

Nozzle by Adjuvant Interaction - Ignite.

Trial ID: 10-10A

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: 06-06-10

Objectives: Determine the influence and interaction of nozzle type and adjuvant on the efficacy of Ignite in corn.

Crop 1: ZEAMD Dent corn Variety: P1184HR Description: LL/RR2
 Planting Method: SEEDED Planting Date: 06-06-10
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: GGGAN grasses, annual
 Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 3 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf
 Pest 4 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. morningglory, ivyleaf

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 45 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. GLXMA 2009

Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 150 LB/A

% OM: 1.8 Texture: SILT LOAM
 pH: 6.7 Soil Name: PIERRON
 CEC: 9 Fert. Level: P1: 73 LB/A, K: 268 LB/A

Application Description

A
 Application Date: 06-30-10
 Time of Day: 16:00
 Application Method: Spray
 Application Timing: 6-8"W
 Application Placement: BROFOL
 Applied By: BGY
 Air Temperature, Unit: 80 F
 % Relative Humidity: 58
 Wind Velocity, Unit: 2 MPH
 Wind Direction: NE
 Dew Presence (Y/N): N
 Soil Moisture: ABONOR
 % Cloud Cover: 58

06-30-10
 Crop stage at application: V3
 Height Min, Max (inch): 6 7

Pest Stage At Each Application

Application Date: 06-30-10
 Weed Code: GGGAN
 Stage Majority (leaves): 6
 Stage Min, Max: 4 8
 Height Majority: 10 IN
 Height Min, Max: 3 20
 Density, Unit: 10 FT2
 Weed Code: AMATA
 Stage Majority (leaves): 16
 Stage Min, Max: 4 32
 Height Majority: 11 IN
 Height Min, Max: 3 32
 Density, Unit: 40 FT2
 Weed Code: ABUTH
 Stage Majority (leaves): 6
 Stage Min, Max: 2 8
 Height Majority: 9 IN
 Height Min, Max: 3 14
 Density, Unit: 0.01 FT2
 Weed Code: IPOHE
 Stage Majority (leaves): 12
 Stage Min, Max: 6 14
 Height Majority: 14 IN
 Height Min, Max: 4 22
 Density, Unit: 0.01 FT2

Application Equipment

Appl. Equipment: CO2 sprayer
 Nozzle Type: See
 Nozzle Size: comment
 Boom Length, Unit: 6.67 FT
 Spray Volume, Unit: 10 GPA

Nozzle by Adjuvant Interaction - Ignite.

Trial ID: 10-10A

Location: Belleville Res. Center

Pest Code										GGGAN		GGGAN	AMATA	AMATA	ABUTH	ABUTH	
Crop Code										ZEAMD	ZEAMD	07-14-10	07-28-10	07-14-10	07-28-10	07-14-10	07-28-10
Rating Date										Injury	Injury	Control	Control	Control	Control	Control	Control
Rating Data Type										Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
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	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	XR 11004 at 40 PSI									2 a	0 a	82 ab	75 ab	96 a	97 a	63 a	69 a
1	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
1	PL 334	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
2	TT 11004 at 40 PSI									2 a	0 a	70 def	69 abc	95 a	94 a	62 a	63 a-d
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
2	PL 334	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
3	AIXR 11003 at 70 PSI									2 a	0 a	72 cde	71 abc	88 abc	88 abc	48 c-f	55 e-i
3	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
3	PL 334	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
4	GA 110-03 at 70 PSI									0 a	0 a	73 cd	68 bc	75 ef	74 ef	45 ef	54 f-j
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
4	PL 334	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A								
5	XR 11004 at 40 PSI									0 a	0 a	77 a-d	63 cd	91 abc	91 abc	53 a-e	55 e-i
5	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
5	PL 713	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A								
6	TT 11004 at 40 PSI									0 a	0 a	77 a-d	73 abc	82 cde	82 cde	47 def	53 g-j
6	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
6	PL 713	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A								
7	AIXR 11003 at 70 PSI									0 a	0 a	72 cde	67 bc	81 c-f	83 bcd	48 c-f	50 ijk
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
7	PL 713	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A								
8	GA 110-03 at 70 PSI									0 a	0 a	70 def	73 abc	70 f	69 fg	40 f	45 k
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
8	PL 713	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A								
9	XR 11004 at 40 PSI									0 a	0 a	83 a	78 a	97 a	96 a	60 ab	68 ab
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
9	PX 6259	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A								
10	TT 11004 at 40 PSI									0 a	0 a	76 a-d	72 abc	95 a	91 abc	50 b-f	56 d-i
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
10	PX 6259	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A								
11	AIXR 11003 at 70 PSI									3 a	0 a	63 fg	57 de	86 a-d	88 abc	50 b-f	58 c-h
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
11	PX 6259	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A								
12	GA 110-03 at 70 PSI									3 a	0 a	63 fg	57 de	70 f	62 g	50 b-f	52 h-k
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
12	PX 6259	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A								
13	XR 11004 at 40 PSI									0 a	0 a	78 abc	73 ab	93 ab	92 ab	63 a	65 abc
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
13	PL 714	100	SL	1	% v/v	1	% v/v	6-8"W	A								
14	TT 11004 at 40 PSI									0 a	0 a	77 a-d	70 abc	97 a	95 a	62 a	65 abc
14	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
14	PL 714	100	SL	1	% v/v	1	% v/v	6-8"W	A								
15	AIXR 11003 at 70 PSI									0 a	0 a	75 bcd	73 ab	88 abc	88 abc	57 a-d	63 a-e
15	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
15	PL 714	100	SL	1	% v/v	1	% v/v	6-8"W	A								
16	GA 110-03 at 70 PSI									0 a	0 a	60 g	53 e	77 def	68 fg	45 ef	47 jk
16	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
16	PL 714	100	SL	1	% v/v	1	% v/v	6-8"W	A								
17	XR 11004 at 40 PSI									0 a	0 a	78 abc	70 abc	96 a	94 a	62 a	61 b-g
17	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
17	PL 325	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A								
18	TT 11004 at 40 PSI									0 a	0 a	78 abc	68 abc	90 abc	89 abc	60 ab	57 d-i
18	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A								
18	PL 325	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A								

Nozzle by Adjuvant Interaction - Ignite.

