

North Carolina State University

POTENTIAL MOVEMENT OF TRIFLOXYSULFURON AND OTHER SULFONYLUREA HERBICIDES

Trial ID: 04-T3
Location: UNIVERSITY CLUB

Study Dir.: L.S. WARREN
Investigator: Fred Yelverton

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	NA .
Stage Scale:	.
Density, Unit:	. .

APPLICATION EQUIPMENT

	A
Appl. Equipment:	BACSPR
Operating Pressure:	35 PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	XR 8002VS
Nozzle Spacing, Unit:	10 IN
Band Width, Unit:	40 IN
Boom Length, Unit:	40 IN
Boom Height, Unit:	10 IN
Ground Speed, Unit:	3 MPH
Carrier:	WATER
Spray Volume, Unit:	32.5 GPA
Propellant:	COMCO2
Tank Mix (Y/N):	Y

North Carolina State University

POTENTIAL MOVEMENT OF TRIFLOXYSULFURON AND OTHER SULFONYLUREA HERBICIDES

Trial ID: 04-T3
 Location: UNIVERSITY CLUB

Study Dir.: L.S. WARREN
 Investigator: Fred Yelverton

				LAMAM	LAMAM	LAMAM	GERCA	
				CONTROL PERCENT	CONTROL PERCENT	CONTROL PERCENT	CONTROL PERCENT	
				2-4-04	2-19-04	3-5-04	3-5-04	
				L.S. WARREN	L.S. WARREN	L.S. WARREN	L.S. WARREN	
				50 DA-A	65 DA-A	80 DA-A	80 DA-A	
				P	P	P	P	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Product Rate	Product Rate	Grow Unit	Appl Code
1	MONUMENT X-77 SPREADER	75	WG	0.33 oz wt/a			DEC 16 A	
		L		0.25 % v/v			DEC 16 A	
2	MONUMENT X-77 SPREADER	75	WG	0.56 oz wt/a			DEC 16 A	
		L		0.25 % v/v			DEC 16 A	
3	KERB WSP X-77 SPREADER	50	WP	3.0 lb/a			DEC 16 A	
		L		0.25 % v/v			DEC 16 A	
4	TRANXIT GTA X-77 SPREADER	25	DF	2.0 oz wt/a			DEC 16 A	
		L		0.25 % v/v			DEC 16 A	
5	MANOR X-77 SPREADER	60	WG	0.5 oz wt/a			DEC 16 A	
		L		0.25 % v/v			DEC 16 A	
6	REVOLVER	0.19	L	17.4 fl oz/a			DEC 16 A	
7	CHECK							
					0.0 b	0.0 b	0.0 b	0.0 b
					100.0 a	100.0 a	100.0 a	0.0 b
					100.0 a	100.0 a	100.0 a	0.0 b
					0.0 b	0.0 b	0.0 b	0.0 b
					100.0 a	100.0 a	100.0 a	100.0 a
					100.0 a	100.0 a	100.0 a	0.0 b
					0.0 b	0.0 b	0.0 b	0.0 b
					0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00
					0.0	0.0	0.0	0.0
					71.43	71.43	71.43	14.29
					0.0	0.0	0.0	0.0
				
					15.0	15.0	15.0	9.0
					0.02	0.02	0.02	0.174
					0.000	0.000	0.000	0.000
					1.0000	1.0000	1.0000	1.0000
					0.000	0.000	0.000	0.000
					1.0000	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

North Carolina State University

POTENTIAL MOVEMENT OF TRIFLOXYSULFURON AND OTHER SULFONYLUREA HERBICIDES

Trial ID: 04-T3
 Location: UNIVERSITY CLUB

Study Dir.: L.S. WARREN
 Investigator: Fred Yelverton

							TRFRE	VERHE	LOLPE	LOLPE		
							CONTROL	CONTROL	LOLPE	LOLPE		
							PERCENT	PERCENT	INJURY	INJURY		
							3-5-04	3-5-04	2-19-04	3-5-04		
							L.S. WARREN	L.S. WARREN	L.S. WARREN	L.S. WARREN		
							80 DA-A	80 DA-A	65 DA-A	80 DA-A		
							P	P	P	P		
Weed Code												
Crop Code												
Rating Data Type												
Rating Unit												
Rating Date												
Assessed By												
Trt-Eval Interval												
ARM Action Codes												
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code				
1	MONUMENT X-77 SPREADER	75	WG	0.33 oz wt/a			DEC 16 A		99.8 a	99.8 a	5.0 c	8.8 bc
		L		0.25 % v/v			DEC 16 A					
2	MONUMENT X-77 SPREADER	75	WG	0.56 oz wt/a			DEC 16 A		98.8 a	100.0 a	21.3 b	13.8 b
		L		0.25 % v/v			DEC 16 A					
3	KERB WSP X-77 SPREADER	50	WP	3.0 lb/a			DEC 16 A		0.0 c	100.0 a	60.0 a	77.0 a
		L		0.25 % v/v			DEC 16 A					
4	TRANXIT GTA X-77 SPREADER	25	DF	2.0 oz wt/a			DEC 16 A		0.0 c	0.0 c	7.5 c	2.5 bc
		L		0.25 % v/v			DEC 16 A					
5	MANOR X-77 SPREADER	60	WG	0.5 oz wt/a			DEC 16 A		99.8 a	98.8 b	0.5 c	0.5 c
		L		0.25 % v/v			DEC 16 A					
6	REVOLVER	0.19	L	17.4 fl oz/a			DEC 16 A		8.8 b	0.0 c	0.0 c	0.0 c
7	CHECK								0.0 c	0.0 c	0.0 c	0.0 c
LSD (P=.05)							7.01	0.41	13.02	12.33		
Standard Deviation							4.72	0.27	8.77	8.30		
CV							10.76	0.48	65.1	56.69		
Grand Mean							43.86	56.93	13.46	14.64		
Bartlett's X2							29.446	0.0	18.058	17.124		
P(Bartlett's X2)							0.001*	0.001*	0.001*	0.002*		
Friedman's X2							18.67	20.304	18.429	17.545		
P(Friedman's X2)							0.005	0.002	0.005	0.007		
Replicate F							0.569	0.632	1.578	0.306		
Replicate Prob(F)							0.6428	0.6041	0.2293	0.8206		
Treatment F							486.707	150453.640	24.852	45.478		
Treatment Prob(F)							0.0001	0.0001	0.0001	0.0001		

