

Northeast Research & Extension Center

2008 Evaluate the performance of Prequel on light to medium textured soils

Trial ID: 04 08 DUP USA-08-002 Protocol ID: 08 DUP USA-08-002
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: Dekalb DKC 54-20 Description: RR2 CB
BBCH Scale: BCOR Planting Date: 06-02-08
Planting Method: seeded Rate, Unit: 24503 s/a
Depth, Unit: 1.75 in
Row Spacing, Unit: 30 in

Pest Description

Pest 1 Type: W Code: CCHIN Cenchrus incertis M.A.Curtis
Common Name: Sandbur, field
Pest 2 Type: W Code: SETLU Setaria lutescens (Weig. Ex Stun)
Common Name: Foxtail, yellow
Pest 3 Type: W Code: SETVI Setaria viridis (L.) P.Beauv.
Common Name: Foxtail, green

Site and Design

Plot Width, Unit: 10 FT Site Type: FIELD
Plot Length, Unit: 30 FT Tillage Type: MINIMUM-TILL
Replications: 3 Study Design: Randomized Complete Block

Field Prep./Maintenance:
Field cultivated 6-1-08

Soil Description

% Sand: 20 % OM: 2.7 Texture: SILT LOAM
% Silt: 62 pH: 8.1
% Clay: 18 CEC: 20.9 Fert. Level: GOOD
Analyzed By:
Midwest Labs

Application Description

Table with 4 columns: Application Date, Time of Day, Application Method, Application Timing, Application Placement, Applied By, Air Temperature, % Relative Humidity, Wind Velocity, Wind Direction, Dew Presence, Soil Temperature, Soil Moisture, % Cloud Cover. Rows include application details for treatments A, B, and C.

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:		BBCH	BBCH
Stage Majority, Percent:		V2 90	V5 50
Stage Maximum, Percent:		V3 10	V6 50
Height, Unit:		4 in	12 in

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Disc., Scale:	CCHIN W	CCHIN W	CCHIN W
Height, Unit:		2 in	4 in
Height Minimum, Maximum:			3 6
Density, Unit:		20 m2	20 m2
Pest 2 Code, Disc., Scale:	SETLU W	SETLU W	SETLU W
Height, Unit:		1 in	3 in
Density, Unit:		1 m2	1 m2
Pest 3 Code, Disc., Scale:	SETVI W	SETVI W	SETVI W
Height, Unit:		1 in	3 in
Density, Unit:		1 m2	1 m2

Application Equipment

	A	B	C
Appl. Equipment:	backpack	BACKPACK	BACKPACK
Operating Pressure, Unit:	20 psi	40 PSI	40 PSI
Nozzle Type:	Turbo Tee	TURBO TEE	TURBO TEE
Nozzle Size:	11003	11002	11002
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Boom Length, Unit:	10 FT	10 FT	10 FT
Boom Height, Unit:	12 IN	12 IN	12 IN
Ground Speed, Unit:	2.7 MPH	2.7 MPH	2.7 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA
Mix Size, Unit:	1.8 Liters	1.8 Liters	1.8 Liters
Propellant:	co2	co2	co2

Trt No Treatment Application Comment

9 7-14-08 Crop injury rating due to competition with sandbur before late glyphosate application.

Date	By	Notes
06-03-08	js	Treatment 12 balance flexx is equal to 0.75 oz product of balance pro

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Trial ID: 04 08 DUP USA-08-002      Protocol ID: 08 DUP USA-08-002  
 Location: Concord, NE      Study Director: Stevan Knezevic  
    Investigator: Stevan Knezevic

