

Northeast Research & Extension Center

2008 KIH-485 applied EPP in corn

Trial ID: 22 08 KIH Corn 1 EPP Protocol ID: 08 KIH Corn 1 EPP
Location: Concord, NE Study Director: Stevan Knezevic
Investigator: Stevan Knezevic

General Trial Information

Study Director: Stevan Knezevic
Investigator: Stevan Knezevic

Trial Location

City: Concord
State/Prov.: NE
Postal Code: 68728
Country: USA

Cooperator/Landowner

Cooperator: Haskell Agricultural Laboratory Country: USA
Organization: University of Nebraska Phone No: 402-584-2261
Address 1: 57905 866 RD Fax No: 402-584-3859
City: Concord
State/Prov: NE
Postal Code: 68728

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: Pioneer 35F40 Description: HX1 LL RR2
BBCH Scale: BCOR Planting Date: 06-04-08
Planting Method: seeded Rate, Unit: 24503 s/a
Depth, Unit: 1.75 in
Row Spacing, Unit: 30 in
Soil Moisture: ABOVE NORMAL
Harvest Date: 12-04-08 Harvest Equipment: Almaco 40
Harvested Width, Unit: 5 ft Harvested Length, Unit: 27 ft
% Standard Moisture: 15.5 Moisture Meter: Almaco
Weighing Equipment: Almaco

Pest Description

Pest 1 Type: W Code: ABUTH Abutilon theophrasti Medik.
Common Name: Velvetleaf
Pest 2 Type: W Code: AMATU Amaranthus tuberculatos (Moq.) J
Common Name: Waterhemp, tall
Pest 3 Type: W Code: AMARE Amaranthus retroflexus L.
Common Name: Pigweed, redroot
Pest 4 Type: W Code: CHEAL Chenopodium album L.
Common Name: Lambsquarters, common

Site and Design

Plot Width, Unit: 10 FT Site Type: FIELD
Plot Length, Unit: 30 FT Tillage Type: NO-TILL
Replications: 3 Study Design: Randomized Complete Block

Maintenance

Table with 9 columns: No., Date, Maintenance Treatment Name, Form Conc, Form Unit, Form Type, Rate, Rate Unit, Tank Mix. Row 1: 1, 05-18-08, glyphosate, 5.5, lbai/ga, SL, 32, oz/A, n

Soil Description

% Sand: 38 % OM: 2.8 Texture: LOAM
% Silt: 48 pH: 7.3
% Clay: 14 CEC: 16.4 Fert. Level: EXCELLENT
Analyzed By:
Midwest Labs

Application Description

	A
Application Date:	05-09-08
Time of Day:	4:00 pm
Application Method:	spray
Application Timing:	EPP
Application Placement:	surface
Applied By:	js
Air Temperature, Unit:	61 F
% Relative Humidity:	58
Wind Velocity, Unit:	2 mph
Wind Direction:	SW
Dew Presence (Y/N):	n
Soil Temperature, Unit:	52 F
Soil Moisture:	wet
% Cloud Cover:	100

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR

Pest Stage At Each Application

	A
Pest 1 Code, Disc., Scale:	ABUTH W
Pest 2 Code, Disc., Scale:	AMATU W
Pest 3 Code, Disc., Scale:	AMARE W
Pest 4 Code, Disc., Scale:	CHEAL W

Application Equipment

	A
Appl. Equipment:	backpack
Operating Pressure, Unit:	20 psi
Nozzle Type:	Turbo Tee
Nozzle Size:	11003
Nozzle Spacing, Unit:	20 IN
Boom Length, Unit:	10 FT
Boom Height, Unit:	12 IN
Ground Speed, Unit:	2.7 MPH
Carrier:	WATER
Spray Volume, Unit:	20 GPA
Mix Size, Unit:	1.8 Liters
Propellant:	co2

Northeast Research & Extension Center

2008 KIH-485 applied EPP in corn

Trial ID: 22 08 KIH Corn 1 EPP Protocol ID: 08 KIH Corn 1 EPP
 Location: Concord, NE Study Director: Stevan Knezevic
 Investigator: Stevan Knezevic

