

Northeast Research & Extension Center

2009 Fall Application in 2008 of grass herbicides for corn and soybean

Trial ID: 09 Fall grass herb	Protocol ID: 09 Fall grass herb
Location: Concord, NE	Study Director: Stevan Knezevic
Project ID:	Investigator: Stevan Knezevic
	Sponsor Contact:

General Trial Information

Study Director: Stevan Knezevic
Investigator: Stevan Knezevic

Trial Status: K multi-year/final

Trial Location

City: Concord USA 49.376656 - 24.53833
State/Prov.: NE -124.715843 - -66.968887
Postal Code: 68728
Country: USA

Personnel

Study Director: Stevan Knezevic
Investigator: Stevan Knezevic

Crop Description

Crop 1: ZEAMX Zea mays Corn
 Variety: Pioneer 35F40 Description: RR LL
 BBCH Scale: BCOR Planting Date: 05-30-09
 Planting Method: SEEDED seeded Rate, Unit: 24503 s/a
 Depth, Unit: 2 in
 Row Spacing, Unit: 30 in

Crop 2: GLXMA Glycine max Soybean
 Variety: Asgrow AG 2839 Description: RR
 BBCH Scale: BSOY Planting Date: 05-30-09
 Planting Method: SEEDED seeded Rate, Unit: 156000 s/a
 Depth, Unit: 1.5 in

Pest Description

- Pest 1 Type: W Code: DESPI Descurainia pinnata
Common Name: Pinnate tansymustard
- Pest 2 Type: W Code: ERICA Conyza canadensis
Common Name: Canada horseweed
- Pest 3 Type: W Code: SETVI Setaria viridis
Common Name: Green foxtail
- Pest 4 Type: W Code: CHEAL Chenopodium album
Common Name: Common lambsquarters
- Pest 5 Type: W Code: ABUTH Abutilon theophrasti
Common Name: Velvetleaf
- Pest 6 Type: W Code: AMATU Amaranthus tuberculatus
Common Name: Tall waterhemp

Site and Design

Plot Width, Unit: 10 FT Site Type: FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 Tillage Type: NOTILL no-till
Replications: 3 Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description

% Sand: 16 % OM: 2.7 Texture: SIL silt loam
% Silt: 58 pH: 5.7

% Clay: 26 CEC: 17.2 Fert. Level: G good

Application Description

	A
Application Date:	11-26-08
Time of Day:	5 pm
Application Method:	spray
Application Timing:	FALL
Application Placement:	surface
Applied By:	js
Air Temperature, Unit:	44 F
% Relative Humidity:	60
Wind Velocity, Unit:	1 mph
Wind Direction:	N
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	34 F
Soil Moisture:	good
% Cloud Cover:	0

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR
Crop 2 Code, BBCH Scale:	GLXMA BSOY

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	DESPI W
Pest 2 Code, Type, Scale:	ERICA W
Pest 3 Code, Type, Scale:	SETVI W
Pest 4 Code, Type, Scale:	CHEAL W
Pest 5 Code, Type, Scale:	ABUTH W
Pest 6 Code, Type, Scale:	AMATU W

Application Equipment

	A
Appl. Equipment:	BACKPACK
Operating Pressure, Unit:	34 PSI
Nozzle Type:	TURBO TEE
Nozzle Size:	11002
Nozzle Spacing, Unit:	20 IN
Boom Length, Unit:	10 FT
Boom Height, Unit:	12 IN
Ground Speed, Unit:	2.5 MPH
Carrier:	WATER
Spray Volume, Unit:	20 GPA
Mix Size, Unit:	1.8 Liters
Propellant:	co2

Date	By	Notes
11-26-09	JS	No weeds emerged at application.

