

Northeast Research & Extension Center

2008 ET Herbicide for Burndown Applications to Corn (08A48H2B01)

Trial ID: 08A48H2B01 AgServ Protocol ID: 08A48H2B01 AgServices
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

Objectives:

Evaluate and demonstrate ET Herbicide in tank mixtures for burndown of broadleaf weeds preplant to corn. Also evaluate CT-301 as an additive substitute product.

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 HX1 RR2 LL
BBCH Scale: BCOR Planting Date: 06-04-08
Planting Method: seeded Rate, Unit: 24503 s/a
Depth, Unit: 2 in
Row Spacing, Unit: 30 in
Harvest Date: 11-18-08 Harvest Equipment: Gleaner K almaco
Harvested Width, Unit: 7.5 ft Harvested Length, Unit: 27.5 ft
% Standard Moisture: 15.5

Pest Description

Pest 1 Type: W Code: ERICA Erigeron canadensis L.
Common Name: Horseweed
Pest 2 Type: W Code: LAMAM Lamium amplexicaule L.
Common Name: Henbit
Pest 3 Type: W Code: TAROF Taraxacum officinale Weber In Wi
Common Name: Dandelion, common
Pest 4 Type: W Code: CAPBP Capsella bursa-Pastoris (L.) Med
Common Name: Shepherdspurse
Pest 5 Type: W Code: DESPI Descurainia pinnata (Walt.) Brit
Common Name: Tansymustard
Pest 6 Type: W Code: BROTE Bromus tectorum L.
Common Name: Brome, downy

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

Soil Description

% Sand: 32 % OM: 3.3 Texture: SILT LOAM
% Silt: 56 pH: 7.3
% Clay: 12 CEC: 17.2 Fert. Level: EXCELLENT

Application Description

	A
Application Date:	05-26-08
Time of Day:	4 pm
Application Method:	spray
Application Timing:	EPP 9
Application Placement:	foliar
Applied By:	js
Air Temperature, Unit:	66 F
% Relative Humidity:	50
Wind Velocity, Unit:	8 mph
Wind Direction:	nw
Dew Presence (Y/N):	n
Soil Temperature, Unit:	60 F
Soil Moisture:	EXCESSIVE
% Cloud Cover:	10

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR

Pest Stage At Each Application

	A
Pest 1 Code, Disc., Scale:	ERICA W
Height, Unit:	5 in
Height Minimum, Maximum:	4 6
Density, Unit:	10 m2
Pest 2 Code, Disc., Scale:	LAMAM W
Stage Majority, Percent:	flower 30
Diameter, Unit:	10 in
Height, Unit:	9 in
Height Minimum, Maximum:	6 12
Density, Unit:	10 m2
Pest 3 Code, Disc., Scale:	TAROF W
Diameter, Unit:	12 in
Height, Unit:	3 in
Density, Unit:	2 m2
Pest 4 Code, Disc., Scale:	CAPBP W
Stage Minimum, Percent:	flower 25
Stage Maximum, Percent:	seed 75
Height, Unit:	15 in
Height Minimum, Maximum:	12 18
Density, Unit:	1 m2
Pest 5 Code, Disc., Scale:	DESPI W
Stage Minimum, Percent:	flower 50
Stage Maximum, Percent:	seed 50
Height, Unit:	15 in
Height Minimum, Maximum:	12 18
Density, Unit:	10 m2
Pest 6 Code, Disc., Scale:	BROTE W
Stage Majority, Percent:	seed 75
Height, Unit:	15 in
Height Minimum, Maximum:	12 18
Density, Unit:	10 m2

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 ET Herbicide for Burndown Applications to Corn (08A48H2B01)

Trial ID: 08A48H2B01 AgServ Protocol ID: 08A48H2B01 AgServices
 Location: Concord, NE Study Director: Stevan Knezevic
 Investigator: Stevan Knezevic

