

Capreno Adjuvant Study - Belleville.

Trial ID: 08-2A-ME80

Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 06-16-08

Objectives: Evaluate the efficacy of commercial and experimental adjuvants with Capreno herbicide.

Crop 1: ZEAMD Dent corn Variety: DKC 61-73 RR2/YGCB
 Planting Method: SEEDED Planting Date: 06-16-08
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 2 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 3 Type: W Code: XANST Xanthium strumarium L. cocklebur, common
 Pest 4 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 28 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. GLXMA 2007

Field Prep./Maintenance: N 150 LB/A, P2O5 0 LB/A, K2O 100 LB/A

% OM: 1.6 Texture: SILT LOAM
 pH: 6.2 Soil Name: PIERRON
 CEC: 7 Fert. Level: P1:93 LB/A, K:448 LB/A

Application Description

A
 Application Date: 07-07-08
 Time of Day: 18:00
 Application Method: Spray
 Application Timing: 4-6"W
 Application Placement: BROFOL
 Applied By: DKT
 Air Temperature, Unit: 80 F
 % Relative Humidity: 92
 Wind Velocity, Unit: 4 MPH
 Dew Presence (Y/N): N
 Soil Temperature, Unit: 85 F
 Soil Moisture: ABONOR

07-07-08
 Crop stage at application: V5
 Height Min, Max (inch): 15 17

Pest Stage At Each Application

Application Date: 07-07-08
 Weed Code: AMATA
 Stage Majority (leaves): 8
 Stage Min, Max: 5 9
 Height Majority: 6 IN
 Height Min, Max: 3 6
 Density, Unit: 2 FT2
 Weed Code: AMBTR
 Stage Majority (leaves): COTY
 Stage Min, Max: COTY 2
 Height Majority: 0.5 IN
 Height Min, Max: 0.5 1
 Density, Unit: 1 FT2
 Weed Code: XANST
 Stage Majority (leaves): 6
 Stage Min, Max: 4 6
 Height Majority: 6 IN
 Height Min, Max: 4 6
 Density, Unit: 1 FT2
 Weed Code: SETFA
 Stage Majority (leaves): 3
 Stage Min, Max: 2 3
 Height Majority: 4 IN
 Height Min, Max: 2 5
 Density, Unit: 1 FT2

Application Equipment

Appl. Equipment: CO2 sprayer
 Operating Pressure: 30 PSI
 Nozzle Type: Flat fan
 Nozzle Size: XR 8002
 Boom Length, Unit: 7.5 FT
 Spray Volume, Unit: 15 GPA

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										AMATA	AMATA	AMBTR	AMBTR			
								ZEAMD	ZEAMD	ZEAMD	ZEAMD	07-21-08	08-04-08	07-21-08	08-04-08	
								11-08-08	11-08-08	07-21-08	08-04-08	Control	Control	Control	Control	
								Moisture	Yield	Injury	Injury	Percent	Percent	Percent	Percent	
								Percent	bu/A	Percent	Percent	Percent	Percent	Percent	Percent	
										14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl								
No.	Name	Conc	Type	Unit	Rate	Rate	Stage	Code								
1	NONTREATED								19.1 a	190 b	0 a	0 a	0 e	0 f	0 b	0 b
2	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	18.3 a	219 a	0 a	0 a	33 d	27 e	99 a	99 a
3	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	19.0 a	213 a	0 a	0 a	88 ab	87 abc	99 a	99 a
3	DESTINY MSO	100	SL		1 % v/v	1 % v/v	4-6"W	A								
3	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
4	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	18.4 a	222 a	0 a	0 a	83 b	83 bc	98 a	98 a
4	PRIME OIL COC	100	SL		1 % v/v	1 % v/v	4-6"W	A								
4	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
5	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	19.4 a	209 a	0 a	0 a	99 a	98 a	99 a	99 a
5	SUPERB HC	100	SL		0.5 % v/v	0.5 % v/v	4-6"W	A								
5	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
6	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	18.0 a	220 a	0 a	0 a	99 a	96 a	99 a	99 a
6	NEWTONE	100	SL		1 % v/v	1 % v/v	4-6"W	A								
7	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	18.8 a	208 ab	0 a	0 a	95 a	95 ab	99 a	99 a
7	AG 05006	100	SL		0.5 % v/v	0.5 % v/v	4-6"W	A								
7	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
8	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	18.6 a	211 a	0 a	0 a	95 a	95 a	98 a	98 a
8	AG 05006	100	SL		1 % v/v	1 % v/v	4-6"W	A								
8	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
9	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	17.9 a	208 a	0 a	0 a	95 a	93 ab	99 a	99 a
9	AG 07042	100	SL		0.5 % v/v	0.5 % v/v	4-6"W	A								
9	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
10	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	18.3 a	215 a	0 a	0 a	90 ab	87 abc	99 a	99 a
10	AG 08040	100	SL		1.5 % v/v	1.5 % v/v	4-6"W	A								
11	SEE COMMENT 4															
11	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A								
11	AG 08041	100	SL		1.5 % v/v	1.5 % v/v	4-6"W	A								
12	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	18.1 a	217 a	0 a	0 a	91 ab	90 ab	99 a	99 a
12	AG 08004	100	SL		0.5 % v/v	0.5 % v/v	4-6"W	A								
12	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
13	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	19.2 a	215 a	0 a	0 a	92 ab	92 ab	99 a	99 a
13	TROPHY GOLD	100	SL		0.25 % v/v	0.25 % v/v	4-6"W	A								
13	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
14	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	18.8 a	214 a	0 a	0 a	53 c	50 d	99 a	99 a
14	MSO CONCENTRATE	100	SL		1 % v/v	1 % v/v	4-6"W	A								
14	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
15	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	19.0 a	217 a	0 a	0 a	83 b	77 c	99 a	99 a
15	AGRIDEX	100	SL		1 % v/v	1 % v/v	4-6"W	A								
15	N-PAK AMS	100	SL		2.5 % v/v	2.5 % v/v	4-6"W	A								
LSD (P=.05)									1.64	18.5	0.0	0.0	11.3	12.0	1.4	1.4
Replicate F									0.850	0.974	0.000	0.000	0.550	2.037	2.167	2.167
Replicate Prob(F)									0.4390	0.3910	1.0000	1.0000	0.5836	0.1507	0.1348	0.1348
Treatment F									0.687	1.547	0.000	0.000	56.304	51.567	2974.867	2974.867
Treatment Prob(F)									0.7583	0.1665	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