Description	Corn, field	Corn, field	Corn, field	Corn, field	Corn, field	Velvetleaf	Velvetleaf	Velvetleaf	Velvetleaf	Waterhemp					
Rating Date	12-04-08	12-04-08	07-03-08	07-18-08	08-06-08	07-03-08	07-18-08	07-18-08	08-06-08	07-03-08					
Rating Data Type	Yield	Moisture	Stunting	Stunting	Stunting	Control	Control	Density	Control	Control					
Rating Unit	Bu/A15.5	%	Percent	Percent	Percent	Percent	Percent	m2 RunCH	Percent	Percent					
Days After First/Last Applic.	209 209	209 209	55 55	70 70	89 89	55 55	70 70	70 70	89 89	55 55					
Trt-Eval Interval	209 DA-A	209 DA-A	55 DA-A	70 DA-A	89 DA-A	55 DA-A	70 DA-A	70 DA-A	89 DA-A	55 DA-A					
Plant-Eval Interval	183 DP-1	183 DP-1	29 DP-1	44 DP-1	63 DP-1	29 DP-1	44 DP-1	44 DP-1	63 DP-1	29 DP-1					
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage										
1	Nontreated Check				EPP	71.9 c	11.2 a	0.0 a	0.0 a	0.0 a	0.0 e	0.0 c	15.7 a	0.0 c	0.0 d
2	KIH-485	2.1 oz/a	125 g a/ha		EPP	171.7 a	13.1 a	0.0 a	0.0 a	0.0 a	61.7 c	56.7 ab	15.7 a	68.3 b	73.3 b
3	KIH-485	2.8 oz/a	166 g a/ha		EPP	168.1 a	13.3 a	0.0 a	0.0 a	0.0 a	75.0 bc	71.7 ab	15.7 a	76.7 b	96.0 ab
4	KIH-485	3.5 oz/a	209 g a/ha		EPP	178.0 a	13.3 a	0.0 a	0.0 a	0.0 a	99.0 a	97.7 a	6.3 a	88.3 a	99.0 a
5	KIH-485	5.6 oz/a	332 g a/ha		EPP	184.0 a	13.5 a	0.0 a	0.0 a	0.0 a	97.0 ab	96.0 a	9.0 a	92.7 a	99.0 a
6	Dual II Magnum	1.33 pt/a	1423 g a/ha		EPP	126.5 b	13.1 a	0.0 a	0.0 a	0.0 a	38.3 d	31.7 bc	13.3 a	0.0 c	31.7 c
7	Surpass	2.28 pt/a	2233 g a/ha		EPP	108.6 b	13.3 a	0.0 a	0.0 a	0.0 a	60.0 cd	53.3 ab	7.3 a	0.0 c	23.3 cd
8	KIH-485	8.4 oz/a	500 g a/ha		EPP	184.6 a	13.3 a	0.0 a	0.0 a	0.0 a	98.0 a	64.7 ab	5.7 a	97.7 a	99.0 a
LSD (P=.05)		35.95	2.33	0.00		0.00	0.00	0.00			22.43	47.10	13.02	10.23	24.71
Standard Deviation		20.53	1.33	0.00		0.00	0.00	0.00			12.81	26.89	7.43	5.84	14.11
CV		13.76	10.2	0.0		0.0	0.0	0.0			19.36	45.61	67.07	11.03	21.65
Grand Mean		149.17	13.03	0.0		0.0	0.0	0.0			66.13	58.96	11.08	52.96	65.17
Replicate F		6.844	1.369	0.000		0.000	0.000	0.000			2.292	0.060	23.030	3.305	2.929
Replicate Prob(F)		0.0084	0.2865	1.0000		1.0000	1.0000	1.0000			0.1377	0.9423	0.0001	0.0667	0.0866
Treatment F		12.502	0.909	0.000		0.000	0.000	0.000			21.775	4.339	1.073	176.317	24.904
Treatment Prob(F)		0.0001	0.5270	1.0000		1.0000	1.0000	1.0000			0.0001	0.0094	0.4287	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Northeast Research & Extension Center

