

Water Conditioning Agents with Touchdown Total - United Suppliers.

Project Code: 06-10B-ME70 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: 12-1-06**Objective:**

Compare glyphosate efficacy with commercial and experimental adjuvant formulations for conditioning hard water.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMBTR	ragweed, giant	Ambrosia trifida L.
3. XANST	cocklebur, common	Xanthium strumarium L.
4. ABUTH	velvetleaf	Abutilon theophrasti Medicus
5. IPOSS	morningglory, species	Ipomoea sp.

Crop 1:	GLXMA soybean	Variety:	Asgrow 4403 RR
Planting Method:	Seeded	Planting Date:	5-30-06
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	20 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2005				
Field Prep./Maintenance:	N 0 LB/A, P205 0 LB/A, K2O 100 LB/A				

Soil Name:	Weir	% OM:	2	pH:	6.2	CEC:	11
Texture:	Silt loam	Fert. Level:	P1: 88 LB/A, K: 445 LB/A				

APPLICATION DESCRIPTION

Application Date:	6-26-06
Time of Day:	12:00
Application Method:	Spray
Application Timing:	6-8"W
Applic. Placement:	BROFOL
Air Temp., Unit:	76 F
% Relative Humidity:	82
Wind Velocity, Unit:	5 MPH
Soil Moisture:	NORMAL
% Cloud Cover:	25

CROP STAGE AT EACH APPLICATION

Crop 1 Code, Stage:	GLXMA V3
Height, Unit:	7-9 IN

WEED STAGE AT EACH APPLICATION

Weed 1 Code:	SETFA
Stage (leaves):	3-6
Height (inches):	4-8
Density:	High
Weed 2 Code:	AMBTR
Stage (leaves):	4-8
Height (inches):	8-12
Density:	Medium
Weed 3 Code:	XANST
Stage (leaves):	4-8
Height (inches):	6-10
Density:	High
Weed 4 Code:	ABUTH
Stage (leaves):	3-6
Height (inches):	5-10
Density:	Medium
Weed 5 Code:	IPOSS
Stage (leaves):	8-10
Height (inches):	10-12
Density:	Low

APPLICATION EQUIPMENT

Appl. Equipment:	CO2 sprayer
Operating Pressure:	40 PSI
Nozzle Type:	Flat fan
Nozzle Size:	XR 110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	12.5 GPA

NOTES:

Water Conditioning Agents with Touchdown Total - United Suppliers.

Project Code: 06-10B-ME70 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	GLXMA Injury Percent	GLXMA Injury Percent	GLXMA Injury Percent	GLXMA Injury Percent	SETFA Control Percent	SETFA Control Percent	SETFA Control Percent	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	3 DA-A	7 DA-A	14 DA-A	28 DA-A
1	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
2	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
2	FORMULA 1	100	LIQ	0.75	% v/v	3	qt/100 gal	6-8"W	A	0	0	0	99
3	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
3	SPEEDWAY	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A	0	0	0	99
4	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
4	USEXP1	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A	0	0	0	99
5	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
5	USEXP2	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A	0	0	0	99
6	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
6	USEXP5	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A	0	0	0	99
7	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A	0	0	0	99
8	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
8	AMS 2000	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A	0	0	0	99
9	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
9	AMS 20/10	100	DRY	1.2	% w/w	10	lb/100 gal	6-8"W	A	0	0	0	99
10	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
10	PAYOFF PLUS	100	DRY	1.2	% w/w	10	lb/100 gal	6-8"W	A	0	0	0	99
11	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
11	AMSOL PLUS	100	LIQ	5	% v/v	5	gal/100 gal	6-8"W	A	0	0	0	99
12	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	0	0	0	99
12	DOUBLE DOWN	100	LIQ	2.5	% v/v	2.5	gal/100 gal	6-8"W	A	0	0	0	99
13	NONTREATED									0	0	0	0
	LSD (P=.05)									0.0	0.0	0.0	0.3
	Replicate F									0.000	0.000	0.000	1.000
	Replicate Prob(F)									1.0000	1.0000	1.0000	0.3827
	Treatment F									0.000	0.000	0.000	88160.509
	Treatment Prob(F)									1.0000	1.0000	1.0000	0.0001

Water Conditioning Agents with Touchdown Total - United Suppliers.