Trial ID: 10-10A

Location: Belleville Res. Center

Pest Code										GGGAN	GGGAN	AMATA	AMATA	ABUTH	ABUTH
Crop Code										ZEAMD	ZEAMD				
Rating Date										07-14-10	07-28-10	07-14-10	07-28-10	07-14-10	07-28-10
Rating Data Type										Injury	Injury	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										14 DA-A	28 DA-A	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						
19	AIXR 11003 at 70 PSI									0 a	0 a	73 cd	67 bc	83 b-e	83 bcd
19	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A						
19	PL 325	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A						
20	GA 110-03 at 70 PSI									0 a	0 a	64 efg	63 cd	76 def	78 de
20	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A						
20	PL 325	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A						
LSD (P=.05)										3.4	0.0	7.9	9.7	10.8	9.2
Replicate F										5.344	0.000	29.302	14.843	5.195	3.846
Replicate Prob(F)										0.0093	1.0000	0.0001	0.0001	0.0104	0.0306
Treatment F										0.947	0.000	5.313	3.632	5.705	9.900
Treatment Prob(F)										0.5365	1.0000	0.0001	0.0004	0.0001	0.0001

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

Nozzle by Adjuvant Interaction - Ignite.

Trial ID: 10-10A

Location: Belleville Res. Center

Pest Code		IPOHE	IPOHE
Crop Code			
Rating Date		07-14-10	07-28-10
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	XR 11004 at 40 PSI									87 a	88 a
1	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
1	PL 334	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
2	TT 11004 at 40 PSI									80 bcd	79 bc
2	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
2	PL 334	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
3	AIXR 11003 at 70 PSI									63 g	63 ef
3	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
3	PL 334	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
4	GA 110-03 at 70 PSI									55 h	55 g
4	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
4	PL 334	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
5	XR 11004 at 40 PSI									77 cd	77 bcd
5	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
5	PL 713	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A		
6	TT 11004 at 40 PSI									70 ef	62 fg
6	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
6	PL 713	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A		
7	AIXR 11003 at 70 PSI									80 bcd	70 de
7	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
7	PL 713	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A		
8	GA 110-03 at 70 PSI									68 fg	60 fg
8	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
8	PL 713	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A		
9	XR 11004 at 40 PSI									82 abc	81 abc
9	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
9	PX 6259	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A		
10	TT 11004 at 40 PSI									82 abc	77 bcd
10	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
10	PX 6259	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A		
11	AIXR 11003 at 70 PSI									67 fg	73 cd
11	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
11	PX 6259	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A		
12	GA 110-03 at 70 PSI									68 fg	57 fg
12	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
12	PX 6259	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A		
13	XR 11004 at 40 PSI									80 bcd	82 ab
13	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
13	PL 714	100	SL	1	% v/v	1	% v/v	6-8"W	A		
14	TT 11004 at 40 PSI									75 de	73 cd
14	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
14	PL 714	100	SL	1	% v/v	1	% v/v	6-8"W	A		
15	AIXR 11003 at 70 PSI									78 cd	78 bcd
15	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
15	PL 714	100	SL	1	% v/v	1	% v/v	6-8"W	A		
16	GA 110-03 at 70 PSI									68 fg	58 fg
16	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
16	PL 714	100	SL	1	% v/v	1	% v/v	6-8"W	A		
17	XR 11004 at 40 PSI									85 ab	83 ab
17	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
17	PL 325	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A		
18	TT 11004 at 40 PSI									77 cd	71 de
18	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		
18	PL 325	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A		

Nozzle by Adjuvant Interaction - Ignite.

Trial ID: 10-10A

Location: Belleville Res. Center

Pest Code		IPOHE	IPOHE
Crop Code			
Rating Date		07-14-10	07-28-10
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	Other Unit	Other Rate	Other Unit	Growth Stage	Appl Code		
19	AIXR 11003 at 70 PSI									76	cde
19	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		73
19	PL 325	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A		cd
20	GA 110-03 at 70 PSI									70	ef
20	IGNITE 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-8"W	A		63
20	PL 325	100	SL	1.25	% v/v	1.25	% v/v	6-8"W	A		ef
LSD (P=.05)										6.5	7.9
Replicate F										2.359	2.221
Replicate Prob(F)										0.1090	0.1232
Treatment F										12.494	12.443
Treatment Prob(F)										0.0001	0.0001

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

Trial Comments

1. Protocol: Precision Labs.
2. CI/WC at 14 and 28 DAT.
3. Nozzle size and type and spray pressure are per treatment, see treatment list. All applications made at 12 MPH.
4. GGGAN = Annual grasses including SETFA (giant foxtail) and PANDI (fall panicum).
5. Not harvested.