

Status Tank-Mixtures with Glyphosate in Glyphosate-Resistant Corn.

Trial ID: 08-10B-W40 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: 06-15-08

Objectives: Evaluate the efficacy (benefit) of Status tank-mixed with glyphosate for postemergence applications in glyphosate-resistant corn compared with Callisto.

Crop 1: ZEAMD Dent corn Variety: DKC 61-73 RR2/YGCB
 Planting Method: SEEDS Planting Date: 06-15-08
 Rate, Unit: 28000 S/A Depth, Unit: 1.5 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: AMBTR Ambrosia trifida L. ragweed, giant
 Pest 2 Type: W Code: ABUTH Abutilon theophrasti Medicus velvetleaf
 Pest 3 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 4 Type: W Code: IPOHE Ipomoea hederacea (L.) jacq. morningglory, annual
 Pest 5 Type: W Code: CYPES Cyperus esculentus L. nutsedge, yellow
 Pest 6 Type: W Code: SETFA Setaria faberi Herrm. foxtail, giant
 Pest 7 Type: W Code: XANST Xanthium strumarium L. cocklebur, common

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 24 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2007

Field Prep./Maintenance: N 150 LB/A, P2O5 50 LB/A, K2O 100 LB/A

% OM: 2 Texture: SILT LOAM
 pH: 6.2 Soil Name: PIERRON
 CEC: 11 Fert. Level: P1 88 LB/A, K 445 LB/A

	Application Description	
	A	B
Application Date:	06-29-08	07-02-08
Time of Day:	16:30	9:30
Application Method:	Spray	Spray
Application Timing:	5-8"CN	8-12"CN
Application Placement:	BROFOL	BROFOL
Applied By:	DKT	DKT
Air Temperature, Unit:	70 F	80 F
% Relative Humidity:	92	75
Wind Velocity, Unit:	9 MPH	6 MPH
Dew Presence (Y/N):	N	N
Soil Temperature, Unit:	81 F	84 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	80	
	06-29-08	07-02-08
Crop stage at application:	V4	V4
Height Min, Max (inch):	6 8	8 12

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	Pest Stage At Each Application			
Application Date:	06-29-08	07-02-08		
Weed Code:	AMBTR	AMBTR		
Stage Majority (leaves):	4	4		
Stage Min, Max:	2	4	2	6
Height Majority:	3	IN	4	IN
Height Min, Max:	1	4	1	6
Density, Unit:	1	FT2	1	FT2
Weed Code:	ABUTH	ABUTH		
Stage Majority (leaves):	3	4		
Stage Min, Max:	2	4	2	4
Height Majority:	3	IN	4	IN
Height Min, Max:	2	4	2	5
Density, Unit:	1	FT2	1	FT2
Weed Code:	AMATA	AMATA		
Stage Majority (leaves):	4	4		
Stage Min, Max:	2	6	2	6
Height Majority:	1	IN	2	IN
Height Min, Max:	1	2	2	3
Density, Unit:	1	FT2	1	FT2
Weed Code:	IPOHE	IPOHE		
Stage Majority (leaves):	2	3		
Stage Min, Max:	COTY	3	COTY	5
Height Majority:	2	IN	3	IN
Height Min, Max:	1	4	1	5
Density, Unit:	0.5	FT2	0.5	FT2
Weed Code:	CYPES	CYPES		
Stage Majority (leaves):	9	9		
Stage Min, Max:	3	9	3	9
Height Majority:	6	IN	7	IN
Height Min, Max:	1	7	3	8
Density, Unit:	2	FT2	2	FT2
Weed Code:	SETFA	SETFA		
Stage Majority (leaves):	3	4		
Stage Min, Max:	1	4	2	5
Height Majority:	4	IN	4	IN
Height Min, Max:	1	5	2	6
Density, Unit:	2	FT2	2	FT2
Weed Code:	XANST	XANST		
Stage Majority (leaves):	4	4		
Stage Min, Max:	2	4	2	4
Height Majority:	3	IN	4	IN
Height Min, Max:	1	4	1	5
Density, Unit:	1	FT2	1	FT2