04-02-09

JS

Still no significant weed emergence, emailed to Kumia

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04-02-09 JS Still no significant weed emergence (did not do any ratings)

05-28-09 JS Weeds slowly emerged during May. Did have a substantial population that could be evaluated mid to late May.
(Did rating May 29, 2009)

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Description							Corn, field	Soybean	Tansy Mustard	Marestail	Green Foxtail	Green Foxtail
Rating Date							08-05-09	08-05-09	05-29-09	05-29-09	05-29-09	08-05-09
Rating Type							Injury	Injury	Control	Control	Control	Control
Rating Unit							Percent	Percent	Percent	Percent	Percent	Percent
Days After First/Last Applic.							252 252	252 252	184 184	184 184	184 184	252 252
Trt-Eval Interval							216 DA-A	216 DA-A	184 DA-A	184 DA-A	184 DA-A	252 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code	1	2	3	4	5	6
1	Nontreated Check						0.0 a	0.0 b	0.0 c	0.0 e	0.0 g	0.0 e
2	Parallel	1.67 pt/a			FALL	A	0.0 a	0.0 b	5.0 c	6.7 e	65.0 e	10.0 de
3	Parallel	2.0 pt/a			FALL	A	0.0 a	0.0 b	10.0 c	10.0 e	90.0 abc	15.0 de
4	Dual II Magnum	1.67 pt/a			FALL	A	0.0 a	0.0 b	10.0 c	8.3 e	75.0 d	8.3 e
5	Dual II Magnum	2 pt/a			FALL	A	0.0 a	0.0 b	10.0 c	10.0 e	85.0 c	26.7 cd
6	KIH-485	2.8 oz/a	166 g a/ha		FALL	A	0.0 a	0.0 b	43.3 b	26.7 cd	88.3 bc	26.7 cd
7	KIH-485	3.5 oz/a	209 g a/ha		FALL	A	0.0 a	0.0 b	61.7 b	61.7 b	93.3 abc	35.0 c
8	KIH-485	4.2 oz/a	250 g a/ha		FALL	A	0.0 a	0.0 b	61.7 b	56.7 b	95.0 ab	53.3 b
9	KIH-485	5.04 oz/a	300 g a/ha		FALL	A	0.0 a	0.0 b	63.3 b	38.3 c	99.0 a	85.0 a
10	Outlook	21 oz/a			FALL	A	0.0 a	0.0 b	10.0 c	13.3 de	50.0 f	6.7 e
11	Corvus	5.6 oz/a			FALL	A	0.0 a	18.3 a	99.0 a	99.0 a	99.0 a	83.3 a
LSD (P=.05)							0.00	5.35	20.69	16.55	9.64	17.60
Standard Deviation							0.00	3.14	11.95	9.72	5.66	10.34
CV							0.0	188.29	35.15	32.32	7.42	32.48
Grand Mean							0.0	1.67	34.0	30.06	76.33	31.82
Bartlett's X2							0.0	0.0	5.397	8.483	5.42	16.06
P(Bartlett's X2)							.	.	0.249	0.205	0.491	0.042*
Replicate F							0.000	1.000	2.912	3.860	3.002	7.085
Replicate Prob(F)							1.0000	0.3855	0.0834	0.0382	0.0724	0.0047
Treatment F							0.000	9.308	23.118	30.342	81.647	25.174
Treatment Prob(F)							1.0000	0.0001	0.0001	0.0001	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.

