	55 a	30 b	20 bc	0 a	40 c
7	ROUNDUP POWERMAX	22 oz/a		30 EPP	A						
7	AMS	4 qt/a		30 EPP							
8	UTC					0 c	0 b	0 b	0 c	0 a	0 e
LSD (P=.05)						16.8	30.3	28.3	32.1	3.8	16.2
Standard Deviation						9.6	17.2	16.2	18.3	2.1	9.2
CV						13.24	26.88	32.88	58.68	343.65	15.79
Bartlett's X2						3.482	2.452	1.633	0.57	0.866	9.51
P(Bartlett's X2)						0.626	0.653	0.803	0.989	0.352	0.147
Replicate F						1.323	3.081	1.164	0.037	2.032	4.762
Replicate Prob(F)						0.2976	0.0803	0.3407	0.9636	0.1679	0.0264
Treatment F						32.207	14.155	21.604	6.087	1.000	45.138
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0021	0.4706	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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Weed Code				AMBTR	AMBEL	CHEAL	SETFA	AMBTR	AMBEL		
Crop Code				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL		
Rating Data Type				PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT		
Rating Unit				Jun/02/2008	Jun/02/2008	Jun/02/2008	Jun/16/2008	Jun/16/2008	Jun/16/2008		
Rating Date				61 DA-A	61 DA-A	61 DA-A	75 DA-A	75 DA-A	75 DA-A		
Trt-Eval Interval				0	0	0	0	0	0		
# Subsamples, Dec.				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	ROUNDUP POWERMAX	22	oz/a	30 EPP	A	7 a	7 d	17 bc	0 d	0 a	0 d
1	AMS	4	qt/a	30 EPP							
2	KIH-485	2.77	oz/a	30 EPP	A	17 a	33 bc	37 bc	43 bc	0 a	7 cd
2	ROUNDUP POWERMAX	22	oz/a	30 EPP	A						
2	AMS	4	qt/a	30 EPP							
3	KIH-485	3.5	oz/a	30 EPP	A	23 a	43 bc	50 ab	60 b	0 a	27 bc
3	ROUNDUP POWERMAX	22	oz/a	30 EPP	A						
3	AMS	4	qt/a	30 EPP							
4	KIH-485	4.2	oz/a	30 EPP	A	53 a	57 ab	53 ab	66 ab	23 a	30 b
4	ROUNDUP POWERMAX	22	oz/a	30 EPP	A						
4	AMS	4	qt/a	30 EPP							
5	KIH-485	7	oz/a	30 EPP	A	27 a	68 a	80 a	83 a	17 a	47 a
5	ROUNDUP POWERMAX	22	oz/a	30 EPP	A						
5	AMS	4	qt/a	30 EPP							
6	DUAL II MAGNUM	1.68	pt/a	30 EPP	A	20 a	7 d	17 bc	55 b	7 a	7 cd
6	ROUNDUP POWERMAX	22	oz/a	30 EPP	A						
6	AMS	4	qt/a	30 EPP							
7	OUTLOOK	18	oz/a	30 EPP	A	23 a	20 cd	20 bc	27 c	7 a	17 bcd
7	ROUNDUP POWERMAX	22	oz/a	30 EPP	A						
7	AMS	4	qt/a	30 EPP							
8	UTC					0 a	0 d	0 c	0 d	0 a	0 d
LSD (P=.05)						39.0	19.2	26.3	18.8	28.2	15.7
Standard Deviation						22.2	11.0	15.0	10.7	16.1	9.0
CV						104.66	37.31	43.96	25.66	241.65	53.79
Bartlett's X2						6.958	5.006	5.114	7.952	4.601	1.756
P(Bartlett's X2)						0.325	0.415	0.402	0.159	0.203	0.78
Replicate F						0.480	1.952	3.343	4.512	1.220	2.541
Replicate Prob(F)						0.6285	0.1788	0.0650	0.0307	0.3247	0.1144
Treatment F						1.520	15.900	8.939	24.367	0.917	10.311
Treatment Prob(F)						0.2389	0.0001	0.0003	0.0001	0.5216	0.0001

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Weed Code CHEAL  
 Crop Code  
 Rating Data Type CONTROL  
 Rating Unit PERCENT  
 Rating Date Jun/16/2008  
 Trt-Eval Interval 75 DA-A  
 # Subsamples, Dec. 0

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	
						13
1	ROUNDUP POWERMAX	22	oz/a	30 EPP	A	7 bc
1	AMS	4	qt/a	30 EPP		
2	KIH-485	2.77	oz/a	30 EPP	A	27 bc
2	ROUNDUP POWERMAX	22	oz/a	30 EPP	A	
2	AMS	4	qt/a	30 EPP		
3	KIH-485	3.5	oz/a	30 EPP	A	43 ab
3	ROUNDUP POWERMAX	22	oz/a	30 EPP	A	
3	AMS	4	qt/a	30 EPP		
4	KIH-485	4.2	oz/a	30 EPP	A	43 ab
4	ROUNDUP POWERMAX	22	oz/a	30 EPP	A	
4	AMS	4	qt/a	30 EPP		
5	KIH-485	7	oz/a	30 EPP	A	63 a
5	ROUNDUP POWERMAX	22	oz/a	30 EPP	A	
5	AMS	4	qt/a	30 EPP		
6	DUAL II MAGNUM	1.68	pt/a	30 EPP	A	23 bc
6	ROUNDUP POWERMAX	22	oz/a	30 EPP	A	
6	AMS	4	qt/a	30 EPP		
7	OUTLOOK	18	oz/a	30 EPP	A	20 bc
7	ROUNDUP POWERMAX	22	oz/a	30 EPP	A	
7	AMS	4	qt/a	30 EPP		
8	UTC					0 c
	LSD (P=.05)					25.8
	Standard Deviation					14.7
	CV					52.02
	Bartlett's X2					3.061
	P(Bartlett's X2)					0.801
	Replicate F					2.666
	Replicate Prob(F)					0.1045
	Treatment F					6.005
	Treatment Prob(F)					0.0022

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