

KIH-485 Evaluation in Soybean.

Project Code: 05-10C-M60      Location: Belleville Research Center  
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country:      Belleville      IL 62221 USA  
 Trial Status: Final              Updated:      11-14-05

**Objective:**

Determine the crop safety and weed control from preemergence and postemergence applications of KIH-485 compared with s-metolachlor in soybean.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. CYPES	nutsedge, yellow	Cyperus esculentus L.
3. XANST	cocklebur, common	Xanthium strumarium L.
4. AMBEL	ragweed, common	Ambrosia artemisiifolia L.

Crop 1:	GLXMA soybean	Variety:	Asgrow 4403 RR
Planting Method:	Seeded	Planting Date:	5-12-05
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	24 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2004				

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 100 LB/A

Soil Name:	Weir	% OM:	2.1	pH:	5.6	CEC:	12
Texture:	Silt loam	Fert. Level:	P1: 80 LB/A,	K:	435 LB/A		

**APPLICATION DESCRIPTION**

	A	B
Application Date:	05-12-05	06-02-05
Time of Day:	14:30	8:15
Application Method:	Spray	Spray
Application Timing:	PRE	2-3"W
Applic. Placement:	BROSOI	BROFOL
Air Temp., Unit:	76 F	68 F
% Relative Humidity:	68	90
Wind Velocity, Unit:	5-7 MPH	3 MPH
Soil Moisture:	NORMAL	BELNOR

**CROP STAGE AT EACH APPLICATION**

	A	B
Crop 1 Code, Stage:	GLXMA NA	GLXMA V2
Height, Unit:	NA NA	3 IN

**WEED STAGE AT EACH APPLICATION**

	A	B
Weed 1 Code:		SETFA
Stage (leaves):		3-5
Height (inches):		1-3
Density:		Medium
Weed 2 Code:		CYPES
Stage (leaves):		4-5
Height (inches):		2-3
Density:		Medium
Weed 3 Code:		XANST
Stage (leaves):		3-4
Height (inches):		2-3
Density:		Medium
Weed 4 Code:		AMBEL
Stage (leaves):		4-6
Height (inches):		2-3
Density:		Low

**APPLICATION EQUIPMENT**

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8003	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA

**NOTES:**

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Weed Code									SETFA	SETFA	SETFA					
Crop Code									GLXMA	GLXMA	GLXMA					
Rating Data Type									Injury	Injury	Injury					
Rating Unit									Percent	Percent	Percent					
Rating Date									05-26-05	06-09-05	06-16-05					
Trt-Eval Interval									14 DAP	28 DAP	14 DA-B					
									56 DAP	Control	Control					
									Percent	Percent	Percent					
									28 DAP	14 DA-B	56 DAP					
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code							
1	NONTREATED									0	0	0				
2	KIH-485	60	WG	0.111	lb ai/a	2.96	oz/a	PRE	A	0	1	0				
3	KIH-485	60	WG	0.223	lb ai/a	5.95	oz/a	PRE	A	0	2	0				
4	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	1.33	pt/a	PRE	A	0	7	0				
5	DUAL II MAGNUM	7.64	EC	2.54	lb ai/a	2.66	pt/a	PRE	A	0	7	0				
6	KIH-485	60	WG	0.111	lb ai/a	2.96	oz/a	2-3"W	B	0	10	7				
7	KIH-485	60	WG	0.223	lb ai/a	5.95	oz/a	2-3"W	B	0	11	7				
8	KIH-485	60	WG	0.111	lb ai/a	2.96	oz/a	2-3"W	B	0	20	8				
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"W	B	0	20	8				
8	AMS	100	DRY	2.0	% w/w	2	% w/w	2-3"W	B	0	20	8				
9	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	1.33	pt/a	2-3"W	B	0	20	8				
9	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"W	B	0	20	8				
9	AMS	100	DRY	2.0	% w/w	2	% w/w	2-3"W	B	0	20	8				
10	SEQUENCE	5.25	EW	1.97	lb ai/a	3.0	pt/a	2-3"W	B	0	18	8				
10	AMS	100	DRY	2.0	% w/w	2	% w/w	2-3"W	B	0	18	8				
LSD (P=.05)										0.0	3.7	1.3	0.0	2.8	1.6	9.6
Replicate F										0.000	1.274	1.452	0.000	0.670	1.000	1.148
Replicate Prob(F)										1.0000	0.3039	0.2603	1.0000	0.5238	0.3874	0.3393
Treatment F										0.000	37.521	83.103	0.000	2607.106	7832.641	190.427
Treatment Prob(F)										1.0000	0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