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Rating Unit

Percent = percent

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Description								Corn, field	Soybean	Tansy Mustard	Marestail	Green Foxtail	Green Foxtail
Rating Date								08-05-09	08-05-09	05-29-09	05-29-09	05-29-09	08-05-09
Rating Type								Injury	Injury	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Days After First/Last Applic.								252 252	252 252	184 184	184 184	184 184	252 252
Trt-Eval Interval								216 DA-A	216 DA-A	184 DA-A	184 DA-A	184 DA-A	252 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Plot	1	2	3	4	5	6
1	Nontreated Check						101	0.0	0.0	0.0	0.0	0.0	0.0
							209	0.0	0.0		0.0	0.0	0.0
							307	0.0	0.0	0.0	0.0	0.0	0.0
							Mean =	0.0	0.0	0.0	0.0	0.0	0.0
2	Parallel	1.67 pt/a			FALL	A	102	0.0	0.0	10.0	10.0	70.0	10.0
							204	0.0	0.0		10.0	50.0	10.0
							301	0.0	0.0	0.0	0.0	75.0	10.0
							Mean =	0.0	0.0	5.0	6.7	65.0	10.0
3	Parallel	2.0 pt/a			FALL	A	103	0.0	0.0	10.0	10.0	95.0	10.0
							211	0.0	0.0	10.0	10.0	90.0	25.0
							304	0.0	0.0		10.0	85.0	10.0
							Mean =	0.0	0.0	10.0	10.0	90.0	15.0
4	Dual II Magnum	1.67 pt/a			FALL	A	104	0.0	0.0	10.0	10.0	75.0	10.0
							210	0.0	0.0		5.0	80.0	5.0
							305	0.0	0.0	10.0	10.0	70.0	10.0
							Mean =	0.0	0.0	10.0	8.3	75.0	8.3
5	Dual II Magnum	2 pt/a			FALL	A	105	0.0	0.0	10.0	10.0	90.0	10.0
							202	0.0	0.0	10.0	10.0	80.0	50.0
							311	0.0	0.0	10.0	10.0	85.0	20.0
							Mean =	0.0	0.0	10.0	10.0	85.0	26.7
6	KIH-485	2.8 oz/a	166 g a/ha		FALL	A	106	0.0	0.0	40.0	10.0	95.0	10.0
							205	0.0	0.0	50.0	30.0	80.0	60.0
							308	0.0	0.0	40.0	40.0	90.0	10.0
							Mean =	0.0	0.0	43.3	26.7	88.3	26.7
7	KIH-485	3.5 oz/a	209 g a/ha		FALL	A	107	0.0	0.0	50.0	50.0	95.0	25.0
							201	0.0	0.0	85.0	85.0	95.0	50.0
							310	0.0	0.0	50.0	50.0	90.0	30.0
							Mean =	0.0	0.0	61.7	61.7	93.3	35.0
8	KIH-485	4.2 oz/a	250 g a/ha		FALL	A	108	0.0	0.0	60.0	40.0	95.0	50.0
							207	0.0	0.0	75.0	70.0	95.0	70.0
							309	0.0	0.0	50.0	60.0	95.0	40.0
							Mean =	0.0	0.0	61.7	56.7	95.0	53.3
9	KIH-485	5.04 oz/a	300 g a/ha		FALL	A	109	0.0	0.0	70.0	25.0	99.0	80.0
							203	0.0	0.0	90.0	60.0	99.0	90.0
							306	0.0	0.0	30.0	30.0	99.0	85.0
							Mean =	0.0	0.0	63.3	38.3	99.0	85.0

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Description									Corn, field		Soybean		Tansy Mustard		Marestail		Green Foxtail		Green Foxtail	
Rating Date									08-05-09		08-05-09		05-29-09		05-29-09		05-29-09		08-05-09	
Rating Type									Injury		Injury		Control		Control		Control		Control	
Rating Unit									Percent		Percent		Percent		Percent		Percent		Percent	
Days After First/Last Applic.									252 252		252 252		184 184		184 184		184 184		252 252	
Trt-Eval Interval									216 DA-A		216 DA-A		184 DA-A		184 DA-A		184 DA-A		252 DA-A	
Trt	Treatment	Rate	Other	Other	Growth	Appl														
No.	Name	Rate	Unit	Rate	Rate	Unit	Stage	Code	Plot	1	2	3	4	5	6					
10	Outlook	21	oz/a		FALL	A			110	0.0	0.0	10.0	10.0	60.0	5.0					
									208	0.0	0.0	10.0	20.0	40.0	5.0					
									303	0.0	0.0	10.0	10.0	50.0	10.0					
									Mean =	0.0	0.0	10.0	13.3	50.0	6.7					
11	Corvus	5.6	oz/a		FALL	A			111	0.0	15.0	99.0	99.0	99.0	80.0					
									206	0.0	10.0	99.0	99.0	99.0	90.0					
									302	0.0	30.0	99.0	99.0	99.0	80.0					
									Mean =	0.0	18.3	99.0	99.0	99.0	83.3					