Description	Corn 06-18-08 Injury Percent	Corn 07-01-08 Injury Percent	Corn 07-14-08 Injury Percent	Corn 08-06-08 Injury Percent	Sandbur 06-18-08 Control Percent	Sandbur 07-01-08 Control Percent	Sandbur 07-14-08 Control Percent	Sandbur 07-14-08 Density m2 RunCH	Sandbur 08-06-08 Control Percent	Yellow foxtail 06-18-08 Control Percent					
Rating Date	15 0	28 0	41 13	64 36	15 0	28 0	41 13	41 13	64 36	15 0					
Rating Data Type	15 DA-A	29 DP-1	42 DP-1	65 DP-1	16 DP-1	29 DP-1	42 DP-1	42 DP-1	65 DP-1	16 DP-1					
Rating Unit	16 DP-1	29 DP-1	42 DP-1	65 DP-1	16 DP-1	29 DP-1	42 DP-1	42 DP-1	65 DP-1	16 DP-1					
Days After First/Last Applic.															
Trt-Eval Interval															
Plant-Eval Interval															
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage										
1	Rimsulfuron	0.5 oz/a	0.125 oz/a	a/a	PRE	0.0 b	0.0 a	0.0 b	0.0 a	76.7 b	58.3 d	20.0 d	23.3 a	36.7 c	96.0 b
	Isoxaflutole	0.333 oz/a	0.25 oz/a	a/a	PRE										
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE										
2	Rimsulfuron	1 oz/a	0.25 oz/a	a/a	PRE	5.0 ab	0.0 a	0.0 b	0.0 a	91.0 a	78.3 bc	38.3 c	15.0 a	68.3 b	98.7 a
	Isoxaflutole	0.67 oz/a	0.5 oz/a	a/a	PRE										
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE										
3	Rimsulfuron	1.5 oz/a	0.375 oz/a	a/a	PRE	4.3 b	0.0 a	0.0 b	0.0 a	96.3 a	80.0 bc	65.0 b	21.7 a	75.0 b	99.0 a
	Isoxaflutole	1 oz/a	0.75 oz/a	a/a	PRE										
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE										
4	Rimsulfuron	0.5 oz/a	0.125 oz/a	a/a	PRE	0.3 b	0.0 a	0.0 b	0.0 a	78.3 b	71.7 cd	99.0 a	12.5 a	97.7 a	95.0 b
	Isoxaflutole	0.333 oz/a	0.25 oz/a	a/a	PRE										
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE										
	Roundup PowerMAX	22 oz/a			MPOST										
	Ammonium Sulfate	17 lb/100 gal			MPOST										
5	Rimsulfuron	1 oz/a	0.25 oz/a	a/a	PRE	2.3 b	0.0 a	0.0 b	0.0 a	96.3 a	90.7 ab	99.0 a	20.0 a	99.0 a	99.0 a
	Isoxaflutole	0.67 oz/a	0.5 oz/a	a/a	PRE										
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE										
	Roundup PowerMAX	22 oz/a			MPOST										
	Ammonium Sulfate	17 lb/100 gal			MPOST										
6	Rimsulfuron	1.5 oz/a	0.375 oz/a	a/a	PRE	10.7 a	0.0 a	0.0 b	0.0 a	97.7 a	83.3 bc	99.0 a	18.3 a	99.0 a	99.0 a
	Isoxaflutole	1 oz/a	0.75 oz/a	a/a	PRE										
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE										
	Roundup PowerMAX	22 oz/a			MPOST										
	Ammonium Sulfate	17 lb/100 gal			MPOST										
7	Roundup PowerMAX	22 oz/a			EPOST	0.0 b	0.0 a	0.0 b	0.0 a	0.0 c	97.7 a	90.0 a	18.3 a	93.3 a	0.0 c