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

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

North Carolina State University

POTENTIAL MOVEMENT OF TRIFLOXYSULFURON AND OTHER SULFONYLUREA HERBICIDES

Trial ID: 04-T3
 Location: UNIVERSITY CLUB

Study Dir.: L.S. WARREN
 Investigator: Fred Yelverton

Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Assessed By		Trt-Eval Interval		ARM Action Codes	
				LLOLPE		LLOLPE		LLOLPE		LLOLPE		LLOLPE		LLOLPE	
				INJURY		MOVEMENT									
				PERCENT		FEET									
				3-18-04		3-18-04									
				L.S. WARREN		L.S. WARREN									
				93 DA-A		93 DA-A									
				P											
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Product Rate	Product Rate	Grow Unit	Stg	Appl Code						
1	MONUMENT X-77 SPREADER	75	WG	0.33 oz wt/a			DEC 16 A			5.0 b				0.4 c	
		L		0.25 % v/v			DEC 16 A								
2	MONUMENT X-77 SPREADER	75	WG	0.56 oz wt/a			DEC 16 A			5.0 b				0.9 b	
		L		0.25 % v/v			DEC 16 A								
3	KERB WSP X-77 SPREADER	50	WP	3.0 lb/a			DEC 16 A			78.3 a				4.3 a	
		L		0.25 % v/v			DEC 16 A								
4	TRANXIT GTA X-77 SPREADER	25	DF	2.0 oz wt/a			DEC 16 A			2.5 b				0.2 c	
		L		0.25 % v/v			DEC 16 A								
5	MANOR X-77 SPREADER	60	WG	0.5 oz wt/a			DEC 16 A			0.0 b				0.0 c	
		L		0.25 % v/v			DEC 16 A								
6	REVOLVER	0.19	L	17.4 fl oz/a			DEC 16 A			0.0 b				0.0 c	
7	CHECK									0.0 b				0.0 c	
LSD (P=.05)										10.74			0.45		
Standard Deviation										7.23			0.30		
CV										55.76			37.65		
Grand Mean										12.96			0.81		
Bartlett's X2										10.309			4.849		
P(Bartlett's X2)										0.006*			0.183		
Friedman's X2										16.339			17.946		
P(Friedman's X2)										0.012			0.006		
Replicate F										0.771			2.020		
Replicate Prob(F)										0.5249			0.1471		
Treatment F										63.812			103.480		
Treatment Prob(F)										0.0001			0.0001		

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Trial Comments

12-16-03: TREATMENTS APPLIED BY 9:45 AM

IRRIGATION NOTES:

STARTED IRRIGATING PLOTS AT 11:45 AM WITH 2.5 INCHES PER PLOT
 27,150 GAL PER ACRE = 1 INCH OF WATER SO 40 GAL WATER PER 4 X 6.5 FEET PLOT REQUIRED
 WATER FLOW THROUGH SHOWER SETTING ON NOZZLE WAS 5 GAL PER 110 SECONDS, SO 40 GAL TOOK 880 SECONDS OR 14.7 MINUTES PER PLOT
 PLOTS WATERED INDIVIDUALLY STARTING WITH REP 4 FOR 10 MINUTES APIECE
 PLOTS AGAIN WATERED INDIVIDUALLY STARTING WITH REP 4 FOR 4.7 MINUTES APIECE
 STOPPED IRRIGATING AT 6:00 PM
 RAINFALL OCCURRED DURING THE NIGHT AND EARLY INTO THE NEXT MORNING

12-17-03: IRRIGATED PLOTS WITH 0.5 INCH OF WATER FROM 9:45 AM TO 10:45 AM
 PLOTS WATERED INDIVIDUALLY STARTING WITH REP 4 FOR 2.5 MINUTES APIECE WITH SAME NOZZLE SETUP AS DESCRIBED IN 12-16-03 NOTES

12-22-03, 12-30-03, 01-05-04, 01-12-04, 02-04-04: NO EVIDENCE OF HERBICIDE MOVEMENT INTO LOLPE STRIPS AT THESE TIMES FROM ANY OF THE TREATMENTS

02-04-04: TRANXIT GTA AND REVOLVER PROVIDING NO CONTROL OF IVYLEAF SPEEDWELL
 KERB WSP AND REVOLVER PROVIDING NO CONTROL OF KNAWEL

02-19-04: LOLPE INJURY SYMPTOMS BECOMING EVIDENT AND CONSISTING OF CHLOROTIC LEAVES AND SLIGHTLY STUNTED GROWTH