

Early Preplant Evaluations of KIH-485 in No-Till Corn.

Trial ID: 08-5D-M70

Location: Belleville Res Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 04-07-08

Objectives: Determine the efficacy of KIH applied 45 days before planting compared with competitive products for residual control of summer annual weed species.

Crop 1: ZEAMX corn, field Variety: P33K44
 Planting Method: Seeded Planting Date: 06-14-08
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant
 Pest 2 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 3 Type: W Code: PANDI Panicum dichotomiflorum Michx. panicum, fall
 Pest 4 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 28 FT Tillage Type: NO-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2007

Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 150 LB/A

% OM: 1.5 Texture: SILT LOAM
 pH: 6.6 Soil Name: WINFIELD
 CEC: 7 Fert. Level: P1 81 LB/A, K 313 LB/A

Application Description

A
 Application Date: 04-07-08
 Time of Day: 14:00
 Application Method: Spray
 Application Timing: 45EPP
 Application Placement: BROFOL
 Applied By: RFK
 Air Temperature, Unit: 70 F
 % Relative Humidity: 30
 Wind Velocity, Unit: 3 MPH
 Dew Presence (Y/N): N
 Soil Temperature, Unit: 59 F
 Soil Moisture: ABONOR

04-07-08
 Crop stage at application: NA

Pest Stage At Each Application

Application Date: 04-07-08
 Weed Code: SETFA
 Stage Majority (leaves): NA
 Weed Code: AMBTR
 Stage Majority (leaves): NA
 Weed Code: PANDI
 Stage Majority (leaves): NA
 Weed Code: AMATA
 Stage Majority (leaves): NA

Application Equipment

Appl. Equipment: CO2 sprayer
 Operating Pressure: 30 PSI
 Nozzle Type: Flat fan
 Nozzle Size: XR 8002
 Boom Length, Unit: 7.5 FT
 Spray Volume, Unit: 15 GPA

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Crop Code							
Rating Date	05-23-08	06-23-08	07-14-08	07-31-08	06-23-08	07-14-08	07-31-08
Rating Data Type	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing	0 DAPP	30 DAPP	30 DAP	45 DAP	30 DAPP	30 DAP	45 DAP
Trt-Eval Interval	46 DA-A	77 DA-A	98 DA-A	115 DA-A	77 DA-A	98 DA-A	115 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
1	ROUNDUP W-MAX	4.5	SL	0.78 lb ae/a	22 fl oz/a		45EPP	A	93 b	0 c	0 c	0 b	0 c	0 c	0 b
2	KIH-485	85	WG	0.112 lb ai/a	2.1 oz/a		45EPP	A	99 a	60 b	7 c	0 b	42 b	0 c	0 b
2	ROUNDUP W-MAX	4.5	SL	0.78 lb ae/a	22 fl oz/a		45EPP	A							
3	KIH-485	85	WG	0.148 lb ai/a	2.79 oz/a		45EPP	A	99 a	93 ab	82 ab	23 b	83 a	27 bc	3 b
3	ROUNDUP W-MAX	4.5	SL	0.78 lb ae/a	22 fl oz/a		45EPP	A							
4	KIH-485	85	WG	0.186 lb ai/a	3.5 oz/a		45EPP	A	99 a	94 a	77 ab	20 b	85 a	43 b	13 b
4	ROUNDUP W-MAX	4.5	SL	0.78 lb ae/a	22 fl oz/a		45EPP	A							
5	KIH-485	85	WG	0.296 lb ai/a	5.57 oz/a		45EPP	A	99 a	98 a	90 a	53 a	96 a	83 a	43 a
5	ROUNDUP W-MAX	4.5	SL	0.78 lb ae/a	22 fl oz/a		45EPP	A							
6	DUAL II MAGNUM	7.64	EC	1.27 lb ai/a	1.33 pt/a		45EPP	A	99 a	92 ab	68 b	10 b	73 a	30 bc	10 b
6	ROUNDUP W-MAX	4.5	SL	0.78 lb ae/a	22 fl oz/a		45EPP	A							
7	HARNESS	7	EC	2 lb ai/a	2.25 pt/a		45EPP	A	99 a	92 ab	80 ab	13 b	87 a	33 bc	7 b
7	ROUNDUP W-MAX	4.5	SL	0.78 lb ae/a	22 fl oz/a		45EPP	A							
LSD (P=.05)									3.5	33.5	18.9	26.6	30.9	34.7	20.5
Replicate F									1.000	1.879	5.852	0.255	1.611	0.388	0.250
Replicate Prob(F)									0.3966	0.1951	0.0168	0.7788	0.2401	0.6869	0.7828
Treatment F									4.000	10.747	37.873	4.489	11.652	6.350	5.143
Treatment Prob(F)									0.0197	0.0003	0.0001	0.0130	0.0002	0.0033	0.0078

