

Adjuvant Evaluation with DuPont Product Concepts.

Project Code: 07-HRC-WU12-PL Location: Horticulture Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Carbondale IL 62901 USA
 Trial Status: Final Updated: 1-24-08

Objective:

Compare weed control and crop response from Simplyx and PX 07TN to NIS + AMS or COC + AMS when applied in various tank-mixes in Roundup Ready corn.

Weed Code	Common Name	Scientific Name
1.	BRAPP signalgrass, broadleaf	Brachiaria platyphylla (Griseb.) Nash
2.	DIGSA crabgrass, large	Digitaria sanguinalis (L.) Scop.
3.	AMATA waterhemp, common	Amaranthus rudis Sauer
4.	AMARE pigweed, redroot	Amaranthus retroflexus L.
5.	IPOHE morningglory, annual	Ipomoea hederacea (L.) jacq.

Crop 1: ZEAMX corn, field Variety: 33K44
 Planting Method: Seeded Planting Date: 5-24-07
 Rate: 28000 S/A Depth: 1.5 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 3
 Tillage Type: Reduced-Till Study Design: Randomized complete block
 Previous Crop, Year: GLXMA, 2006
 Field Prep./Maintenance: N 166 LB/A, P205 92 LB/A, K20 90 LB/A

Texture: Silt loam % OM: 1.6 pH: 6.5 CEC: 8
 Fert. Level: P1: 47 LB/A, K: 265 LB/A

APPLICATION DESCRIPTION

A
 Application Date: 6-15-07
 Time of Day: 9:00
 Application Method: Spray
 Application Timing: 1-3"GR
 Applic. Placement: BROFOL
 Air Temp., Unit: 86 F
 % Relative Humidity: 40
 Wind Velocity, Unit: 1 MPH
 Dew Presence (Y/N): N
 Soil Temp., Unit: 90 F
 Soil Moisture: NORMAL
 % Cloud Cover: 0

CROP STAGE AT EACH APPLICATION

A
 Crop 1 Code, Stage: ZEAMX V4
 Height, Unit: 14 IN

WEED STAGE AT EACH APPLICATION

A
Weed 1 Code: BRAPP
 Stage(leaves): 4-10
 Height(inches): 4-7
 Density: Medium
Weed 2 Code: DIGSA
 Stage(leaves): 4-10
 Height(inches): 4-7
 Density: Medium
Weed 3 Code: AMATA
 Stage(leaves): 2-6
 Height(inches): 1-3
 Density: Low
Weed 4 Code: AMARE
 Stage(leaves): 3-9
 Height(inches): 1-3
 Density: Medium
Weed 5 Code: IPOHE
 Stage(leaves): Coty-3
 Height(inches): 1-2
 Density: Medium

APPLICATION EQUIPMENT

A
 Appl. Equipment: CO2 sprayer
 Operating Pressure: 40 PSI
 Nozzle Type: Flat fan
 Nozzle Size: XR 8002
 Boom Length, Unit: 7.5 FT
 Spray Volume, Unit: 15 GPA

NOTES:

Adjuvant Evaluation with DuPont Product Concepts.

Project Code: 07-HRC-WU12-PL Location: Horticulture Research Center
 Investigator: Bryan Young

