

Northeast Research & Extension Center

2008 Corn Herbicide Programs Cadet and Resource treatments

Trial ID: 21 08 Corn Herb Study Protocol ID: 08 Corn Herb Study
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 Description: 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

Table with 9 columns: No., Date, Maintenance Treatment Name, Form Conc, Form Unit, Form Type, Rate, Rate Unit, Tank Mix. Contains 2 rows of maintenance data.

Soil Description

Description Name: 06 Corn Herb
% 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:	06-18-08	07-01-08	07-11-08
Time of Day:	11:00 am	10:00 am	9:00 am
Application Method:	spray	spray	spray
Application Timing:	EPOST	POST	LPOST
Application Placement:	foliar	foliar	foliar
Applied By:	js	js	js
Air Temperature, Unit:	81 F	78 F	78 F
% Relative Humidity:	40	60	60
Wind Velocity, Unit:	2 mph	2.5 mph	4 mph
Wind Direction:	S	S	S
Dew Presence (Y/N):	n	n	n
Soil Temperature, Unit:	72 F	65 F	80 F
Soil Moisture:	ADEQUATE	ADEQUATE	ADEQUATE
% Cloud Cover:	50	10	60

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	BBCH	BBCH	BBCH
Stage Majority, Percent:	V2 90	V5 50	V7 50
Stage Maximum, Percent:	V3 10	V6 50	V8 50
Height, Unit:	6 in	12 in	24 in

Pest Stage At Each Application

	A		B		C	
Pest 1 Code, Disc., Scale:	SETVI	W	SETVI	W	SETVI	W
Height, Unit:	1.5	in	7	in	3.5	in
Height Minimum, Maximum:	1	2	6	8	3	4
Density, Unit:	20	m2	10	m2	5	m2
Pest 2 Code, Disc., Scale:	ABUTH	W	ABUTH	W	ABUTH	W
Height, Unit:	1.5	in	7	in	5	in
Height Minimum, Maximum:	1	2	6	8	4	6
Density, Unit:	10	m2	5	m2	5	m2
Pest 3 Code, Disc., Scale:	AMATU	W	AMATU	W	AMATU	W
Height, Unit:	1	in	7	in	5	in
Height Minimum, Maximum:			6	8	4	6
Density, Unit:	1	m2	1	m2	5	m2

Application Equipment

	A	B	C
Appl. Equipment:	BACKPACK	BACKPACK	BACKPACK
Operating Pressure, Unit:	40 PSI	40 PSI	40 PSI
Nozzle Type:	TURBO TEE	TURBO TEE	TURBO TEE
Nozzle Size:	11002	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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2008 Corn Herbicide Programs Cadet and Resource treatments

Trial ID: 21 08 Corn Herb Study Protocol ID: 08 Corn Herb Study
 Location: Concord, NE Study Director: Stevan Knezevic
 Investigator: Stevan Knezevic