Description	Corn, field	Corn, field	Marestail	Marestail	Marestail	Henbit	Henbit	Henbit	Dandelion	Dandelion				
Rating Date	11-18-08	11-18-08	05-31-08	06-05-08	07-09-08	05-31-08	06-05-08	07-09-08	05-31-08	06-05-08				
Rating Data Type	Yield	Moisture	Control	Control	Control	Control	Control	Control	Control	Control				
Rating Unit	Bu/A15.5	%	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent				
Days After First/Last Applic.	176 176	176 176	5 5	10 10	44 44	5 5	10 10	44 44	5 5	10 10				
Trt-Eval Interval	176 DA-A	176 DA-A	5 DA-A	10 DA-A	44 DA-A	5 DA-A	10 DA-A	44 DA-A	5 DA-A	10 DA-A				
Plant-Eval Interval	167 DP-1	167 DP-1	-4 DP-1	1 DP-1	35 DP-1	-4 DP-1	1 DP-1	35 DP-1	-4 DP-1	1 DP-1				
Trt Treatment	Rate	Other Rate	Other Rate	Growth Stage										
1 Credit	0.75 lb ae/a	32 fl oz/a		Burndown	176.7 a	17.1 a	25.0 c	83.3 a	100.0 a	25.0 c	85.0 a	100.0 a	25.0 c	78.3 a
Bicep II Magnum	2.9 lb a/a	2.1 qt/a		Burndown										
NIS	0.25 % v/v			Burndown										
Ammonium Sulfate	2 % w/w			Burndown										
2 ET	0.00163 lb a/a	1 fl oz/a		Burndown	179.4 a	17.1 a	65.0 a	86.7 a	100.0 a	60.0 a	88.3 a	100.0 a	60.0 a	80.0 a
Credit	0.75 lb ae/a	32 fl oz/a		Burndown										
Bicep II Magnum	2.9 lb a/a	2.1 qt/a		Burndown										
NIS	0.25 % v/v			Burndown										
Ammonium Sulfate	2 % w/w			Burndown										
3 Credit	0.75 lb ae/a	32 fl oz/a		Burndown	197.6 a	16.7 a	50.0 b	91.7 a	100.0 a	50.0 b	90.0 a	100.0 a	50.0 b	76.7 a
2,4-D Ester	0.5 lb a/a	1 pt/a		Burndown										
Bicep II Magnum	2.9 lb a/a	2.1 qt/a		Burndown										
NIS	0.25 % v/v			Burndown										
Ammonium Sulfate	2 % w/w			Burndown										
4 ET	0.00163 lb a/a	1 fl oz/a		Burndown	201.6 a	17.0 a	58.3 a	78.3 a	76.7 b	60.0 a	91.7 a	100.0 a	60.0 a	82.5 a
Credit	0.75 lb ae/a	32 fl oz/a		Burndown										
Bicep II Magnum	2.9 lb a/a	2.1 qt/a		Burndown										
NIS	0.25 % v/v			Burndown										
CT-301 (put in first)	0.047 % v/v	1.2 fl oz/a		Burndown										
LSD (P=.05)					30.60	0.97	8.16	12.35	11.54	0.00	9.85	0.00	0.00	12.62
Standard Deviation					15.32	0.48	4.08	6.18	5.77	0.00	4.93	0.00	0.00	5.57
CV					8.11	2.85	8.23	7.27	6.13	0.0	5.56	0.0	0.0	7.01
Grand Mean					188.83	16.98	49.58	85.0	94.17	48.75	88.75	100.0	48.75	79.38
Replicate F					0.255	0.452	2.000	5.073	1.000	0.000	0.771	0.000	0.000	0.353
Replicate Prob(F)					0.7825	0.6563	0.2160	0.0513	0.4219	1.0000	0.5033	1.0000	1.0000	0.7225
Treatment F					2.017	0.592	55.125	2.473	12.250	0.000	1.000	0.000	0.000	0.599
Treatment Prob(F)					0.2131	0.6425	0.0001	0.1591	0.0057	1.0000	0.4547	1.0000	1.0000	0.6485

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							Dandelion	Shepherdspurse	Shepherdspurse	Shepherdspurse	Tansymustard	Tansymustard	Tansymustard
Rating Date							07-09-08	05-31-08	06-05-08	07-09-08	05-31-08	06-05-08	07-09-08
Rating Data Type							Control	Control	Control	Control	Control	Control	Control
Rating Unit							Percent	Percent	Percent	Percent	Percent	Percent	Percent
Days After First/Last Applic.							44 44	5 5	10 10	44 44	5 5	10 10	44 44
Trt-Eval Interval							44 DA-A	5 DA-A	10 DA-A	44 DA-A	5 DA-A	10 DA-A	44 DA-A
Plant-Eval Interval							35 DP-1	-4 DP-1	1 DP-1	35 DP-1	-4 DP-1	1 DP-1	35 DP-1
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Unit	Growth Stage							
1	Credit	0.75	lb ae/a	32	fl oz/a	Burndown	100.0 a	25.0 b	70.0 b	100.0 a	25.0 b	70.0 b	100.0 a
	Bicep II Magnum	2.9	lb a/a	2.1	qt/a	Burndown							
	NIS	0.25	% v/v			Burndown							
	Ammonium Sulfate	2	% w/w			Burndown							
2	ET	0.00163	lb a/a	1	fl oz/a	Burndown	100.0 a	50.0 a	73.3 b	100.0 a	45.0 a	70.0 b	100.0 a
	Credit	0.75	lb ae/a	32	fl oz/a	Burndown							
	Bicep II Magnum	2.9	lb a/a	2.1	qt/a	Burndown							
	NIS	0.25	% v/v			Burndown							
	Ammonium Sulfate	2	% w/w			Burndown							
3	Credit	0.75	lb ae/a	32	fl oz/a	Burndown	100.0 a	50.0 a	78.3 a	100.0 a	50.0 a	80.0 a	100.0 a
	2,4-D Ester	0.5	lb a/a	1	pt/a	Burndown							
	Bicep II Magnum	2.9	lb a/a	2.1	qt/a	Burndown							
	NIS	0.25	% v/v			Burndown							
	Ammonium Sulfate	2	% w/w			Burndown							
4	ET	0.00163	lb a/a	1	fl oz/a	Burndown	100.0 a	50.0 a	78.3 a	100.0 a	50.0 a	78.3 a	100.0 a
	Credit	0.75	lb ae/a	32	fl oz/a	Burndown							
	Bicep II Magnum	2.9	lb a/a	2.1	qt/a	Burndown							
	NIS	0.25	% v/v			Burndown							
	CT-301 (put in first)	0.047	% v/v	1.2	fl oz/a	Burndown							
LSD (P=.05)							0.00	0.00	4.99	0.00	6.94	6.94	0.00
Standard Deviation							0.00	0.00	2.50	0.00	3.06	3.06	0.00
CV							0.0	0.0	3.33	0.0	7.2	4.11	0.0
Grand Mean							100.0	43.75	75.0	100.0	42.5	74.58	100.0
Replicate F							0.000	0.000	1.000	0.000	0.667	1.556	0.000
Replicate Prob(F)							1.0000	1.0000	0.4219	1.0000	0.5625	0.3164	1.0000
Treatment F							0.000	0.000	8.000	0.000	45.333	9.111	0.000
Treatment Prob(F)							1.0000	1.0000	0.0161	1.0000	0.0015	0.0292	1.0000