Weed Code							BRAPP		DIGSA		AMATA							
Crop Code							ZEAMX		ZEAMX		ZEAMX							
Rating Data Type							Injury		Injury		Injury							
Rating Unit							Percent		Percent		Percent							
Rating Date							6-22-07		6-29-07		7-13-07							
Trt-Eval Interval							7 DA-A		14 DA-A		28 DA-A							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent			
1	ROUNDUP W-MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		1-3"LC A		0 c	0 b	0 a	97 a	97 a	99 a			
1	AMS	100 DRY		2.0 lb ai/a		2 lb/a		1-3"LC A										
2	ROUNDUP W-MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		1-3"LC A		1 c	0 b	0 a	99 a	98 a	99 a			
2	SIMPLYX	100 LIQ		0.5 % v/v		0.5 % v/v		1-3"LC A										
3	ROUNDUP W-MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		1-3"LC A		0 c	0 b	0 a	98 a	98 a	99 a			
3	PX 07TN	100 LIQ		0.5 % v/v		0.5 % v/v		1-3"LC A										
4	ROUNDUP W-MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		1-3"LC A		5 ab	0 b	0 a	99 a	98 a	99 a			
4	RESOLVE	25 WG		0.0156 lb ai/a		1 oz/a		1-3"LC A										
4	ACTIVATOR 90	100 LIQ		0.25 % v/v		0.25 % v/v		1-3"LC A										
4	AMS	100 DRY		2.0 lb ai/a		2 lb/a		1-3"LC A										
5	ROUNDUP W-MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		1-3"LC A		2 bc	0 b	0 a	99 a	99 a	99 a			
5	RESOLVE	25 WG		0.0156 lb ai/a		1 oz/a		1-3"LC A										
5	SIMPLYX	100 LIQ		0.5 % v/v		0.5 % v/v		1-3"LC A										
6	ROUNDUP W-MAX	4.5 SL		0.77 lb ae/a		22 fl oz/a		1-3"LC A		7 a	5 a	1 a	98 a	98 a	99 a			
6	RESOLVE	25 WG		0.0156 lb ai/a		1 oz/a		1-3"LC A										
6	PX 07TN	100 LIQ		0.5 % v/v		0.5 % v/v		1-3"LC A										
7	STEADFAST	75 WG		0.035 lb ai/a		0.75 oz/a		1-3"LC A		5 ab	2 b	0 a	85 bc	92 a	95 b-e			
7	CLARITY	4 EC		0.125 lb ai/a		4 fl oz/a		1-3"LC A										
7	PRIME OIL COC	100 LIQ		1.0 % v/v		1 % v/v		1-3"LC A										
7	AMS	100 DRY		2.0 lb ai/a		2 lb/a		1-3"LC A										
8	STEADFAST	75 WG		0.035 lb ai/a		0.75 oz/a		1-3"LC A		4 b	0 b	0 a	80 cd	76 b	93 e			
8	CLARITY	4 EC		0.125 lb ai/a		4 fl oz/a		1-3"LC A										
8	SIMPLYX	100 LIQ		0.5 % v/v		0.5 % v/v		1-3"LC A										
9	STEADFAST	75 WG		0.035 lb ai/a		0.75 oz/a		1-3"LC A		2 bc	0 b	0 a	90 abc	94 a	93 de			
9	CLARITY	4 EC		0.125 lb ai/a		4 fl oz/a		1-3"LC A										
9	PX 07TN	100 LIQ		0.5 % v/v		0.5 % v/v		1-3"LC A										
10	STEADFAST	75 WG		0.035 lb ai/a		0.75 oz/a		1-3"LC A		4 b	2 b	1 a	73 d	68 b	94 cde			
10	CLARITY	4 EC		0.125 lb ai/a		4 fl oz/a		1-3"LC A										
10	PX 07IR	100 LIQ		0.375 % v/v		0.375 % v/v		1-3"LC A										
11	STEADFAST	75 WG		0.035 lb ai/a		0.75 oz/a		1-3"LC A		0 c	0 b	0 a	86 bc	75 b	96 b-e			
11	CALLISTO	4 SC		0.0625 lb ai/a		2 fl oz/a		1-3"LC A										
11	AATREX	90 WG		0.25 lb ai/a		4.44 oz/a		1-3"LC A										
11	PX 07IR	100 LIQ		0.375 % v/v		0.375 % v/v		1-3"LC A										
12	STEADFAST	75 WG		0.035 lb ai/a		0.75 oz/a		1-3"LC A		0 c	0 b	0 a	90 abc	93 a	96 a-d			
12	CALLISTO	4 SC		0.0625 lb ai/a		2 fl oz/a		1-3"LC A										
12	AATREX	90 WG		0.25 lb ai/a		4.44 oz/a		1-3"LC A										
12	PRIME OIL COC	100 LIQ		1.0 % v/v		1 % v/v		1-3"LC A										
12	AMS	100 DRY		2.0 lb ai/a		2 lb/a		1-3"LC A										
13	STEADFAST	75 WG		0.035 lb ai/a		0.75 oz/a		1-3"LC A		0 c	0 b	0 a	93 ab	96 a	98 ab			
13	CALLISTO	4 SC		0.0625 lb ai/a		2 fl oz/a		1-3"LC A										
13	AATREX	90 WG		0.25 lb ai/a		4.44 oz/a		1-3"LC A										
13	SIMPLYX	100 LIQ		0.5 % v/v		0.5 % v/v		1-3"LC A										
14	STEADFAST	75 WG		0.035 lb ai/a		0.75 oz/a		1-3"LC A		0 c	0 b	0 a	91 ab	93 a	97 abc			
14	CALLISTO	4 SC		0.0625 lb ai/a		2 fl oz/a		1-3"LC A										
14	AATREX	90 WG		0.25 lb ai/a		4.44 oz/a		1-3"LC A										
14	PX 07TN	100 LIQ		0.5 % v/v		0.5 % v/v		1-3"LC A										
15	NONTREATED									0 c	0 b	0 a	0 e	0 c	0 f			
LSD (P=.05)										3.1	2.9	1.1	10.5	12.5	3.3	2.7	4.4	8.4
Replicate F										1.794	0.761	0.466	2.017	1.902	0.121	4.337	1.240	1.474
Replicate Prob(F)										0.1855	0.4772	0.6328	0.1527	0.1687	0.8868	0.0233	0.3054	0.2468
Treatment F										5.389	1.901	0.865	46.951	35.146	489.190	754.014	283.214	77.924
Treatment Prob(F)										0.0001	0.0738	0.6012	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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

Adjuvant Evaluation with DuPont Product Concepts.

