

Capreno Adjuvant Study - Carbondale.

Trial ID: 08-ARC-12C

Location: Agronomy Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Carbondale IL 62901 USA
 Trial Status: FINAL Initiation Date: 06-04-08

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

Crop 1: ZEAMD Dent corn Variety: P33K44
 Planting Method: SEEDDED Planting Date: 06-04-08
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: PANDI Panicum dichotomiflorum Michx. panicum, fall
 Pest 2 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant
 Pest 3 Type: W Code: CYPES Cyperus esculentus L. nutsedge, yellow

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 25 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year

1. ZEAMD 2007

Field Prep./Maintenance: N 198 LB/A, P205 46 LB/A, K20 400 LB/A

% OM: 1.6 Texture: SILT LOAM
 pH: 6.1 Soil Name: WEIR
 CEC: 8.1 Fert. Level: P1: 94 LB/A, K: 317 LB/A

Application Description

A

Application Date: 06-26-08
 Time of Day: 9:00
 Application Method: Spray
 Application Timing: 4-6"W
 Application Placement: BROFOL
 Applied By: DKT
 Air Temperature, Unit: 87 F
 % Relative Humidity: 58
 Wind Velocity, Unit: 4 MPH
 Dew Presence (Y/N): Y
 Soil Temperature, Unit: 78 F
 Soil Moisture: NORMAL
 % Cloud Cover: 40

06-26-08
 Crop stage at application: V4
 Height Min, Max (inch): 17 25

Pest Stage At Each Application

Application Date: 06-26-08
 Weed Code: PANDI
 Stage Majority (leaves): 4
 Stage Min, Max: 1 5
 Height Majority: 5 IN
 Height Min, Max: 1 6
 Density, Unit: 2 FT2
 Weed Code: SETFA
 Stage Majority (leaves): 4
 Stage Min, Max: 1 4
 Height Majority: 5 IN
 Height Min, Max: 1 5
 Density, Unit: 1 FT2
 Weed Code: CYPES
 Stage Majority (leaves): 9
 Stage Min, Max: 3 9
 Height Majority: 6 IN
 Height Min, Max: 1 8
 Density, Unit: 2 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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										PANDI	PANDI	SETFA	SETFA			
								ZEAMD	ZEAMD	ZEAMD	ZEAMD	07-10-08	07-24-08			
								10-17-08	10-17-08	07-10-08	07-24-08	07-10-08	07-24-08			
								Yield	Moisture	Injury	Injury	Control	Control			
								bu/A	Percent	Percent	Percent	Percent	Percent			
										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								146 a	20.8 a	0 a	0 a	0 g	0 f	0 e	0 f
2	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	155 a	19.7 ab	0 a	0 a	37 f	23 e	23 d	20 e
3	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5 fl oz/a	4-6"W	A	170 a	20.1 ab	0 a	0 a	88 ab	83 ab	90 abc	82 abc
3	DESTINY MSO	100	SL	1 % v/v	1 % v/v	1 % v/v	4-6"W	A								
3	N-PAK AMS	100	SL	2.5 % v/v	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	158 a	19.0 b	0 a	0 a	92 a	85 ab	95 a	85 ab
4	PRIME OIL COC	100	SL	1 % v/v	1 % v/v	1 % v/v	4-6"W	A								
4	N-PAK AMS	100	SL	2.5 % v/v	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	156 a	18.9 b	0 a	0 a	78 bc	77 abc	88 abc	83 abc
5	SUPERB HC	100	SL	0.5 % v/v	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	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	143 a	18.7 b	0 a	0 a	67 de	72 bc	85 bc	78 bcd
6	NEWTONE	100	SL	1 % v/v	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	161 a	18.9 b	0 a	0 a	92 a	87 a	92 ab	85 ab
7	AG 05006	100	SL	0.5 % v/v	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	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	169 a	19.2 b	0 a	0 a	63 de	73 abc	82 c	72 d
8	AG 05006	100	SL	1 % v/v	1 % v/v	1 % v/v	4-6"W	A								
8	N-PAK AMS	100	SL	2.5 % v/v	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	153 a	20.1 ab	0 a	0 a	37 f	50 d	88 abc	82 abc
9	AG 07042	100	SL	0.5 % v/v	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	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	149 a	19.3 ab	0 a	0 a	57 e	63 cd	90 abc	77 cd
10	AG 08040	100	SL	1.5 % v/v	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	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	164 a	19.5 ab	0 a	0 a	70 cd	73 abc	90 abc	85 ab
12	AG 08004	100	SL	0.5 % v/v	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	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	172 a	20.0 ab	0 a	0 a	92 a	87 a	90 abc	87 a
13	TROPHY GOLD	100	SL	0.25 % v/v	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	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	154 a	20.1 ab	0 a	0 a	87 ab	83 ab	92 ab	85 ab
14	MSO CONCENTRATE	100	SL	1 % v/v	1 % v/v	1 % v/v	4-6"W	A								
14	N-PAK AMS	100	SL	2.5 % v/v	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	169 a	19.8 ab	0 a	0 a	87 ab	80 ab	93 ab	85 ab
15	AGRIDEX	100	SL	1 % v/v	1 % v/v	1 % v/v	4-6"W	A								
15	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v	2.5 % v/v	4-6"W	A								
LSD (P=.05)									39.7	1.55	0.0	0.0	10.8	13.9	8.5	8.1
Replicate F									0.913	1.097	0.000	0.000	0.815	3.888	1.775	1.219
Replicate Prob(F)									0.4136	0.3489	1.0000	1.0000	0.4536	0.0333	0.1893	0.3119
Treatment F									0.464	1.287	0.000	0.000	53.436	29.250	97.324	91.791
Treatment Prob(F)									0.9260	0.2811	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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Location: Agronomy Res. Center

Pest Code	CYPES	CYPES
Crop Code		
Rating Date	07-10-08	07-24-08
Rating Data Type	Control	Control
Rating Unit	Percent	Percent
Rating Timing		
Trt-Eval Interval	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 g	0 e
2	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	23 ef	17 d
3	CAPRENO	3.45	SC	0.0404	lb ai/a	1.5	fl oz/a	4-6"W	A	40 cd	33 bc
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	53 bc	40 b
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	57 b	40 b
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	78 a	65 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	82 a	70 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	17 f	17 d
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	83 a	68 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	63 b	63 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	20 f	23 cd
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	23 ef	17 d
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	37 de	33 bc
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	57 b	27 bcd
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)										14.6	16.4
Replicate F										0.481	11.487
Replicate Prob(F)										0.6233	0.0003
Treatment F										27.811	15.616
Treatment Prob(F)										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 Agronomy Research Center in Carbondale the above normal rainfall in May 2008 delayed corn and soybean planting until early-June.
6. Harvested 10-17-08, (2) 30 inch rows by 22.5 ft.