Project Code: 06-10B-ME70 Location: Belleville Research Center
 Investigator: Bryan Young

								AMBTR	AMBTR	AMBTR	XANST	XANST	XANST		
								Control	Control	Control	Control	Control	Control		
								Percent	Percent	Percent	Percent	Percent	Percent		
								7-3-06	7-10-06	7-24-06	7-3-06	7-10-06	7-24-06		
								7 DA-A	14 DA-A	28 DA-A	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						
1	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	52	35	25	90	89	90
2	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	58	47	33	92	92	93
2	FORMULA 1	100	LIQ	0.75	% v/v	3	qt/100 gal	6-8"W	A						
3	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	59	48	32	96	97	95
3	SPEEDWAY	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A						
4	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	57	48	32	93	95	95
4	USEXP1	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A						
5	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	52	43	23	93	91	93
5	USEXP2	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A						
6	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	58	52	35	96	98	97
6	USEXP5	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A						
7	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	63	58	50	98	98	95
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A						
8	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	57	53	53	98	98	97
8	AMS 2000	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A						
9	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	62	55	48	97	98	97
9	AMS 20/10	100	DRY	1.2	% w/w	10	lb/100 gal	6-8"W	A						
10	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	55	48	40	97	98	98
10	PAYOFF PLUS	100	DRY	1.2	% w/w	10	lb/100 gal	6-8"W	A						
11	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	52	45	43	97	98	98
11	AMSOL PLUS	100	LIQ	5	% v/v	5	gal/100 gal	6-8"W	A						
12	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	60	55	53	96	98	98
12	DOUBLE DOWN	100	LIQ	2.5	% v/v	2.5	gal/100 gal	6-8"W	A						
13	NONTREATED										0	0	0	0	0
LSD (P=.05)										7.0	10.1	8.6	5.5	8.6	5.9
Replicate F										1.145	0.820	0.019	3.876	2.024	4.945
Replicate Prob(F)										0.3349	0.4524	0.9816	0.0348	0.1541	0.0159
Treatment F										46.048	18.193	25.137	198.300	81.693	174.172
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Water Conditioning Agents with Touchdown Total - United Suppliers.

Project Code: 06-10B-ME70 Location: Belleville Research Center
 Investigator: Bryan Young

								ABUTH	ABUTH	ABUTH	IPOSS	IPOSS	IPOSS		
								Control	Control	Control	Control	Control	Control		
								Percent	Percent	Percent	Percent	Percent	Percent		
								7-3-06	7-10-06	7-24-06	7-3-06	7-10-06	7-24-06		
								7 DA-A	14 DA-A	28 DA-A	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						
1	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	28	25	20	28	27	28
2	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	33	31	27	32	33	33
2	FORMULA 1	100	LIQ	0.75	% v/v	3	qt/100 gal	6-8"W	A						
3	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	35	35	25	35	37	30
3	SPEEDWAY	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A						
4	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	33	32	27	38	40	33
4	USEXP1	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A						
5	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	33	30	27	30	35	37
5	USEXP2	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A						
6	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	40	33	27	38	40	33
6	USEXP5	100	LIQ	0.25	% v/v	1	qt/100 gal	6-8"W	A						
7	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	47	43	42	42	45	37
7	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A						
8	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	45	48	43	35	42	36
8	AMS 2000	100	DRY	2.0	% w/w	17	lb/100 gal	6-8"W	A						
9	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	45	49	40	35	43	38
9	AMS 20/10	100	DRY	1.2	% w/w	10	lb/100 gal	6-8"W	A						
10	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	43	45	39	37	42	38
10	PAYOFF PLUS	100	DRY	1.2	% w/w	10	lb/100 gal	6-8"W	A						
11	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	45	47	43	37	40	38
11	AMSOL PLUS	100	LIQ	5	% v/v	5	gal/100 gal	6-8"W	A						
12	TOUCHDOWN TOTAL	4.17	SC	0.375	lb ae/a	11.5	fl oz/a	6-8"W	A	45	45	46	36	38	35
12	DOUBLE DOWN	100	LIQ	2.5	% v/v	2.5	gal/100 gal	6-8"W	A						
13	NONTREATED									0	0	0	0	0	0
LSD (P=.05)									5.5	6.4	7.1	4.6	6.1	4.3	
Replicate F									2.254	3.933	0.216	2.885	0.786	2.768	
Replicate Prob(F)									0.1268	0.0333	0.8073	0.0754	0.4668	0.0829	
Treatment F									44.721	37.297	27.193	43.981	31.345	46.117	
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	

Trial Comments

1. Protocol: United Suppliers.
2. Ratings: CI 3 + 7 DAT; WC 7, 14 + 28 DAT.
3. Spraying instructions: Use XR 110015 tips.
4. DA-A = Days after 6-8"W application.
5. IPOSS was IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
6. Not harvested.