Project Code: 07-HRC-WU12-PL Location: Horticulture Research Center
 Investigator: Bryan Young

Weed Code	AMARE	AMARE	IPOHE	IPOHE
Crop Code				
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Date	6-29-07	7-13-07	6-29-07	7-13-07
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	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3"LC	A	99 a	99 a	97 abc	79 e
1	AMS	100	DRY	2.0	lb ai/a	2	lb/a	1-3"LC	A				
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3"LC	A	99 a	99 a	96 abc	87 cd
2	SIMPLYX	100	LIQ	0.5	% v/v	0.5	% v/v	1-3"LC	A				
3	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3"LC	A	99 a	99 a	99 a	89 bcd
3	PX 07TN	100	LIQ	0.5	% v/v	0.5	% v/v	1-3"LC	A				
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3"LC	A	99 a	99 a	98 ab	91 abc
4	RESOLVE	25	WG	0.0156	lb ai/a	1	oz/a	1-3"LC	A				
4	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	1-3"LC	A				
4	AMS	100	DRY	2.0	lb ai/a	2	lb/a	1-3"LC	A				
5	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3"LC	A	99 a	99 a	99 a	89 bcd
5	RESOLVE	25	WG	0.0156	lb ai/a	1	oz/a	1-3"LC	A				
5	SIMPLYX	100	LIQ	0.5	% v/v	0.5	% v/v	1-3"LC	A				
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3"LC	A	99 a	99 a	98 ab	89 bcd
6	RESOLVE	25	WG	0.0156	lb ai/a	1	oz/a	1-3"LC	A				
6	PX 07TN	100	LIQ	0.5	% v/v	0.5	% v/v	1-3"LC	A				
7	STEADFAST	75	WG	0.035	lb ai/a	0.75	oz/a	1-3"LC	A	98 ab	96 ab	95 bc	87 cd
7	CLARITY	4	EC	0.125	lb ai/a	4	fl oz/a	1-3"LC	A				
7	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	1-3"LC	A				
7	AMS	100	DRY	2.0	lb ai/a	2	lb/a	1-3"LC	A				
8	STEADFAST	75	WG	0.035	lb ai/a	0.75	oz/a	1-3"LC	A	93 c	93 b	90 d	78 e
8	CLARITY	4	EC	0.125	lb ai/a	4	fl oz/a	1-3"LC	A				
8	SIMPLYX	100	LIQ	0.5	% v/v	0.5	% v/v	1-3"LC	A				
9	STEADFAST	75	WG	0.035	lb ai/a	0.75	oz/a	1-3"LC	A	99 a	99 a	93 cd	88 cd
9	CLARITY	4	EC	0.125	lb ai/a	4	fl oz/a	1-3"LC	A				
9	PX 07TN	100	LIQ	0.5	% v/v	0.5	% v/v	1-3"LC	A				
10	STEADFAST	75	WG	0.035	lb ai/a	0.75	oz/a	1-3"LC	A	96 bc	96 ab	93 cd	83 de
10	CLARITY	4	EC	0.125	lb ai/a	4	fl oz/a	1-3"LC	A				
10	PX 07IR	100	LIQ	0.375	% v/v	0.375	% v/v	1-3"LC	A				
11	STEADFAST	75	WG	0.035	lb ai/a	0.75	oz/a	1-3"LC	A	99 a	99 a	99 a	92 abc
11	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	1-3"LC	A				
11	AATREX	90	WG	0.25	lb ai/a	4.44	oz/a	1-3"LC	A				
11	PX 07IR	100	LIQ	0.375	% v/v	0.375	% v/v	1-3"LC	A				
12	STEADFAST	75	WG	0.035	lb ai/a	0.75	oz/a	1-3"LC	A	99 a	99 a	99 a	96 a
12	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	1-3"LC	A				
12	AATREX	90	WG	0.25	lb ai/a	4.44	oz/a	1-3"LC	A				
12	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	1-3"LC	A				
12	AMS	100	DRY	2.0	lb ai/a	2	lb/a	1-3"LC	A				
13	STEADFAST	75	WG	0.035	lb ai/a	0.75	oz/a	1-3"LC	A	99 a	99 a	99 a	92 abc
13	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	1-3"LC	A				
13	AATREX	90	WG	0.25	lb ai/a	4.44	oz/a	1-3"LC	A				
13	SIMPLYX	100	LIQ	0.5	% v/v	0.5	% v/v	1-3"LC	A				
14	STEADFAST	75	WG	0.035	lb ai/a	0.75	oz/a	1-3"LC	A	99 a	99 a	99 a	96 ab
14	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	1-3"LC	A				
14	AATREX	90	WG	0.25	lb ai/a	4.44	oz/a	1-3"LC	A				
14	PX 07TN	100	LIQ	0.5	% v/v	0.5	% v/v	1-3"LC	A				
15	NONTREATED									0 d	0 c	0 e	0 f
LSD (P=.05)										2.9	3.5	3.8	7.3
Replicate F										0.157	0.768	2.795	0.164
Replicate Prob(F)										0.8557	0.4738	0.0788	0.8492
Treatment F										651.384	443.149	376.253	87.156
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: Precision Labs.
2. Ratings: CI 7 DAT; CI/WC at 14 + 28 DAT.
3. DA-A = Days after 1-3"LC application.