	Ammonium Sulfate	17 lb/100 gal			EPOST										
8	Roundup PowerMAX	22 oz/a			EPOST	0.0 b	0.0 a	0.0 b	0.0 a	0.0 c	98.3 a	97.7 a	20.0 a	97.0 a	0.0 c
	Ammonium Sulfate	17 lb/100 gal			EPOST										
	Roundup PowerMAX	22 oz/a			MPOST										
	Ammonium Sulfate	17 lb/100 gal			MPOST										
9	Roundup PowerMAX	22 oz/a			MPOST	0.0 b	0.0 a	6.7 a	0.0 a	0.0 c	0.0 e	99.0 a	20.0 a	97.0 a	0.0 c
	Ammonium Sulfate	17 lb/100 gal			MPOST										
10	Guardsman Max Lite	2.5 pt/a			PRE	0.0 b	0.0 a	0.0 b	0.0 a	94.0 a	82.0 bc	99.0 a	20.0 a	99.0 a	97.7 a
	Roundup PowerMAX	22 oz/a			MPOST										
	Ammonium Sulfate	17 lb/100 gal			MPOST										
11	Nontreated Check					0.0 b	0.0 a	0.0 b	0.0 a	0.0 c	0.0 e	0.0 e	22.5 a	0.0 d	0.0 c
12	Rimsulfuron	1.5 oz/a	0.375 oz/a	a/a	PRE	0.0 b	0.0 a	0.0 b	0.0 a	92.5 a	75.0 c	67.5 b	25.0 a	70.0 b	99.0 a
	Balance Flexx (1/2 rate)	1.5 oz/a	0.75 oz/a	a/a	PRE										
LSD (P=.05)		6.30	0.00			2.98	0.00	9.63	13.49	11.35	7.08	12.63	1.42		
Standard Deviation		3.71	0.00			1.75	0.00	5.67	7.95	6.66	4.07	7.42	0.83		
CV		196.49	0.0			314.64	0.0	9.41	11.69	9.15	20.64	9.55	1.28		
Grand Mean		1.89	0.0			0.56	0.0	60.24	67.94	72.79	19.72	77.67	65.28		
Replicate F		0.196	0.000			0.909	0.000	0.447	4.365	1.146	1.299	0.661	1.956		
Replicate Prob(F)		0.8238	1.0000			0.4189	1.0000	0.6452	0.0260	0.3378	0.3018	0.5274	0.1663		
Treatment F		2.382	0.000			3.636	0.000	188.730	53.573	84.216	2.156	52.683	10028.681		
Treatment Prob(F)		0.0420	1.0000			0.0060	1.0000	0.0001	0.0001	0.0001	0.0836	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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Description						Yellow foxtail	Yellow foxtail	Yellow foxtail	Yellow foxtail	Green foxtail	Green foxtail	Green foxtail
Rating Date						07-01-08	07-14-08	07-14-08	08-06-08	06-18-08	07-01-08	07-14-08
Rating Data Type						Control	Control	Density	Control	Control	Control	Control
Rating Unit						Percent	Percent	m2 RunCH	Percent	Percent	Percent	Percent
Days After First/Last Applic.						28 0	41 13	41 13	64 36	15 0	28 0	41 13
Trt-Eval Interval												
Plant-Eval Interval						29 DP-1	42 DP-1	42 DP-1	65 DP-1	16 DP-1	29 DP-1	42 DP-1
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage							
1	Rimsulfuron	0.5 oz/a	0.125 oz/a	a/a	PRE	73.3 d	15.0 d	1.7 bc	56.7 c	96.0 b	73.3 d	15.0 d
	Isoxaflutole	0.333 oz/a	0.25 oz/a	a/a	PRE							
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE							
2	Rimsulfuron	1 oz/a	0.25 oz/a	a/a	PRE	91.7 abc	43.3 c	2.5 bc	81.7 b	98.7 a	91.7 abc	43.3 c