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Pest Code	XANST	XANST	SETFA	SETFA
Crop Code				
Rating Date	07-21-08	08-04-08	07-21-08	08-04-08
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Timing				
Trt-Eval Interval	14 DA-A	28 DA-A	14 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	NONTREATED									0 f	0 g	0 f	0 d
2	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	66 bcd	63 bcd	63 e	60 c
3	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	60 bcd	60 b-e	90 d	90 b
3	DESTINY MSO	100	SL	1	% v/v	1	% v/v	4-6"W	A				
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
4	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	43 de	40 def	99 a	99 a
4	PRIME OIL COC	100	SL	1	% v/v	1	% v/v	4-6"W	A				
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
5	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	27 e	23 fg	99 a	99 a
5	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A				
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
6	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	43 de	37 ef	99 a	99 a
6	NEWTONE	100	SL	1	% v/v	1	% v/v	4-6"W	A				
7	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	65 bcd	60 b-e	92 cd	92 b
7	AG 05006	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A				
7	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
8	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	96 a	93 a	99 a	99 a
8	AG 05006	100	SL	1	% v/v	1	% v/v	4-6"W	A				
8	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
9	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	47 cde	47 c-f	98 ab	98 a
9	AG 07042	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A				
9	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
10	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	47 cde	43 def	99 a	99 a
10	AG 08040	100	SL	1.5	% v/v	1.5	% v/v	4-6"W	A				
11	SEE COMMENT 4												
11	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A				
11	AG 08041	100	SL	1.5	% v/v	1.5	% v/v	4-6"W	A				
12	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	67 bcd	63 bcd	99 a	99 a
12	AG 08004	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A				
12	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
13	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	77 ab	72 ab	99 a	99 a
13	TROPHY GOLD	100	SL	0.25	% v/v	0.25	% v/v	4-6"W	A				
13	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
14	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	70 bc	70 abc	98 ab	98 a
14	MSO CONCENTRATE	100	SL	1	% v/v	1	% v/v	4-6"W	A				
14	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
15	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	82 ab	75 ab	95 bc	95 ab
15	AGRIDEX	100	SL	1	% v/v	1	% v/v	4-6"W	A				
15	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A				
LSD (P=.05)										26.1	23.8	3.9	5.3
Replicate F										4.843	5.690	0.700	0.742
Replicate Prob(F)										0.0163	0.0089	0.5056	0.4860
Treatment F										7.393	8.344	411.026	218.951
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: SIU-DT/Bayer/Winfield Solutions.
2. Ratings: CI/WC at 14 + 28 DAT.
3. DA-A = Days after 4-6"W application.
4. Adjuvant for treatment 11 was not available, nothing was applied.
5. At the Belleville Research Center the above normal rainfall in spring 2008 (no more than four consecutive rain-free days between March 22 and June 15) delayed corn and soybean planting until mid-June.
6. Harvested 11-8-08, (2) 30 inch rows by 25 ft.