Description								Lambsquarter	Lambsquarter	Smartweed	Velvetleaf	Velvetleaf	Waterhemp
Rating Date								05-29-09	08-05-09	05-29-09	05-29-09	08-05-09	08-05-09
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Days After First/Last Applic.								184 184	252 252	184 184	184 184	252 252	252 252
Trt-Eval Interval								184 DA-A	252 DA-A	184 DA-A	184 DA-A	252 DA-A	252 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	Plot	7	8	9	10	11	12
1	Nontreated Check						101	0.0	0.0	0.0		0.0	0.0
							209	0.0	0.0	0.0	0.0	0.0	0.0
							307	0.0	0.0	0.0	0.0	0.0	0.0
							Mean =	0.0	0.0	0.0	0.0	0.0	0.0
2	Parallel	1.67 pt/a			FALL	A	102	50.0	5.0	25.0		0.0	5.0
							204	20.0	10.0	20.0	5.0	10.0	10.0
							301	50.0	5.0		25.0	0.0	10.0
							Mean =	40.0	6.7	22.5	15.0	3.3	8.3
3	Parallel	2.0 pt/a			FALL	A	103	50.0	5.0	25.0	25.0	0.0	5.0
							211	50.0	5.0			10.0	10.0
							304	50.0	10.0		25.0	10.0	10.0
							Mean =	50.0	6.7	25.0	25.0	6.7	8.3
4	Dual II Magnum	1.67 pt/a			FALL	A	104	25.0	5.0		25.0	0.0	
							210	30.0	5.0	5.0	5.0	10.0	5.0
							305	25.0	10.0		10.0	0.0	10.0
							Mean =	26.7	6.7	5.0	13.3	3.3	7.5
5	Dual II Magnum	2 pt/a			FALL	A	105	50.0	5.0		25.0	0.0	5.0
							202	50.0	40.0	30.0	30.0	10.0	10.0
							311	40.0	10.0		20.0	0.0	10.0
							Mean =	46.7	18.3	30.0	25.0	3.3	8.3
6	KIH-485	2.8 oz/a	166 g a/ha		FALL	A	106	90.0	5.0	25.0	50.0	50.0	50.0
							205	90.0	10.0	60.0	90.0	70.0	70.0
							308	80.0	25.0	40.0	90.0	75.0	75.0
							Mean =	86.7	13.3	41.7	76.7	65.0	65.0
7	KIH-485	3.5 oz/a	209 g a/ha		FALL	A	107	90.0	50.0	75.0		60.0	50.0
							201	99.0	80.0			90.0	80.0
							310	90.0	80.0		90.0	80.0	80.0
							Mean =	93.0	70.0	75.0	90.0	76.7	70.0
8	KIH-485	4.2 oz/a	250 g a/ha		FALL	A	108	90.0	25.0	70.0	90.0	75.0	75.0
							207	95.0	50.0	80.0	80.0	70.0	70.0
							309	90.0	80.0		90.0	80.0	80.0
							Mean =	91.7	51.7	75.0	86.7	75.0	75.0
9	KIH-485	5.04 oz/a	300 g a/ha		FALL	A	109	99.0	80.0	90.0	90.0	80.0	90.0
							203	99.0	90.0	99.0	99.0	80.0	90.0
							306	99.0	90.0		80.0	90.0	90.0
							Mean =	99.0	86.7	94.5	89.7	83.3	90.0

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Description									Lambsquarter	Lambsquarter	Smartweed	Velvetleaf	Velvetleaf	Waterhemp
Rating Date									05-29-09	08-05-09	05-29-09	05-29-09	08-05-09	08-05-09
Rating Type									Control	Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
Days After First/Last Applic.									184 184	252 252	184 184	184 184	252 252	252 252
Trt-Eval Interval									184 DA-A	252 DA-A	184 DA-A	184 DA-A	252 DA-A	252 DA-A
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage	Appl Code	Plot		7	8	9	10	11	12
10	Outlook	21	oz/a		FALL	A	110		30.0	5.0			0.0	5.0
							208		25.0	40.0	25.0	25.0	10.0	30.0
							303		40.0	10.0			0.0	5.0
							Mean =		31.7	18.3	25.0	25.0	3.3	13.3
11	Corvus	5.6	oz/a		FALL	A	111		99.0	95.0		99.0	95.0	80.0
							206		99.0	90.0	99.0	99.0	90.0	90.0
							302		99.0	95.0	99.0	99.0	95.0	95.0
							Mean =		99.0	93.3	99.0	99.0	93.3	88.3

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Rating Unit

Percent = percent