

AE 172747 Tank-mix Study.

Project Code: 07-2C-E95      Location: Belleville Research Center  
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country:      Belleville      IL 62221 USA  
 Trial Status: Final              Updated:      1-23-08

**Objective:**

Evaluate the necessary rate of AE 0172747 and tank-mix partners for control of existing weeds and residual activity.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. PANDI	panicum, fall	Panicum dichotomiflorum Michx.
3. ABUTH	velvetleaf	Abutilon theophrasti Medicus
4. AMBEL	ragweed, common	Ambrosia artemisiifolia L.

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: 28 FT              Reps: 3  
 Tillage Type: Reduced-Till              Study Design: Randomized complete block  
 Previous Crop, Year: ZEAMX, 2006  
 Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 100 LB/A

Soil Name: Weir                    % OM: 2.2              pH: 6.2              CEC: 8  
 Texture: Silt loam              Fert. Level: P1: 117 LB/A, K: 318 LB/A

**APPLICATION DESCRIPTION**

**A**  
 Application Date: 6-19-07  
 Time of Day: 7:00  
 Application Method: Spray  
 Application Timing: 6-8"W  
 Applic. Placement: BROFOL  
 Air Temp., Unit: 76 F  
 % Relative Humidity: 92  
 Wind Velocity, Unit: 0 MPH  
 Dew Presence (Y/N): N  
 Soil Moisture: NORMAL  
 % Cloud Cover: 20

**CROP STAGE AT EACH APPLICATION**

**A**  
 Crop 1 Code, Stage: ZEAMX V4-V5  
 Height, Unit: 16 IN

**WEED STAGE AT EACH APPLICATION**

**A**  
 Weed 1 Code: SETFA  
 Stage(leaves): 3-6  
 Height(inches): 4-8  
 Density: High  
 Weed 2 Code: PANDI  
 Stage(leaves): 3-6  
 Height(inches): 4-8  
 Density: High  
 Weed 3 Code: ABUTH  
 Stage(leaves): 3-5  
 Height(inches): 4-9  
 Density: Medium  
 Weed 4 Code: AMBEL  
 Stage(leaves): 4-10  
 Height(inches): 3-10  
 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:**

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Weed Code										SETFA	SETFA	PANDI	PANDI			
Crop Code										Control	Control	Control	Control			
Rating Data Type										Percent	Percent	Percent	Percent			
Rating Unit										6-26-07	7-3-07	7-24-07	7-24-07			
Rating Date										7 DA-A	14 DA-A	35 DA-A	35 DA-A			
Trt-Eval Interval										7 DA-A	14 DA-A	35 DA-A	35 DA-A			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code							
1	NONTREATED									0 a	0 a	0 a	0 d			
2	LIBERTY	1.67 EC		0.417	lb ai/a	32	fl oz/a	6-8"	W A	0 a	0 a	0 a	27 c			
2	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A	99 a	99 a	27 c	27 bc			
3	LIBERTY	1.67 EC		0.417	lb ai/a	32	fl oz/a	6-8"	W A	0 a	0 a	0 a	33 bc			
3	AATREX	90 WG		1.0	lb ai/a	1.11	lb/a	6-8"	W A	99 a	99 a	33 bc	30 bc			
3	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
4	LIBERTY	1.67 EC		0.417	lb ai/a	32	fl oz/a	6-8"	W A	0 a	0 a	0 a	23 c			
4	AE 0172747	3.5 SC		0.0273	lb ai/a	1	fl oz/a	6-8"	W A	99 a	99 a	23 c	20 c			
4	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
5	LIBERTY	1.67 EC		0.417	lb ai/a	32	fl oz/a	6-8"	W A	0 a	0 a	0 a	23 c			
5	AE 0172747	3.5 SC		0.041	lb ai/a	1.5	fl oz/a	6-8"	W A	99 a	99 a	23 c	23 bc			
5	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
6	LIBERTY	1.67 EC		0.417	lb ai/a	32	fl oz/a	6-8"	W A	0 a	0 a	0 a	20 c			
6	AE 0172747	3.5 SC		0.0547	lb ai/a	2	fl oz/a	6-8"	W A	99 a	99 a	20 c	33 b			
6	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
7	LIBERTY	1.67 EC		0.417	lb ai/a	32	fl oz/a	6-8"	W A	0 a	0 a	0 a	20 c			
7	IMPACT	2.8 SC		0.00547	lb ai/a	0.25	fl oz/a	6-8"	W A	99 a	99 a	20 c	33 b			
7	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
8	LIBERTY	1.67 EC		0.417	lb ai/a	32	fl oz/a	6-8"	W A	0 a	0 a	0 a	27 c			
8	CALLISTO	4 SC		0.0312	lb ai/a	1	fl oz/a	6-8"	W A	99 a	99 a	27 c	33 b			
8	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
9	LIBERTY	1.67 EC		0.417	lb ai/a	32	fl oz/a	6-8"	W A	0 a	0 a	0 a	53 b			
9	AE 0172747	3.5 SC		0.0273	lb ai/a	1	fl oz/a	6-8"	W A	99 a	99 a	53 b	30 bc			
9	AATREX	90 WG		0.5	lb ai/a	0.556	lb/a	6-8"	W A							
9	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
10	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	6-8"	W A	0 a	0 a	0 a	98 a			
10	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A	99 a	99 a	98 a	93 a			
11	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	6-8"	W A	0 a	0 a	0 a	98 a			
11	AATREX	90 WG		1.0	lb ai/a	1.11	lb/a	6-8"	W A	99 a	99 a	98 a	95 a			
11	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
12	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	6-8"	W A	0 a	0 a	0 a	98 a			
12	AE 0172747	3.5 SC		0.0273	lb ai/a	1	fl oz/a	6-8"	W A	99 a	99 a	98 a	93 a			
12	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
13	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	6-8"	W A	0 a	0 a	0 a	99 a			
13	AE 0172747	3.5 SC		0.041	lb ai/a	1.5	fl oz/a	6-8"	W A	99 a	99 a	99 a	96 a			
13	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
14	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	6-8"	W A	0 a	0 a	0 a	99 a			
14	AE 0172747	3.5 SC		0.0547	lb ai/a	2	fl oz/a	6-8"	W A	99 a	99 a	99 a	96 a			
14	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
15	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	6-8"	W A	0 a	0 a	0 a	99 a			
15	IMPACT	2.8 SC		0.00547	lb ai/a	0.25	fl oz/a	6-8"	W A	99 a	99 a	99 a	95 a			
15	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
16	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	6-8"	W A	0 a	0 a	0 a	99 a			
16	CALLISTO	4 SC		0.0312	lb ai/a	1	fl oz/a	6-8"	W A	99 a	99 a	99 a	93 a			
16	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
17	ROUNDUP W-MAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	6-8"	W A	0 a	0 a	0 a	99 a			
17	AE 0172747	3.5 SC		0.0273	lb ai/a	1	fl oz/a	6-8"	W A	99 a	99 a	98 a	94 a			
17	AATREX	90 WG		0.5	lb ai/a	0.556	lb/a	6-8"	W A							
17	AMS	100 DRY		2.0	% w/w	17	lb/100 gal	6-8"	W A							
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0	19.7	11.0
Replicate F										0.000	0.000	0.000	0.000	0.000	0.319	1.921
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	0.7289	0.1629
Treatment F										0.000	0.000	0.000	0.000	0.000	32.586	91.063
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	0.0001

