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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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 11-08-08 Moisture Percent	ZEAMD 11-08-08 Yield bu/A	ZEAMD 07-21-08 Injury Percent	ZEAMD 08-04-08 Injury Percent	AMATA 07-21-08 Control Percent	AMATA 08-04-08 Control Percent	AMBTR 07-21-08 Control Percent	AMBTR 08-04-08 Control Percent
	Pest Code																
	Crop Code																
	Rating Date																
	Rating Data Type																
	Rating Unit																
	Rating Timing																
	Trt-Eval Interval											14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A
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.