

One-Pass PRE Programs with KIH-485.

Project Code: 07-10B-E80 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: 1-23-08

Objective:
Evaluate potential one-pass weed control programs with KIH-485.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMBTR	ragweed, giant	Ambrosia trifida L.
3. XANST	cocklebur, common	Xanthium strumarium L.
4. AMATA	waterhemp, common	Amaranthus rudis Sauer
5. ABUTH	velvetleaf	Abutilon theophrasti Medicus

Crop 1: ZEAMX corn, field Variety: 33K44
Planting Method: Seeded Planting Date: 4-30-07
Rate: 28000 S/A Depth: 1.5 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: GLXMA, 2006
Field Prep./Maintenance: N 150 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Name: Weir % OM: 2.2 pH: 6.5 CEC: 11
Texture: Silt loam Fert. Level: P1: 70 LB/A, K: 421 LB/A

APPLICATION DESCRIPTION

A
Application Date: 5-1-07
Time of Day: 10:00
Application Method: Spray
Application Timing: PRE
Applic. Placement: BROSIO
Air Temp., Unit: 56 F
% Relative Humidity: 90
Wind Velocity, Unit: 3 MPH
Soil Moisture: ABONOR
% Cloud Cover: 50

CROP STAGE AT EACH APPLICATION

A
Crop 1 Code, Stage: ZEAMX NA
Height, Unit: NA NA

APPLICATION EQUIPMENT

A
Appl. Equipment: CO2 sprayer
Operating Pressure: 40 PSI
Nozzle Type: Flat fan
Nozzle Size: XR 8002
Boom Length, Unit: 7.5 FT
Spray Volume, Unit: 15 GPA

NOTES:

One-Pass PRE Programs with KIH-485.

Project Code: 07-10B-E80 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code		ZEAMX					SETFA		SETFA		SETFA		SETFA				
Crop Code		Injury	Injury	Injury	Injury	Injury	Control	Control	Control	Control	Control	Control	Control				
Rating Data Type		Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent				
Rating Unit		5-8-07	5-16-07	5-31-07	6-15-07	6-30-07	5-16-07	5-31-07	6-15-07	6-30-07	6-15-07	6-30-07	6-30-07				
Rating Date		7 DA-A	15 DA-A	30 DA-A	45 DA-A	60 DA-A	15 DA-A	30 DA-A	45 DA-A	60 DA-A	45 DA-A	60 DA-A	60 DA-A				
Trt-Eval Interval																	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code									
1	NONTREATED								0 a	0 c	0 a	0 a	0 a	0 b	0 b	0 b	0 b
2	KIH-485	85 WG		0.148 lb ai/a	2.79 oz/a	PRE	A		0 a	0 c	0 a	0 a	0 a	99 a	99 a	99 a	99 a
2	CALLISTO	4 SC		0.168 lb ai/a	5.4 fl oz/a	PRE	A										
3	KIH-485	85 WG		0.186 lb ai/a	3.5 oz/a	PRE	A		0 a	0 c	0 a	0 a	0 a	99 a	99 a	99 a	99 a
3	CALLISTO	4 SC		0.168 lb ai/a	5.4 fl oz/a	PRE	A										
4	KIH-485	85 WG		0.148 lb ai/a	2.79 oz/a	PRE	A		0 a	0 c	0 a	0 a	0 a	99 a	99 a	99 a	99 a
4	AATREX	90 WG		0.62 lb ai/a	11 oz/a	PRE	A										
4	CALLISTO	4 SC		0.168 lb ai/a	5.4 fl oz/a	PRE	A										
5	KIH-485	85 WG		0.186 lb ai/a	3.5 oz/a	PRE	A		0 a	0 c	0 a	0 a	0 a	99 a	99 a	99 a	99 a
5	AATREX	90 WG		0.62 lb ai/a	11 oz/a	PRE	A										
5	CALLISTO	4 SC		0.168 lb ai/a	5.4 fl oz/a	PRE	A										
6	KIH-485	85 WG		0.148 lb ai/a	2.79 oz/a	PRE	A		0 a	3 b	0 a	0 a	0 a	99 a	99 a	99 a	99 a
6	BALANCE PRO	4 SC		0.078 lb ai/a	2.5 fl oz/a	PRE	A										
7	KIH-485	85 WG		0.186 lb ai/a	3.5 oz/a	PRE	A		0 a	2 bc	0 a	0 a	0 a	99 a	99 a	99 a	99 a
7	BALANCE PRO	4 SC		0.078 lb ai/a	2.5 fl oz/a	PRE	A										
8	KIH-485	85 WG		0.148 lb ai/a	2.79 oz/a	PRE	A		0 a	3 b	0 a	0 a	0 a	99 a	99 a	99 a	99 a
8	AATREX	90 WG		0.62 lb ai/a	11 oz/a	PRE	A										
8	BALANCE PRO	4 SC		0.078 lb ai/a	2.5 fl oz/a	PRE	A										
9	KIH-485	85 WG		0.186 lb ai/a	3.5 oz/a	PRE	A		0 a	7 a	0 a	0 a	0 a	99 a	99 a	99 a	99 a
9	AATREX	90 WG		0.62 lb ai/a	11 oz/a	PRE	A										
9	BALANCE PRO	4 SC		0.078 lb ai/a	2.5 fl oz/a	PRE	A										
10	KIH-485	85 WG		0.186 lb ai/a	3.5 oz/a	PRE	A		0 a	0 c	0 a	0 a	0 a	99 a	99 a	99 a	99 a
10	AATREX	90 WG		0.62 lb ai/a	11 oz/a	PRE	A										
11	LUMAX	3.94 L		2.46 lb ai/a	2.5 qt/a	PRE	A		0 a	0 c	0 a	0 a	0 a	99 a	99 a	99 a	99 a
12	LEXAR	3.7 L		2.78 lb ai/a	3 qt/a	PRE	A		0 a	0 c	0 a	0 a	0 a	99 a	99 a	99 a	99 a
13	KIH-485	85 WG		0.186 lb ai/a	3.5 oz/a	PRE	A		0 a	0 c	0 a	0 a	0 a	99 a	99 a	99 a	99 a
13	AATREX	90 WG		1.5 lb ai/a	26.7 oz/a	PRE	A										
LSD (P=.05)									0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.5	0.5
Replicate F									0.000	0.643	0.000	0.000	0.000	0.000	0.000	1.000	1.867
Replicate Prob(F)									1.0000	0.5346	1.0000	1.0000	1.0000	1.0000	1.0000	0.3827	0.1764
Treatment F									0.000	8.236	0.000	0.000	0.000	0.000	0.000	29354.337	23470.403
Treatment Prob(F)									1.0000	0.0001	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

