

2008 Surestart PRE RR-Corn Efficacy Crop Tolerance

Trial ID: 18 08 DOW Pre Corn                      Protocol ID: 08 DOW Pre Corn  
 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: 11-26-08    Harvest Equipment: Almaco 40  
 Harvested Width, Unit: 5 ft    Harvested Length, Unit: 27 ft  
 % Standard Moisture: 15.5

Pest Description

Pest 1 Type: W Code: SETVI Setaria viridis (L.) P.Beauv.  
 Common Name: Foxtail, green  
 Pest 2 Type: W Code: ABUTH Abutilon theophrasti Medik.  
 Common Name: Velvetleaf  
 Pest 3 Type: W Code: AMATU Amaranthus tuberculatos (Moq.) J  
 Common Name: Waterhemp, tall

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

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix
1.	05-18-08	glyphosate	5.5	lbai/ga	SL	32	oz/A	n
2.	06-04-08	glyphosate	5.4	lbai/ga	SL	32	oz/A	n

Soil Description

Description Name: 08CRNHRBW  
 % Sand: 12                      % OM: 3.4                      Texture: SILT LOAM  
 % Silt: 62                      pH: 6.7                      Soil Name: Baltic  
 % Clay: 26                      CEC: 20.4                      Fert. Level: excellent

Application Description

	A	B	C
Application Date:	06-04-08	06-30-08	07-11-08
Time of Day:	5:00 pm	2:00 pm	9:00 am
Application Method:	spray	spray	spray
Application Timing:	PRE	POST	6WA
Application Placement:	surface	foliar	foliar
Applied By:		js	js
Air Temperature, Unit:	75 F	86 F	78 F
% Relative Humidity:	70	36	60
Wind Velocity, Unit:	1 mph	4 mph	4 mph
Wind Direction:	var	S	S
Dew Presence (Y/N):	n	n	n
Soil Temperature, Unit:	68 F	82 F	80 F
Soil Moisture:	EXCESSIVE	ADEQUATE	ADEQUATE
% Cloud Cover:	100	10	60
Next Rain Occurred On:	06-05-08		

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:		V4 75	V7 50
Stage Maximum, Percent:		V5 25	V8 50
Height, Unit:		10 in	24 in

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Disc., Scale:	SETVI W	SETVI W	SETVI W
Height, Unit:		3.5 in	3.5 in
Height Minimum, Maximum:		3 4	3 4
Density, Unit:			5 m2
Pest 2 Code, Disc., Scale:	ABUTH W	ABUTH W	ABUTH W
Height, Unit:		5 in	5 in
Height Minimum, Maximum:		4 6	4 6
Density, Unit:		5 m2	5 m2
Pest 3 Code, Disc., Scale:	AMATU W	AMATU W	AMATU W
Height, Unit:		5 in	5 in
Height Minimum, Maximum:		4 6	4 6
Density, Unit:		5 m2	5 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

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 Location: Concord, NE                              Study Director: Stevan Knezevic  
    Investigator: Stevan Knezevic

Description						Corn, field	Corn, field	Green Foxtail	Green Foxtail	Green Foxtail	Green Foxtail	Velvetleaf	Velvetleaf	Velvetleaf
Rating Date						11-26-08	11-26-08	07-03-08	07-18-08	07-18-08	08-06-08	07-03-08	07-18-08	07-18-08
Rating Data Type						Yield	Moisture	Control	Control	Density	Control	Control	Control	Density
Rating Unit						Bu/A15.5	%	Percent	Percent	m2 RunCH	Percent	Percent	Percent	m2 RunCH
Days After First/Last Applic.						175 138	175 138	29 3	44 7	44 7	63 26	29 3	44 7	44 7
Plant-Eval Interval						175 DP-1	175 DP-1	29 DP-1	44 DP-1	44 DP-1	63 DP-1	29 DP-1	44 DP-1	44 DP-1
Trt No.	Treatment Name	Rate	Other Rate	Other Rate Unit	Growth Stage									
1	Surestart	1.75 pt/a	1040 g ae/ha		PRE	203.5 a	14.1 a	90.0 a	91.7 ab	26.7 a	99.0 a	88.3 a	86.7 cd	16.7 a
	Durango DMA	24 oz/a			6 WA V1									
	AMS	2 % w/w			6 WA V1									
2	Harness Extra 5.6L	2.6 pt/a	2040 g ae/ha		PRE	195.4 a	14.5 a	90.0 a	93.3 ab	21.7 a	99.0 a	66.7 c	88.3 bcd	8.3 a
	Durango DMA	24 oz/a			6 WA V1									
	AMS	2 % w/w			6 WA V1									
3	Bicep II Magnum	2.1 pt/a	1620 g ae/ha		PRE	202.3 a	14.3 a	93.0 a	91.7 ab	18.3 a	99.0 a	78.3 b	88.3 bcd	35.0 a
	Durango DMA	24 oz/a			6 WA V1									
	AMS	2 % w/w			6 WA V1									
4	Guardsman Max	1.9 pt/a	1330 g a/ha		PRE	199.9 a	14.2 a	93.0 a	94.7 ab	30.0 a	99.0 a	61.7 c	85.0 d	20.0 a
	Durango DMA	24 oz/a			6 WA V1									
	AMS	2 % w/w			6 WA V1									
5	Lumax	2.5 pt/a	1380 g a/ha		PRE	226.0 a	14.2 a	88.3 a	86.7 b	23.3 a	99.0 a	97.3 a	94.7 ab	8.3 a
	Durango DMA	24 oz/a			6 WA V1									
	AMS	2 % w/w			6 WA V1									
6	Surestart	3 pt/a	1790 g ae/ha		PRE	193.2 a	14.3 a	93.3 a	90.0 ab	26.7 a	99.0 a	95.0 a	93.0 abc	13.3 a
	Durango DMA	24 oz/a			6 WA V1									
	AMS	2 % w/w			6 WA V1									
7	Nontreated Check					129.1 b	14.4 a	0.0 b	0.0 c	30.0 a	0.0 b	0.0 d	0.0 e	26.7 a
8	Surestart	1.75 pt/a	1040 g ae/ha		V3-4 2"W	190.6 a	14.5 a		97.7 a	30.0 a	99.0 a		97.7 a	16.7 a
	Durango DMA	24 oz/a			V3-4 2"W									
	AMS	2 % w/w			V3-4 2"W									
LSD (P=.05)						37.28	0.54	7.95	8.88	16.84	0.00	9.82	6.41	20.34
Standard Deviation						21.28	0.31	4.47	5.07	9.46	0.00	5.52	3.66	11.43
CV						11.06	2.16	5.71	6.28	36.64	0.0	7.93	4.62	63.08
Grand Mean						192.5	14.31	78.24	80.71	25.83	86.63	69.62	79.21	18.13
Replicate F						0.358	0.504	0.045	0.162	0.326	0.000	3.247	0.676	1.458
Replicate Prob(F)						0.7054	0.6144	0.9558	0.8519	0.7283	1.0000	0.0746	0.5245	0.2711
Treatment F						5.133	0.690	179.443	125.410	0.638	0.000	110.918	233.897	1.902
Treatment Prob(F)						0.0046	0.6799	0.0001	0.0001	0.7177	1.0000	0.0001	0.0001	0.1565