	Isoxaflutole	0.67 oz/a	0.5 oz/a	a/a	PRE							
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE							
3	Rimsulfuron	1.5 oz/a	0.375 oz/a	a/a	PRE	89.7 bc	63.3 b	2.0 bc	90.0 ab	99.0 a	89.7 bc	63.3 b
	Isoxaflutole	1 oz/a	0.75 oz/a	a/a	PRE							
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE							
4	Rimsulfuron	0.5 oz/a	0.125 oz/a	a/a	PRE	83.3 c	99.0 a	3.5 bc	97.7 a	95.0 b	83.3 c	99.0 a
	Isoxaflutole	0.333 oz/a	0.25 oz/a	a/a	PRE							
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE							
	Roundup PowerMAX	22 oz/a			MPOST							
	Ammonium Sulfate	17 lb/100 gal			MPOST							
5	Rimsulfuron	1 oz/a	0.25 oz/a	a/a	PRE	97.7 ab	99.0 a	2.3 bc	99.0 a	99.0 a	97.7 ab	99.0 a
	Isoxaflutole	0.67 oz/a	0.5 oz/a	a/a	PRE							
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE							
	Roundup PowerMAX	22 oz/a			MPOST							
	Ammonium Sulfate	17 lb/100 gal			MPOST							
6	Rimsulfuron	1.5 oz/a	0.375 oz/a	a/a	PRE	92.7 ab	99.0 a	1.7 bc	99.0 a	99.0 a	92.7 ab	99.0 a
	Isoxaflutole	1 oz/a	0.75 oz/a	a/a	PRE							
	Atrazine	17.8 oz/a	16 oz/a	a/a	PRE							
	Roundup PowerMAX	22 oz/a			MPOST							
	Ammonium Sulfate	17 lb/100 gal			MPOST							
7	Roundup PowerMAX	22 oz/a			EPOST	99.0 a	86.7 a	4.7 b	90.0 ab	0.0 c	99.0 a	86.7 a
	Ammonium Sulfate	17 lb/100 gal			EPOST							
8	Roundup PowerMAX	22 oz/a			EPOST	99.0 a	97.7 a	2.0 bc	97.3 a	0.0 c	99.0 a	97.7 a
	Ammonium Sulfate	17 lb/100 gal			EPOST							
	Roundup PowerMAX	22 oz/a			MPOST							
	Ammonium Sulfate	17 lb/100 gal			MPOST							
9	Roundup PowerMAX	22 oz/a			MPOST	0.0 e	99.0 a	2.0 bc	97.7 a	0.0 c	0.0 e	99.0 a
	Ammonium Sulfate	17 lb/100 gal			MPOST							
10	Guardsman Max Lite	2.5 pt/a			PRE	91.3 abc	99.0 a	3.5 bc	99.0 a	97.7 a	91.3 abc	99.0 a
	Roundup PowerMAX	22 oz/a			MPOST							
	Ammonium Sulfate	17 lb/100 gal			MPOST							
11	Nontreated Check					0.0 e	0.0 d	1.5 c	0.0 d	0.0 c	0.0 e	0.0 d
12	Rimsulfuron	1.5 oz/a	0.375 oz/a	a/a	PRE	92.5 ab	90.0 a	10.0 a	87.5 ab	99.0 a	92.5 ab	90.0 a
	Balance Flexx (1/2 rate)	1.5 oz/a	0.75 oz/a	a/a	PRE							
LSD (P=.05)						9.09	16.21	3.12	12.13	1.42	9.09	16.21
Standard Deviation						5.35	9.52	1.79	7.12	0.83	5.35	9.52
CV						7.06	12.82	57.59	8.58	1.28	7.06	12.82
Grand Mean						75.85	74.25	3.11	82.96	65.28	75.85	74.25
Replicate F						4.246	1.378	1.015	0.513	1.956	4.246	1.378
Replicate Prob(F)						0.0283	0.2751	0.3861	0.6062	0.1663	0.0283	0.2751
Treatment F						136.634	42.500	5.236	48.994	10028.681	136.634	42.500
Treatment Prob(F)						0.0001	0.0001	0.0019	0.0001	0.0001	0.0001	0.0001