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

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Pest Code	AMBTR	AMBTR	AMBTR	AMBTR	AMATA	AMATA	AMATA
Crop Code							
Rating Date	05-23-08	06-23-08	07-14-08	07-31-08	06-23-08	07-14-08	07-31-08
Rating Data Type	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing	0 DAPP	30 DAPP	30 DAP	45 DAP	30 DAPP	30 DAP	45 DAP
Trt-Eval Interval	46 DA-A	77 DA-A	98 DA-A	115 DA-A	77 DA-A	98 DA-A	115 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR	AMBTR	AMBTR	AMBTR	AMATA	AMATA	AMATA
1	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A	88 a	0 a	0 b	0 b	0 c	0 b	0 a
2	KIH-485	85	WG	0.112	lb ai/a	2.1	oz/a	45EPP	A	90 a	0 a	0 b	0 b	42 b	10 b	0 a
2	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A							
3	KIH-485	85	WG	0.148	lb ai/a	2.79	oz/a	45EPP	A	90 a	0 a	20 ab	7 a	83 a	33 ab	0 a
3	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A							
4	KIH-485	85	WG	0.186	lb ai/a	3.5	oz/a	45EPP	A	90 a	0 a	0 b	0 b	85 a	25 ab	7 a
4	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A							
5	KIH-485	85	WG	0.296	lb ai/a	5.57	oz/a	45EPP	A	90 a	0 a	27 a	3 ab	88 a	55 a	7 a
5	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A							
6	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	1.33	pt/a	45EPP	A	90 a	0 a	0 b	0 b	78 a	0 b	0 a
6	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A							
7	HARNESS	7	EC	2	lb ai/a	2.25	pt/a	45EPP	A	90 a	0 a	0 b	0 b	73 a	33 ab	0 a
7	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A							
LSD (P=.05)										1.9	0.0	21.8	5.9	24.3	37.2	8.4
Replicate F										1.000	0.000	0.222	0.000	5.239	2.629	1.500
Replicate Prob(F)										0.3966	1.0000	0.8040	1.0000	0.0232	0.1130	0.2621
Treatment F										1.000	0.000	2.667	1.857	16.908	2.825	1.429
Treatment Prob(F)										0.4682	1.0000	0.0699	0.1702	0.0001	0.0594	0.2815

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

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Location: Belleville Res Center

Pest Code			
Crop Code			
Rating Date	ZEAMX	ZEAMX	ZEAMX
Rating Data Type	06-23-08	07-14-08	07-31-08
Rating Unit	Injury	Injury	Injury
Rating Timing	Percent	Percent	Percent
Trt-Eval Interval	30 DAPP	30 DAP	45 DAP
	77 DA-A	98 DA-A	115 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A	0 a	0 a	0 a
2	KIH-485	85	WG	0.112	lb ai/a	2.1	oz/a	45EPP	A	0 a	0 a	0 a
2	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A			
3	KIH-485	85	WG	0.148	lb ai/a	2.79	oz/a	45EPP	A	0 a	0 a	0 a
3	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A			
4	KIH-485	85	WG	0.186	lb ai/a	3.5	oz/a	45EPP	A	0 a	0 a	0 a
4	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A			
5	KIH-485	85	WG	0.296	lb ai/a	5.57	oz/a	45EPP	A	0 a	0 a	0 a
5	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A			
6	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	1.33	pt/a	45EPP	A	0 a	0 a	0 a
6	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A			
7	HARNESS	7	EC	2	lb ai/a	2.25	pt/a	45EPP	A	0 a	0 a	0 a
7	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A			
LSD (P=.05)										0.0	0.0	0.0
Replicate F										0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000

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

Trial Comments

1. Protocol: K-I Chemical USA.
2. Ratings: CI/WC at planting and 30 + 45 DAP.
3. Blanket application of Roundup WeatherMax (22 fl oz/A) 10 ft wide to all plots at 45EPP timing (do not tank mix RWM in treatment list).
4. DAPP = Days after planned planting date. DAP = Days after planting. DA-A = Days after 45EPP application. Ratings on 06-23-08 at 30 DAPP were 9 days after planting.
5. On 05-23-08 the only weeds emerged in the nontreated plots were SETFA and AMBTR.
6. At the Belleville Research Center the above normal rainfall in spring 2008 (no more than four consecutive rain-free days between March 22 and June 15) delayed corn and soybean planting until mid-June.
7. Not harvested.