One-Pass PRE Programs with KIH-485.

Project Code: 07-10B-E80 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code		AMBTR		AMBTR		AMBTR		AMBTR		XANST		XANST		XANST		XANST	
Crop Code		Control		Control		Control		Control		Control		Control		Control		Control	
Rating Data Type		Percent		Percent		Percent		Percent		Percent		Percent		Percent		Percent	
Rating Unit		5-16-07		5-31-07		6-15-07		6-30-07		5-16-07		5-31-07		6-15-07		6-30-07	
Rating Date		15 DA-A		30 DA-A		45 DA-A		60 DA-A		15 DA-A		30 DA-A		45 DA-A		60 DA-A	
Trt-Eval Interval																	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code									
1	NONTREATED								0 d	0 f	0 i	0 g	0 e	0 g	0 i	0 g	
2	KIH-485	85	WG	0.148	2.79	oz/a	PRE	A	95 ab	94 ab	83 cd	78 bc	93 bc	93 ab	83 bcd	75 bc	
2	CALLISTO	4	SC	0.168	5.4	fl oz/a	PRE	A									
3	KIH-485	85	WG	0.186	3.5	oz/a	PRE	A	96 ab	94 abc	85 cd	79 bc	96 ab	95 a	88 abc	83 ab	
3	CALLISTO	4	SC	0.168	5.4	fl oz/a	PRE	A									
4	KIH-485	85	WG	0.148	2.79	oz/a	PRE	A	97 a	94 abc	88 bcd	82 b	97 ab	95 a	89 abc	87 ab	
4	AATREX	90	WG	0.62	11	oz/a	PRE	A									
4	CALLISTO	4	SC	0.168	5.4	fl oz/a	PRE	A									
5	KIH-485	85	WG	0.186	3.5	oz/a	PRE	A	96 ab	95 a	89 abc	84 b	97 a	95 a	90 ab	87 ab	
5	AATREX	90	WG	0.62	11	oz/a	PRE	A									
5	CALLISTO	4	SC	0.168	5.4	fl oz/a	PRE	A									
6	KIH-485	85	WG	0.148	2.79	oz/a	PRE	A	92 c	87 de	60 g	45 e	92 cd	85 de	65 fg	53 e	
6	BALANCE PRO	4	SC	0.078	2.5	fl oz/a	PRE	A									
7	KIH-485	85	WG	0.186	3.5	oz/a	PRE	A	94 b	90 cd	73 f	55 d	95 abc	88 cd	72 ef	58 de	
7	BALANCE PRO	4	SC	0.078	2.5	fl oz/a	PRE	A									
8	KIH-485	85	WG	0.148	2.79	oz/a	PRE	A	96 ab	91 abc	75 ef	62 d	94 abc	91 bc	73 def	67 cd	
8	AATREX	90	WG	0.62	11	oz/a	PRE	A									
8	BALANCE PRO	4	SC	0.078	2.5	fl oz/a	PRE	A									
9	KIH-485	85	WG	0.186	3.5	oz/a	PRE	A	96 ab	91 bc	81 de	72 c	96 ab	88 cd	80 cde	77 bc	
9	AATREX	90	WG	0.62	11	oz/a	PRE	A									
9	BALANCE PRO	4	SC	0.078	2.5	fl oz/a	PRE	A									
10	KIH-485	85	WG	0.186	3.5	oz/a	PRE	A	90 c	83 e	48 h	33 f	88 d	78 f	53 h	37 f	
10	AATREX	90	WG	0.62	11	oz/a	PRE	A									
11	LUMAX	3.94	L	2.46	2.5	qt/a	PRE	A	95 ab	95 a	94 ab	93 a	94 abc	96 a	95 a	93 a	
12	LEXAR	3.7	L	2.78	3	qt/a	PRE	A	95 ab	95 a	96 a	94 a	96 ab	95 a	96 a	93 a	
13	KIH-485	85	WG	0.186	3.5	oz/a	PRE	A	95 ab	86 e	55 gh	37 f	95 abc	82 ef	58 gh	40 f	
13	AATREX	90	WG	1.5	26.7	oz/a	PRE	A									
LSD (P=.05)									2.3	3.9	7.5	7.7	3.5	3.8	9.7	12.9	
Replicate F									2.831	0.620	2.483	0.713	1.791	0.020	0.086	0.104	
Replicate Prob(F)									0.0787	0.5466	0.1047	0.5001	0.1883	0.9805	0.9174	0.9012	
Treatment F									1143.895	374.127	102.019	110.962	468.887	378.621	59.792	38.480	
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