Description	Corn, field	Corn, field	Corn	Corn	Corn	Green Foxtail	Green Foxtail	Green Foxtail	Green Foxtail	Velvetleaf				
Rating Date	11-26-08	11-26-08	07-03-08	07-08-08	07-18-08	07-03-08	07-08-08	07-18-08	07-18-08	07-03-08				
Rating Data Type	Yield	Moisture	Necrosis	Necrosis	Necrosis	Control	Control	Control	Density	Control				
Rating Unit	Bu/A15.5	%	Percent	Percent	Percent	Percent	Percent	Percent	m2 RunCH	Percent				
Days After First/Last Applic.	161 138	161 138	15 2	20 7	30 7	15 2	20 7	30 7	30 7	15 2				
Trt-Eval Interval			2 DA-B	7 DA-B	17 DA-B	2 DA-B	7 DA-B	17 DA-B	17 DA-B	2 DA-B				
Plant-Eval Interval	175 DP-1	175 DP-1	29 DP-1	34 DP-1	44 DP-1	29 DP-1	34 DP-1	44 DP-1	44 DP-1	29 DP-1				
Trt No.	Treatment Name	Rate	Unit	Growth Stage										
1	Cadet COC	0.4	oz/a	POST	173.4 a	14.4 a	0.0 b	0.0 a	0.0 a	0.0 c	0.0 c	0.0 b	15.0 a	94.7 ab
		1	% v/v	POST										
2	Cadet COC	0.6	oz/a	POST	181.5 a	14.8 a	0.3 b	0.0 a	0.0 a	0.0 c	0.0 c	0.0 b	16.7 a	97.7 a
		1	% v/v	POST										
3	Resource COC	4	oz/a	POST	166.5 a	14.5 a	2.3 a	0.0 a	0.0 a	0.0 c	0.0 c	0.0 b	13.3 a	91.7 ab
		1	% v/v	POST										
4	Cadet Credit Extra Ammonium Sulfate	0.2	oz/a	POST	194.4 a	14.5 a	0.0 b	0.0 a	0.0 a	3.3 bc	93.7 ab	99.0 a	6.7 a	78.3 c
		24	oz/a	POST										
		17	lb/100 gal	POST										
5	Cadet Credit Extra Ammonium Sulfate	0.4	oz/a	POST	201.6 a	14.4 a	0.3 b	0.0 a	0.0 a	0.0 c	93.0 ab	99.0 a	6.7 a	87.5 b
		24	oz/a	POST										
		17	lb/100 gal	POST										
6	Resource Credit Extra Ammonium Sulfate	3	oz/a	POST	196.4 a	14.2 a	0.0 b	0.0 a	0.0 a	6.7 b	96.0 a	99.0 a	8.3 a	88.3 b
		24	oz/a	POST										
		17	lb/100 gal	POST										
7	Credit Extra Ammonium Sulfate	24	oz/a	POST	197.9 a	14.1 a	0.0 b	0.0 a	0.0 a	0.0 c	89.0 b	99.0 a	10.0 a	3.3 d
		17	lb/100 gal	POST										
8	Resource Credit Extra Ammonium Sulfate	2	oz/a	EPOST	194.8 a	13.8 a	0.0 b	0.0 a	0.0 a	99.0 a	91.7 ab	99.0 a	10.0 a	97.7 a
		24	oz/a	EPOST										
		17	lb/100 gal	EPOST										
	Resource Credit Extra Ammonium Sulfate	2	oz/a	LPOST										
		24	oz/a	LPOST										
		17	lb/100 gal	LPOST										
LSD (P=.05)		23.60			0.68	0.66	0.00	0.00	0.00	5.40	4.85	0.00	12.55	9.02
Standard Deviation		13.48			0.39	0.38	0.00	0.00	0.00	3.09	2.77	0.00	7.17	5.12
CV		7.16			2.69	100.79	0.0	0.0	0.0	22.65	4.78	0.0	66.14	6.4
Grand Mean		188.31			14.34	0.38	0.0	0.0	0.0	13.63	57.92	61.88	10.83	79.9
Replicate F		0.002			0.976	0.000	0.000	0.000	0.000	0.000	0.267	0.000	2.090	0.626
Replicate Prob(F)		0.9978			0.4010	1.0000	1.0000	1.0000	1.0000	1.0000	0.7698	1.0000	0.1606	0.5502
Treatment F		2.727			1.709	13.625	0.000	0.000	0.000	376.714	902.238	0.000	0.835	114.271
Treatment Prob(F)		0.0522			0.1862	0.0001	1.0000	1.0000	1.0000	0.0001	0.0001	1.0000	0.5763	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	Velvetleaf 07-08-08	Velvetleaf 07-18-08	Velvetleaf 07-18-08	Waterhemp 07-03-08	Waterhemp 07-08-08	Waterhemp 07-18-08	Waterhemp 07-18-08	Common Lambsquarter 07-18-08				
Rating Date	Control	Control	Density	Control	Control	Control	Density	Control				
Rating Data Type	Percent	Percent	m2 RunCH	Percent	Percent	Percent	m2 RunCH	Percent				
Rating Unit	20 7	30 7	30 7	15 2	20 7	30 7	30 7	30 7				
Days After First/Last Applic.	7 DA-B	17 DA-B	17 DA-B	2 DA-B	7 DA-B	17 DA-B	17 DA-B	17 DA-B				
Trt-Eval Interval	34 DP-1	44 DP-1	44 DP-1	29 DP-1	34 DP-1	44 DP-1	44 DP-1	44 DP-1				
Plant-Eval Interval												
Trt No.	Treatment Name	Rate	Unit	Growth Stage								
1	Cadet	0.4	oz/a	POST	99.0 a	99.0 a	5.0 a	86.7 b	71.7 b	43.3 d	9.3 a	40.0 c
	COC	1	% v/v	POST								
2	Cadet	0.6	oz/a	POST	99.0 a	99.0 a	4.0 a	90.0 b	88.3 a	71.7 b	15.0 a	70.0 b
	COC	1	% v/v	POST								
3	Resource	4	oz/a	POST	97.7 a	99.0 a	4.7 a	86.0 b	71.7 b	56.7 c	8.7 a	31.7 c
	COC	1	% v/v	POST								
4	Cadet	0.2	oz/a	POST	96.3 ab	99.0 a	2.7 a	76.7 c	97.0 a	94.7 a	10.0 a	93.0 a
	Credit Extra	24	oz/a	POST								
	Ammonium Sulfate	17	lb/100 gal	POST								
5	Cadet	0.4	oz/a	POST	98.7 a	99.0 a	2.3 a	86.7 b	93.0 a	93.0 a	7.0 a	89.7 a
	Credit Extra	24	oz/a	POST								
	Ammonium Sulfate	17	lb/100 gal	POST								
6	Resource	3	oz/a	POST	94.0 b	98.7 a	8.3 a	85.0 bc	97.0 a	94.7 a	3.7 a	94.7 a
	Credit Extra	24	oz/a	POST								
	Ammonium Sulfate	17	lb/100 gal	POST								
7	Credit Extra	24	oz/a	POST	95.7 ab	99.0 a	6.7 a	0.0 d	96.7 a	99.0 a	3.7 a	96.0 a
	Ammonium Sulfate	17	lb/100 gal	POST								
8	Resource	2	oz/a	EPOST	88.3 c	99.0 a	8.0 a	99.0 a	95.0 a	99.0 a	5.0 a	99.0 a
	Credit Extra	24	oz/a	EPOST								
	Ammonium Sulfate	17	lb/100 gal	EPOST								
	Resource	2	oz/a	LPOST								
	Credit Extra	24	oz/a	LPOST								
	Ammonium Sulfate	17	lb/100 gal	LPOST								
LSD (P=.05)					3.44	0.36	7.24	8.63	10.26	12.10	12.07	12.89
Standard Deviation					1.96	0.20	4.13	4.93	5.86	6.91	6.89	7.36
CV					2.04	0.21	79.33	6.47	6.6	8.48	88.46	9.59
Grand Mean					96.08	98.96	5.21	76.25	88.79	81.5	7.79	76.75
Replicate F					0.691	1.000	2.060	0.324	0.854	0.702	0.227	1.733
Replicate Prob(F)					0.5172	0.3927	0.1644	0.7285	0.4467	0.5123	0.7997	0.2125
Treatment F					10.093	1.000	0.909	121.843	10.495	29.281	0.924	39.930
Treatment Prob(F)					0.0002	0.4706	0.5270	0.0001	0.0001	0.0001	0.5173	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.