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Weed Code									CYPES	CYPES	CYPES	XANST	XANST	XANST	
Crop Code									Control	Control	Control	Control	Control	Control	
Rating Data Type									Percent	Percent	Percent	Percent	Percent	Percent	
Rating Unit									06-09-05	06-16-05	07-07-05	06-09-05	06-16-05	07-07-05	
Rating Date									28 DAP	14 DA-B	56 DAP	28 DAP	14 DA-B	56 DAP	
Trt-Eval Interval															
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	NONTREATED									0	0	0	0	0	0
2	KIH-485	60	WG	0.111	lb ai/a	2.96	oz/a	PRE	A	27	17	17	7	7	0
3	KIH-485	60	WG	0.223	lb ai/a	5.95	oz/a	PRE	A	37	23	13	15	17	0
4	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	1.33	pt/a	PRE	A	50	45	37	3	7	0
5	DUAL II MAGNUM	7.64	EC	2.54	lb ai/a	2.66	pt/a	PRE	A	67	65	65	17	17	0
6	KIH-485	60	WG	0.111	lb ai/a	2.96	oz/a	2-3"W	B	0	0	0	3	0	0
7	KIH-485	60	WG	0.223	lb ai/a	5.95	oz/a	2-3"W	B	0	0	0	0	0	0
8	KIH-485	60	WG	0.111	lb ai/a	2.96	oz/a	2-3"W	B	33	83	88	99	99	92
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"W	B	33	83	88	99	99	92
8	AMS	100	DRY	2.0	% w/w	2	% w/w	2-3"W	B	33	83	88	99	99	92
9	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	1.33	pt/a	2-3"W	B	33	82	95	99	99	91
9	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"W	B	33	82	95	99	99	91
9	AMS	100	DRY	2.0	% w/w	2	% w/w	2-3"W	B	33	82	95	99	99	91
10	SEQUENCE	5.25	EW	1.97	lb ai/a	3.0	pt/a	2-3"W	B	30	81	93	99	99	90
10	AMS	100	DRY	2.0	% w/w	2	% w/w	2-3"W	B	30	81	93	99	99	90
LSD (P=.05)										15.9	11.7	22.4	6.3	8.3	2.5
Replicate F										1.086	2.456	3.111	0.633	1.000	2.039
Replicate Prob(F)										0.3586	0.1140	0.0691	0.5423	0.3874	0.1591
Treatment F										17.332	82.408	29.086	447.863	260.525	2660.334
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Weed Code	AMBEL	AMBEL	AMBEL
Crop Code			
Rating Data Type	Control	Control	Control
Rating Unit	Percent	Percent	Percent
Rating Date	06-09-05	06-16-05	07-07-05
Trt-Eval Interval	28 DAP	14 DA-B	56 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code			
1	NONTREATED									0	0	0
2	KIH-485	60	WG	0.111	lb ai/a	2.96	oz/a	PRE	A	20	12	0
3	KIH-485	60	WG	0.223	lb ai/a	5.95	oz/a	PRE	A	33	27	0
4	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	1.33	pt/a	PRE	A	20	10	0
5	DUAL II MAGNUM	7.64	EC	2.54	lb ai/a	2.66	pt/a	PRE	A	30	27	0
6	KIH-485	60	WG	0.111	lb ai/a	2.96	oz/a	2-3"W	B	0	0	0
7	KIH-485	60	WG	0.223	lb ai/a	5.95	oz/a	2-3"W	B	0	0	0
8	KIH-485	60	WG	0.111	lb ai/a	2.96	oz/a	2-3"W	B	99	99	99
8	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"W	B			
8	AMS	100	DRY	2.0	% w/w	2	% w/w	2-3"W	B			
9	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	1.33	pt/a	2-3"W	B	99	99	99
9	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-3"W	B			
9	AMS	100	DRY	2.0	% w/w	2	% w/w	2-3"W	B			
10	SEQUENCE	5.25	EW	1.97	lb ai/a	3.0	pt/a	2-3"W	B	99	99	99
10	AMS	100	DRY	2.0	% w/w	2	% w/w	2-3"W	B			
LSD (P=.05)										11.6	10.3	0.0
Replicate F										0.512	1.465	0.000
Replicate Prob(F)										0.6077	0.2573	1.0000
Treatment F										118.445	160.213	0.000
Treatment Prob(F)										0.0001	0.0001	1.0000

## Trial Comments

1. Protocol: K-I Chemical USA Inc.
2. Ratings: CI 14, 28 and 56 DAP and 7 and 14 DA "B";  
WC 28 and 56 DAP and 14 DA "B".
3. DAP = Days after planting. DA-B = Days after 2-3"W application.
4. Ratings at 28 DAP were also 7 DA-B. Ratings at 14 DA-B were also 35 DAP. Ratings at 56 DAP were also 35 DA-B.