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					Velvetleaf	Waterhemp	Waterhemp	Waterhemp	Waterhemp	
Rating Date					08-06-08	07-03-08	07-18-08	07-18-08	08-06-08	
Rating Data Type					Control	Control	Control	Density	Control	
Rating Unit					Percent	Percent	Percent	m2 RunCH	Percent	
Days After First/Last Applic.					63 26	29 3	44 7	44 7	63 26	
Plant-Eval Interval					63 DP-1	29 DP-1	44 DP-1	44 DP-1	63 DP-1	
Trt No.	Treatment Name	Rate Rate Unit	Other Rate	Other Rate Unit	Growth Stage					
1	Surestart	1.75 pt/a	1040 g ae/ha		PRE	97.7 ab	96.3 ab	96.3 a	15.0 a	98.7 a
	Durango DMA	24 oz/a			6 WA V1					
	AMS	2 % w/w			6 WA V1					
2	Harness Extra 5.6L	2.6 pt/a	2040 g ae/ha		PRE	94.3 b	96.3 ab	97.3 a	23.3 a	99.0 a
	Durango DMA	24 oz/a			6 WA V1					
	AMS	2 % w/w			6 WA V1					
3	Bicep II Magnum	2.1 pt/a	1620 g ae/ha		PRE	96.3 ab	73.3 c	96.3 a	20.0 a	99.0 a
	Durango DMA	24 oz/a			6 WA V1					
	AMS	2 % w/w			6 WA V1					
4	Guardsman Max	1.9 pt/a	1330 g a/ha		PRE	96.0 ab	90.0 b	96.3 a	23.3 a	98.7 a
	Durango DMA	24 oz/a			6 WA V1					
	AMS	2 % w/w			6 WA V1					
5	Lumax	2.5 pt/a	1380 g a/ha		PRE	99.0 a	98.3 a	96.3 a	16.7 a	99.0 a
	Durango DMA	24 oz/a			6 WA V1					
	AMS	2 % w/w			6 WA V1					
6	Surestart	3 pt/a	1790 g ae/ha		PRE	96.3 ab	98.7 a	99.0 a	11.7 a	98.7 a
	Durango DMA	24 oz/a			6 WA V1					
	AMS	2 % w/w			6 WA V1					
7	Nontreated Check					0.0 c	0.0 d	0.0 b	30.0 a	0.0 b
8	Surestart	1.75 pt/a	1040 g ae/ha		V3-4 2"W	97.0 ab		96.0 a	26.7 a	98.7 a
	Durango DMA	24 oz/a			V3-4 2"W					
	AMS	2 % w/w			V3-4 2"W					
LSD (P=.05)					4.27	7.17	4.78	11.98	0.68	
Standard Deviation					2.44	4.03	2.73	6.73	0.39	
CV					2.88	5.1	3.22	32.31	0.45	
Grand Mean					84.58	79.0	84.71	20.83	86.46	
Replicate F					0.976	1.435	0.073	1.540	1.960	
Replicate Prob(F)					0.4011	0.2763	0.9302	0.2539	0.1776	
Treatment F					591.386	238.924	472.357	2.522	24604.122	
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0763	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.

<b>Additional Treatment Information</b>
<b>Rate Unit</b>
PT/A = Pints Product per Acre (Metric=L/HA) P
OZ/A = Ounces Product per Acre (Metric=ML-G/HA) O
% W/W = Percent, Weight Product per Weight Mix Basis (Metric=same) O
<b>Other Rate Unit</b>
G AE/HA = Grams Acid Equivalent per Hectare
G A/HA = Grams Active Ingredient per Hectare