Application Equipment

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

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										AMBTR	AMBTR	AMBTR	AMBTR					
										ZEAMD	ZEAMD	ZEAMD	ZEAMD	ZEAMD				
										Injury	Injury	Injury	Injury	Injury				
										Percent	Percent	Percent	Percent	Percent				
										5 DAT	14 DAT	28 DAT	35 DAT	42 DAT				
										Control	Control	Control	Control	Control				
										Percent	Percent	Percent	Percent	Percent				
										14 DAT	28 DAT	35 DAT	42 DAT					
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl										
No.	Name	Conc	Type	Unit	Rate	Rate	Stage	Code										
1	NONTREATED									0 a	0 b	0 a	0 a	0 a	0 c	0 c	0 b	0 c
2	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		5-8"CN	A		0 a	0 b	0 a	0 a	0 a	98 b	96 ab	92 a	88 b
2	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v		5-8"CN	A										
3	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		8-12"CN	B		0 a	0 b	0 a	0 a	0 a	98 ab	92 ab	91 a	93 a
3	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v		8-12"CN	B										
4	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		5-8"CN	A		0 a	0 b	0 a	0 a	0 a	99 a	97 a	95 a	96 a
4	STATUS	56	WG	0.0875 lb ai/a	2.5 oz/a		5-8"CN	A										
4	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v		5-8"CN	A										
5	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		5-8"CN	A		0 a	2 a	0 a	0 a	0 a	99 a	96 ab	96 a	96 a
5	STATUS	56	WG	0.175 lb ai/a	5 oz/a		5-8"CN	A										
5	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v		5-8"CN	A										
6	ROUNDUP W-MAX	4.5	SL	0.77 lb ae/a	22 fl oz/a		5-8"CN	A		0 a	0 b	0 a	0 a	0 a	99 a	91 b	91 a	92 ab
6	CALLISTO	4	SC	0.047 lb ai/a	1.5 fl oz/a		5-8"CN	A										
6	N-PAK AMS	100	SL	2.5 % v/v	2.5 % v/v		5-8"CN	A										
LSD (P=.05)										0.0	1.3	0.0	0.0	0.0	0.9	5.5	4.9	4.1
Replicate F										0.000	1.000	0.000	0.000	0.000	1.000	0.376	3.331	0.546
Replicate Prob(F)										1.0000	0.4019	1.0000	1.0000	1.0000	0.4019	0.6957	0.0779	0.5958
Treatment F										0.000	4.000	0.000	0.000	0.000	21906.403	478.936	608.006	870.138
Treatment Prob(F)										1.0000	0.0297	1.0000	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	ABUTH	ABUTH	ABUTH	ABUTH	AMATA	AMATA	AMATA	AMATA
Crop Code								
Rating Date								
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing	14 DAT	28 DAT	35 DAT	42 DAT	14 DAT	28 DAT	35 DAT	42 DAT
Trt-Eval Interval								

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 14 DAT	ABUTH 28 DAT	ABUTH 35 DAT	ABUTH 42 DAT	AMATA 14 DAT	AMATA 28 DAT	AMATA 35 DAT	AMATA 42 DAT
1	NONTREATED									0 e	0 d	0 c	0 d	0 b	0 c	0 b	0 b
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	90 d	80 bc	80 b	75 c	98 a	93 b	93 a	93 a
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
3	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	B	97 ab	87 ab	87 ab	83 ab	98 a	95 ab	94 a	92 a
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	B								
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	91 cd	83 bc	81 b	77 bc	98 a	96 ab	93 a	94 a
4	STATUS	56	WG	0.0875	lb ai/a	2.5	oz/a	5-8"CN	A								
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
5	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	94 bc	79 c	79 b	78 bc	99 a	96 a	96 a	96 a
5	STATUS	56	WG	0.175	lb ai/a	5	oz/a	5-8"CN	A								
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	98 a	92 a	92 a	91 a	99 a	95 ab	95 a	95 a
6	CALLISTO	4	SC	0.047	lb ai/a	1.5	fl oz/a	5-8"CN	A								
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
LSD (P=.05)										3.5	7.5	8.0	8.2	1.5	2.9	4.5	5.2
Replicate F										0.000	2.212	1.676	3.180	1.000	0.794	1.370	1.839
Replicate Prob(F)										1.0000	0.1602	0.2356	0.0853	0.4019	0.4786	0.2979	0.2089
Treatment F										1191.572	211.283	186.655	165.279	7291.951	1746.627	726.222	539.453
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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