Description	Waterhemp 07-18-08	Waterhemp 07-18-08	Waterhemp 08-06-08	Redroot pigweed 07-03-08	Redroot pigweed 07-18-08	Redroot pigweed 07-18-08	Lambsquarters 07-03-08
Rating Date	Control	Density	Control	Control	Control	Density	Control
Rating Data Type	Percent	m2 RunCH	Percent	Percent	Percent	m2 RunCH	Percent
Rating Unit	70 70	70 70	89 89	55 55	70 70	70 70	55 55
Days After First/Last Applic.	70 DA-A	70 DA-A	89 DA-A	55 DA-A	70 DA-A	70 DA-A	55 DA-A
Trt-Eval Interval	44 DP-1	44 DP-1	63 DP-1	29 DP-1	44 DP-1	44 DP-1	29 DP-1
Plant-Eval Interval							
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Stage	
1	Nontreated Check				EPP		
		0.0 d	11.7 a	0.0 f			
2	KIH-485	2.1 oz/a	125 g a/ha	EPP			
		73.3 b	11.7 a	65.0 e			
3	KIH-485	2.8 oz/a	166 g a/ha	EPP			
		96.0 ab	8.3 a	81.7 d			
4	KIH-485	3.5 oz/a	209 g a/ha	EPP			
		96.0 ab	11.7 a	86.7 c			
5	KIH-485	5.6 oz/a	332 g a/ha	EPP			
		99.0 a	8.3 a	91.7 b			
6	Dual II Magnum	1.33 pt/a	1423 g a/ha	EPP			
		35.0 c	13.3 a	0.0 f			
7	Surpass	2.28 pt/a	2233 g a/ha	EPP			
		16.7 cd	10.0 a	0.0 f			
8	KIH-485	8.4 oz/a	500 g a/ha	EPP			
		99.0 a	8.3 a	96.0 a			
LSD (P=.05)		24.38	4.87	4.19	22.75	22.75	7.76
Standard Deviation		13.92	2.78	2.39	12.99	12.99	4.43
CV		21.62	26.7	4.55	19.96	19.66	23.9
Grand Mean		64.38	10.42	52.63	65.08	66.08	18.54
Replicate F		3.814	32.846	2.246	3.383	2.307	28.212
Replicate Prob(F)		0.0476	0.0001	0.1426	0.0633	0.1361	0.0001
Treatment F		26.010	1.462	1036.950	27.653	26.103	2.114
Treatment Prob(F)		0.0001	0.2580	0.0001	0.0001	0.0001	0.1105

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Northeast Research & Extension Center

Description	Lambsquarters 07-18-08		Lambsquarters 07-18-08		Lambsquarters 08-06-08	
Rating Date	Control		Density		Control	
Rating Data Type	Percent		m2 RunCH		Percent	
Rating Unit	70 70		70 70		89 89	
Days After First/Last Applic.	70 DA-A		70 DA-A		89 DA-A	
Trt-Eval Interval	44 DP-1		44 DP-1		63 DP-1	
Plant-Eval Interval						
Trt No.	Treatment Name	Rate	Other Rate Unit	Other Rate Unit	Growth Stage	
1	Nontreated Check				EPP	0.0 e 18.3 a 0.0 d
2	KIH-485	2.1 oz/a	125 g a/ha		EPP	40.0 cd 15.0 a 60.0 c
3	KIH-485	2.8 oz/a	166 g a/ha		EPP	61.7 c 15.0 a 66.7 c
4	KIH-485	3.5 oz/a	209 g a/ha		EPP	68.0 bc 10.0 a 81.7 b
5	KIH-485	5.6 oz/a	332 g a/ha		EPP	93.0 ab 15.0 a 86.7 b
6	Dual II Magnum	1.33 pt/a	1423 g a/ha		EPP	25.0 de 18.3 a 0.0 d
7	Surpass	2.28 pt/a	2233 g a/ha		EPP	30.0 d 10.0 a 0.0 d
8	KIH-485	8.4 oz/a	500 g a/ha		EPP	99.0 a 15.0 a 97.3 a
LSD (P=.05)						29.31 12.38 7.44
Standard Deviation						16.73 7.07 4.25
CV						32.13 48.49 8.66
Grand Mean						52.08 14.58 49.04
Replicate F						3.400 0.333 1.554
Replicate Prob(F)						0.0626 0.7221 0.2457
Treatment F						12.703 0.607 295.936
Treatment Prob(F)						0.0001 0.7412 0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

<u>Additional Treatment Information</u>
<u>Rate Unit</u>
OZ/A = Ounces Product per Acre (Metric=ML-G/HA) O
PT/A = Pints Product per Acre (Metric=L/HA) P
<u>Other Rate Unit</u>
G A/HA = Grams Active Ingredient per Hectare