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Description						Green foxtail	Green foxtail
Rating Date						07-14-08	08-06-08
Rating Data Type						Density	Control
Rating Unit						m <sup>2</sup> RunCH	Percent
Days After First/Last Applic.						41 13	64 36
Trt-Eval Interval							
Plant-Eval Interval						42 DP-1	65 DP-1
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	
1	Rimsulfuron	0.5	oz/a	0.125	oz a/a	PRE	1.7 bc
	Isoxaflutole	0.333	oz/a	0.25	oz a/a	PRE	56.7 c
	Atrazine	17.8	oz/a	16	oz a/a	PRE	
2	Rimsulfuron	1	oz/a	0.25	oz a/a	PRE	2.5 bc
	Isoxaflutole	0.67	oz/a	0.5	oz a/a	PRE	81.7 b
	Atrazine	17.8	oz/a	16	oz a/a	PRE	
3	Rimsulfuron	1.5	oz/a	0.375	oz a/a	PRE	2.0 bc
	Isoxaflutole	1	oz/a	0.75	oz a/a	PRE	90.0 ab
	Atrazine	17.8	oz/a	16	oz a/a	PRE	
4	Rimsulfuron	0.5	oz/a	0.125	oz a/a	PRE	3.5 bc
	Isoxaflutole	0.333	oz/a	0.25	oz a/a	PRE	97.7 a
	Atrazine	17.8	oz/a	16	oz a/a	PRE	
	Roundup PowerMAX	22	oz/a			MPOST	
	Ammonium Sulfate	17	lb/100 gal			MPOST	
5	Rimsulfuron	1	oz/a	0.25	oz a/a	PRE	2.3 bc
	Isoxaflutole	0.67	oz/a	0.5	oz a/a	PRE	99.0 a
	Atrazine	17.8	oz/a	16	oz a/a	PRE	
	Roundup PowerMAX	22	oz/a			MPOST	
	Ammonium Sulfate	17	lb/100 gal			MPOST	
6	Rimsulfuron	1.5	oz/a	0.375	oz a/a	PRE	1.7 bc
	Isoxaflutole	1	oz/a	0.75	oz a/a	PRE	99.0 a
	Atrazine	17.8	oz/a	16	oz a/a	PRE	
	Roundup PowerMAX	22	oz/a			MPOST	
	Ammonium Sulfate	17	lb/100 gal			MPOST	
7	Roundup PowerMAX	22	oz/a			EPOST	4.7 b
	Ammonium Sulfate	17	lb/100 gal			EPOST	90.0 ab
8	Roundup PowerMAX	22	oz/a			EPOST	2.0 bc
	Ammonium Sulfate	17	lb/100 gal			EPOST	97.3 a
	Roundup PowerMAX	22	oz/a			MPOST	
	Ammonium Sulfate	17	lb/100 gal			MPOST	
9	Roundup PowerMAX	22	oz/a			MPOST	2.0 bc
	Ammonium Sulfate	17	lb/100 gal			MPOST	97.7 a
10	Guardsman Max Lite	2.5	pt/a			PRE	3.5 bc
	Roundup PowerMAX	22	oz/a			MPOST	99.0 a
	Ammonium Sulfate	17	lb/100 gal			MPOST	
11	Nontreated Check						1.5 c
							0.0 d
12	Rimsulfuron	1.5	oz/a	0.375	oz a/a	PRE	10.0 a
	Balance Flexx (1/2 rate)	1.5	oz/a	0.75	oz a/a	PRE	87.5 ab
LSD (P=.05)						3.12	12.13
Standard Deviation						1.79	7.12
CV						57.59	8.58
Grand Mean						3.11	82.96
Replicate F						1.015	0.513
Replicate Prob(F)						0.3861	0.6062
Treatment F						5.236	48.994
Treatment Prob(F)						0.0019	0.0001

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<u>Additional Treatment Information</u>	
<u>Treatment Name</u>	Ammonium Sulfate =
<u>Rate Unit</u>	
	OZ/A = Ounces Product per Acre (Metric=ML-G/HA)[O
	LB/100 GAL = Pounds Dry Product per 100 Gallons Mix (Metric=KG/100 L)]
	PT/A = Pints Product per Acre (Metric=L/HA)]P
<u>Other Rate Unit</u>	
	OZ A/A = Ounces Active Ingredient per Acre