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									IPOHE	IPOHE	IPOHE	IPOHE	CYPES	CYPES	CYPES	CYPES	
									Control	Control	Control	Control	Control	Control	Control	Control	
									Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
									14 DAT	28 DAT	35 DAT	42 DAT	14 DAT	28 DAT	35 DAT	42 DAT	
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl									
No.	Name	Conc	Type	Unit	Rate	Rate	Stage	Code									
1	NONTREATED								0 c	0 b	0 b	0 e	0 d	0 d	0 c	0 d	
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	72 b	53 a	30 a	20 d	94 a	73 ab	73 a	73 a
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
3	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	B	75 ab	58 a	33 a	27 cd	72 c	53 c	50 b	53 c
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	B								
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	72 b	55 a	47 a	42 a	87 b	65 b	62 ab	63 b
4	STATUS	56	WG	0.0875	lb ai/a	2.5	oz/a	5-8"CN	A								
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
5	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	80 a	67 a	43 a	37 ab	91 ab	78 a	75 a	77 a
5	STATUS	56	WG	0.175	lb ai/a	5	oz/a	5-8"CN	A								
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	73 ab	65 a	27 a	32 bc	95 a	73 ab	70 a	70 ab
6	CALLISTO	4	SC	0.047	lb ai/a	1.5	fl oz/a	5-8"CN	A								
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
LSD (P=.05)									6.8	24.3	20.2	8.2	4.4	8.4	14.9	9.3	
Replicate F									0.400	0.757	0.946	0.270	5.231	5.909	1.914	5.737	
Replicate Prob(F)									0.6806	0.4943	0.4205	0.7686	0.0279	0.0202	0.1978	0.0219	
Treatment F									200.980	10.473	6.703	32.216	702.520	121.039	36.049	93.684	
Treatment Prob(F)									0.0001	0.0010	0.0055	0.0001	0.0001	0.0001	0.0001	0.0001	

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

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									SETFA	SETFA	SETFA	SETFA	XANST	XANST	XANST	XANST	
									Control	Control	Control	Control	Control	Control	Control	Control	
									Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
									14 DAT	28 DAT	35 DAT	42 DAT	14 DAT	28 DAT	35 DAT	42 DAT	
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl									
No.	Name	Conc	Type	Unit	Rate	Rate	Stage	Code									
1	NONTREATED								0 c	0 c	0 c	0 c	0 c	0 b	0 c	0 c	
2	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	93 b	80 a	77 ab	82 ab	94 ab	87 a	72 b	67 b
2	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
3	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	B	98 a	85 a	80 a	85 ab	92 ab	82 a	78 ab	78 a
3	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	B								
4	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	96 a	82 a	82 a	85 ab	91 b	82 a	78 ab	80 a
4	STATUS	56	WG	0.0875	lb ai/a	2.5	oz/a	5-8"CN	A								
4	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
5	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	98 a	83 a	82 a	88 a	93 ab	87 a	78 ab	83 a
5	STATUS	56	WG	0.175	lb ai/a	5	oz/a	5-8"CN	A								
5	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
6	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	5-8"CN	A	92 b	70 b	70 b	75 b	96 a	84 a	80 a	82 a
6	CALLISTO	4	SC	0.047	lb ai/a	1.5	fl oz/a	5-8"CN	A								
6	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	5-8"CN	A								
LSD (P=.05)									3.3	9.1	9.4	10.4	3.9	11.7	7.2	6.8	
Replicate F									0.068	0.667	0.625	0.897	7.315	3.368	5.624	18.529	
Replicate Prob(F)									0.9351	0.5348	0.5549	0.4381	0.0110	0.0762	0.0231	0.0004	
Treatment F									1388.257	131.333	116.250	107.872	932.038	85.874	194.957	222.118	
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	

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

Trial Comments

1. Protocol: BASF.
2. Ratings: CI at 5, 14, 28 + 42 DAT; WC at 14, 28 + 42 DAT.
3. DAT = Days after either the 5-8"CN or 8-12"CN application.
Ratings at 5 days after the 5-8"CN and 8-12"CN application were on 7-4-08 and 7-7-08, respectively.
Ratings at 14 days after the 5-8"CN and 8-12"CN application were on 7-13-08 and 7-16-08, respectively.
Ratings at 28 days after the 5-8"CN and 8-12"CN application were on 7-27-08 and 7-30-08, respectively.
Ratings at 35 days after the 5-8"CN and 8-12"CN application were on 8-3-08 and 8-6-08, respectively.
Ratings at 42 days after the 5-8"CN and 8-12"CN application were on 8-10-08 and 8-13-08, respectively.
4. 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.
5. Not harvested.