Description	Common Lambsquarter			
Rating Date	07-18-08			
Rating Data Type	Density			
Rating Unit	m2 RunCH			
Days After First/Last Applic.	30 7			
Trt-Eval Interval	17 DA-B			
Plant-Eval Interval	44 DP-1			
Trt No.	Treatment Name	Rate	Growth Stage	
1	Cadet	0.4 oz/a	POST	1.3 a
	COC	1 % v/v	POST	
2	Cadet	0.6 oz/a	POST	1.3 a
	COC	1 % v/v	POST	
3	Resource	4 oz/a	POST	1.3 a
	COC	1 % v/v	POST	
4	Cadet	0.2 oz/a	POST	1.0 a
	Credit Extra	24 oz/a	POST	
	Ammonium Sulfate	17 lb/100 gal	POST	
5	Cadet	0.4 oz/a	POST	1.7 a
	Credit Extra	24 oz/a	POST	
	Ammonium Sulfate	17 lb/100 gal	POST	
6	Resource	3 oz/a	POST	1.0 a
	Credit Extra	24 oz/a	POST	
	Ammonium Sulfate	17 lb/100 gal	POST	
7	Credit Extra	24 oz/a	POST	1.0 a
	Ammonium Sulfate	17 lb/100 gal	POST	
8	Resource	2 oz/a	EPOST	1.0 a
	Credit Extra	24 oz/a	EPOST	
	Ammonium Sulfate	17 lb/100 gal	EPOST	
	Resource	2 oz/a	LPOST	
	Credit Extra	24 oz/a	LPOST	
	Ammonium Sulfate	17 lb/100 gal	LPOST	
LSD (P=.05)				0.72
Standard Deviation				0.41
CV				33.79
Grand Mean				1.21
Replicate F				1.000
Replicate Prob(F)				0.3927
Treatment F				1.107
Treatment Prob(F)				0.4105

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.

Additional Treatment Information
<u>Treatment Name</u> Ammonium Sulfate =
<u>Rate Unit</u> OZ/A = Ounces Product per Acre (Metric=ML-G/HA) O % V/V = Percent, Volume Product per Volume Mix Basis (Metric=same) Z LB/100 GAL = Pounds Dry Product per 100 Gallons Mix (Metric=KG/100 L)]