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

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Weed Code	ABUTH	ABUTH	AMBEL	AMBEL
Crop Code				
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Date	7-3-07	7-24-07	7-3-07	7-24-07
Trt-Eval Interval	14 DA-A	35 DA-A	14 DA-A	35 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	NONTREATED									0 b	0 b	0 b	0 b
2	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
2	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
3	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
3	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	6-8"W	A				
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
4	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
4	AE 0172747	3.5	SC	0.0273	lb ai/a	1	fl oz/a	6-8"W	A				
4	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
5	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
5	AE 0172747	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	6-8"W	A				
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
6	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
6	AE 0172747	3.5	SC	0.0547	lb ai/a	2	fl oz/a	6-8"W	A				
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
7	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
7	IMPACT	2.8	SC	0.00547	lb ai/a	0.25	fl oz/a	6-8"W	A				
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
8	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
8	CALLISTO	4	SC	0.0312	lb ai/a	1	fl oz/a	6-8"W	A				
8	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
9	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
9	AE 0172747	3.5	SC	0.0273	lb ai/a	1	fl oz/a	6-8"W	A				
9	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	6-8"W	A				
9	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
10	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
10	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
11	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
11	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	6-8"W	A				
11	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
12	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
12	AE 0172747	3.5	SC	0.0273	lb ai/a	1	fl oz/a	6-8"W	A				
12	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
13	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
13	AE 0172747	3.5	SC	0.041	lb ai/a	1.5	fl oz/a	6-8"W	A				
13	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
14	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
14	AE 0172747	3.5	SC	0.0547	lb ai/a	2	fl oz/a	6-8"W	A				
14	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
15	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
15	IMPACT	2.8	SC	0.00547	lb ai/a	0.25	fl oz/a	6-8"W	A				
15	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
16	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
16	CALLISTO	4	SC	0.0312	lb ai/a	1	fl oz/a	6-8"W	A				
16	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
17	ROUNDUP W-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A	99 a	99 a	99 a	99 a
17	AE 0172747	3.5	SC	0.0273	lb ai/a	1	fl oz/a	6-8"W	A				
17	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	6-8"W	A				
17	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A				
LSD (P=.05)										0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000

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

Trial Comments

1. Protocol: Bayer (JNE).
2. Ratings: CI 7 DAT; CI/WC 14 + 35 DAT.
3. Crop destruct.
4. DA-A = Days after 6-8"W application.