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						Downy brome	Downy brome	Downy brome	
Rating Date						05-31-08	06-05-08	07-09-08	
Rating Data Type						Control	Control	Control	
Rating Unit						Percent	Percent	Percent	
Days After First/Last Applic.						5 5	10 10	44 44	
Trt-Eval Interval						5 DA-A	10 DA-A	44 DA-A	
Plant-Eval Interval						-4 DP-1	1 DP-1	35 DP-1	
Trt No.	Treatment Name	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage			
1	Credit	0.75	lb ae/a	32	fl oz/a	Burndown	20.0 a	26.7 a	100.0 a
	Bicep II Magnum	2.9	lb a/a	2.1	qt/a	Burndown			
	NIS	0.25	% v/v			Burndown			
	Ammonium Sulfate	2	% w/w			Burndown			
2	ET	0.00163	lb a/a	1	fl oz/a	Burndown	20.0 a	33.3 a	100.0 a
	Credit	0.75	lb ae/a	32	fl oz/a	Burndown			
	Bicep II Magnum	2.9	lb a/a	2.1	qt/a	Burndown			
	NIS	0.25	% v/v			Burndown			
	Ammonium Sulfate	2	% w/w			Burndown			
3	Credit	0.75	lb ae/a	32	fl oz/a	Burndown	20.0 a	36.7 a	100.0 a
	2,4-D Ester	0.5	lb a/a	1	pt/a	Burndown			
	Bicep II Magnum	2.9	lb a/a	2.1	qt/a	Burndown			
	NIS	0.25	% v/v			Burndown			
	Ammonium Sulfate	2	% w/w			Burndown			
4	ET	0.00163	lb a/a	1	fl oz/a	Burndown	20.0 a	36.7 a	100.0 a
	Credit	0.75	lb ae/a	32	fl oz/a	Burndown			
	Bicep II Magnum	2.9	lb a/a	2.1	qt/a	Burndown			
	NIS	0.25	% v/v			Burndown			
	CT-301 (put in first)	0.047	% v/v	1.2	fl oz/a	Burndown			
LSD (P=.05)						0.00	11.54	0.00	
Standard Deviation						0.00	5.77	0.00	
CV						0.0	17.32	0.0	
Grand Mean						20.0	33.33	100.0	
Replicate F						0.000	13.000	0.000	
Replicate Prob(F)						1.0000	0.0066	1.0000	
Treatment F						0.000	2.000	0.000	
Treatment Prob(F)						1.0000	0.2156	1.0000	

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>	
NIS = Non-ionic surfactant	
Ammonium Sulfate =	
2,4-D Ester =	
<u>Rate Unit</u>	
LB AE/A = Pounds Acid Equivalent per Acre (Metric=KG AE/HA) F	
LB A/A = Pounds Active Ingredient per Acre (Metric=KG A/HA) A	
% V/V = Percent, Volume Product per Volume Mix Basis (Metric=same) Z	
% W/W = Percent, Weight Product per Weight Mix Basis (Metric=same) O	
<u>Other Rate Unit</u>	
FL OZ/A = Fluid Ounces Product per Acre	
QT/A = Quarts Product per Acre	
PT/A = Pints Product per Acre	