One-Pass PRE Programs with KIH-485.

Project Code: 07-10B-E80 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code	AMATA	AMATA	AMATA	AMATA	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	5-16-07	5-31-07	6-15-07	6-30-07	5-16-07	5-31-07	6-15-07	6-30-07
Rating Date	15 DA-A	30 DA-A	45 DA-A	60 DA-A	15 DA-A	30 DA-A	45 DA-A	60 DA-A
Trt-Eval Interval								

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code									
1	NONTREATED								0 b	0 b	0 b	0 b	0 b	0 b	0 b	0 c	
2	KIH-485	85	WG	0.148 lb ai/a	2.79 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 ab	
2	CALLISTO	4	SC	0.168 lb ai/a	5.4 fl oz/a	PRE	A										
3	KIH-485	85	WG	0.186 lb ai/a	3.5 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 ab	
3	CALLISTO	4	SC	0.168 lb ai/a	5.4 fl oz/a	PRE	A										
4	KIH-485	85	WG	0.148 lb ai/a	2.79 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	98 b	
4	AATREX	90	WG	0.62 lb ai/a	11 oz/a	PRE	A										
4	CALLISTO	4	SC	0.168 lb ai/a	5.4 fl oz/a	PRE	A										
5	KIH-485	85	WG	0.186 lb ai/a	3.5 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 ab	
5	AATREX	90	WG	0.62 lb ai/a	11 oz/a	PRE	A										
5	CALLISTO	4	SC	0.168 lb ai/a	5.4 fl oz/a	PRE	A										
6	KIH-485	85	WG	0.148 lb ai/a	2.79 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 ab	
6	BALANCE PRO	4	SC	0.078 lb ai/a	2.5 fl oz/a	PRE	A										
7	KIH-485	85	WG	0.186 lb ai/a	3.5 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 ab	
7	BALANCE PRO	4	SC	0.078 lb ai/a	2.5 fl oz/a	PRE	A										
8	KIH-485	85	WG	0.148 lb ai/a	2.79 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	
8	AATREX	90	WG	0.62 lb ai/a	11 oz/a	PRE	A										
8	BALANCE PRO	4	SC	0.078 lb ai/a	2.5 fl oz/a	PRE	A										
9	KIH-485	85	WG	0.186 lb ai/a	3.5 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	
9	AATREX	90	WG	0.62 lb ai/a	11 oz/a	PRE	A										
9	BALANCE PRO	4	SC	0.078 lb ai/a	2.5 fl oz/a	PRE	A										
10	KIH-485	85	WG	0.186 lb ai/a	3.5 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	
10	AATREX	90	WG	0.62 lb ai/a	11 oz/a	PRE	A										
11	LUMAX	3.94	L	2.46 lb ai/a	2.5 qt/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	
12	LEXAR	3.7	L	2.78 lb ai/a	3 qt/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	
13	KIH-485	85	WG	0.186 lb ai/a	3.5 oz/a	PRE	A		99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 ab	
13	AATREX	90	WG	1.5 lb ai/a	26.7 oz/a	PRE	A										
LSD (P=.05)									0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.1	
Replicate F									0.000	0.000	0.000	0.000	0.000	0.000	3.000	6.452	
Replicate Prob(F)									1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0687	0.0057	
Treatment F									0.000	0.000	0.000	0.000	0.000	0.000	20299.578	5659.968	
Treatment Prob(F)									1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: Kumiai.
2. Ratings: CI at 7 DAT; CI/WC 15, 30, 45 + 60 DAT.
3. DA-A = Days after PRE application.