

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

Trial ID: 08-2B-W40

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: 04-08-08

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: GLXMA soybean Variety: AG 4404 RR/STS
 Planting Method: Seeded Planting Date: 06-15-08
 Rate, Unit: 75 lb/A Depth, Unit: 1.0 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: AMBEL Ambrosia artemisiifolia L. ragweed, 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 0 LB/A, P205 0 LB/A, K20 150 LB/A

% OM: 1.6 Texture: SILT LOAM
 pH: 6.1 Soil Name: PIERRON
 CEC: 8 Fert. Level: P1: 91 LB/A, K: 410 LB/A

Application Description

A
 Application Date: 04-08-08
 Time of Day: 10:00
 Application Method: Spray
 Application Timing: 45EPP
 Application Placement: BROFOL
 Air Temperature, Unit: 55 F
 % Relative Humidity: 92
 Wind Velocity, Unit: 5 MPH
 Soil Temperature, Unit: 55 F
 Soil Moisture: ABONOR

04-08-08
 Crop stage at application: NA

Pest Stage At Each Application

Application Date: 04-08-08
 Weed Code: SETFA
 Stage Majority (leaves): NA
 Weed Code: AMBTR
 Stage Majority (leaves): NA
 Weed Code: AMBEL
 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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Pest Code	SETFA	SETFA	SETFA	SETFA	AMBTR	AMBTR	AMBTR	AMBTR
Crop Code								
Rating Date	05-23-08	06-23-08	07-15-08	07-29-08	05-23-08	06-23-08	07-15-08	07-29-08
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	0 DAPP	30 DAPP	30 DAP	45 DAP	0 DAPP	30 DAPP	30 DAP	45 DAP
Rating Timing	45 DA-A	76 DA-A	98 DA-A	112 DA-A	45 DA-A	76 DA-A	98 DA-A	112 DA-A
Trt-Eval Interval								

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	05-23-08	06-23-08	07-15-08	07-29-08	05-23-08	06-23-08	07-15-08	07-29-08
1	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A	0 b	0 c	0 c	0 d	0 c	0 c	0 d	0 c
2	KIH-485	85	WG	0.112	lb ai/a	2.1	oz/a	45EPP	A	99 a	92 a	78 ab	27 b	0 c	30 bc	20 cd	0 c
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	90 a	83 a	20 b	33 ab	87 a	78 ab	27 ab
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	88 a	85 a	17 bc	50 a	92 a	86 a	40 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	99 a	80 ab	78 ab	43 a	0 c	0 c	40 c	0 c
5	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A								
6	DUAL MAGNUM	7.62	EC	1.27	lb ai/a	1.33	pt/a	45EPP	A	99 a	65 b	67 ab	7 cd	33 ab	58 ab	47 bc	7 bc
6	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A								
7	OUTLOOK	6	EC	0.84	lb ai/a	18	fl oz/a	45EPP	A	99 a	63 b	60 b	7 cd	17 bc	88 a	80 a	20 abc
7	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A								
LSD (P=.05)										0.0	21.9	22.6	10.9	32.7	38.0	32.1	26.2
Replicate F										0.000	0.345	0.096	11.872	1.412	1.482	2.489	2.124
Replicate Prob(F)										1.0000	0.7153	0.9092	0.0014	0.2814	0.2660	0.1247	0.1623
Treatment F										0.000	20.510	16.561	17.404	3.647	10.993	9.946	3.474
Treatment Prob(F)										1.0000	0.0001	0.0001	0.0001	0.0269	0.0003	0.0005	0.0315

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

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Pest Code	AMBEL	AMBEL	AMBEL	GLXMA	GLXMA	GLXMA
Crop Code	06-23-08	07-15-08	07-29-08	06-23-08	07-15-08	07-29-08
Rating Date	Control	Control	Control	Injury	Injury	Injury
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	30 DAPP	30 DAP	45 DAP	30 DAPP	30 DAP	45 DAP
Rating Timing	76 DA-A	98 DA-A	112 DA-A	76 DA-A	98 DA-A	112 DA-A
Trt-Eval Interval						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBEL	AMBEL	AMBEL	GLXMA	GLXMA	GLXMA
1	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A	0 b	0 c	0 b	0 b	0 a	0 a
2	KIH-485	85	WG	0.112	lb ai/a	2.1	oz/a	45EPP	A	50 ab	33 abc	0 b	5 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	83 a	77 a	13 ab	5 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	86 a	73 ab	27 a	5 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 b	30 abc	0 b	0 b	0 a	0 a
5	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A						
6	DUAL MAGNUM	7.62	EC	1.27	lb ai/a	1.33	pt/a	45EPP	A	30 ab	23 bc	3 b	5 a	0 a	0 a
6	ROUNDUP W-MAX	4.5	SL	0.78	lb ae/a	22	fl oz/a	45EPP	A						
7	OUTLOOK	6	EC	0.84	lb ai/a	18	fl oz/a	45EPP	A	58 ab	52 abc	17 ab	3 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)										62.0	52.1	18.5	1.9	0.0	0.0
Replicate F										0.113	0.401	1.721	1.000	0.000	0.000
Replicate Prob(F)										0.8939	0.6783	0.2203	0.3966	1.0000	1.0000
Treatment F										3.131	2.683	3.074	14.000	0.000	0.000
Treatment Prob(F)										0.0438	0.0687	0.0463	0.0001	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 8 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. Broadleaf weed control was more a reflection of competition, or lack of competition, with the grasses.
8. Not harvested.