



# North Carolina State University

POST YELLOW NUTSEdge CONTROL IN TIFSPORT BERMUDAGRASS USING FLAZASULFURON AND  
OTHER SULFONYLUREA HERBICIDES AS WELL AS INDUSTRY STANDARDS

Trial ID: 03-T19  
Location: SANDHILLS TURF

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

## APPLICATION EQUIPMENT

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

# North Carolina State University

## POST YELLOW NUTSEDGE CONTROL IN TIFSPORT BERMUDAGRASS USING FLAZASULFURON AND OTHER SULFONYLUREA HERBICIDES AS WELL AS INDUSTRY STANDARDS

Trial ID: 03-T19  
Location: SANDHILLS TURF

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

										CYPES	CYPES	CYPES		
										CONTROL PERCENT	CONTROL PERCENT	CONTROL PERCENT		
										6-3-03	6-23-03	7-8-03		
										L.S. WARREN	L.S. WARREN	L.S. WARREN		
										21 DA-A	41 DA-A	56 DA-A		
										P	P	P		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate	Unit	Grow Stg	Appl Code	Spray Volume			
1	FLAZASULFURON X-77 SPREADER	25	DG	3.0	oz wt/a				MAY 13	A		98.8 a	80.0 ab	42.3 cde
			L	0.25	% v/v				MAY 13	A				
2	FLAZASULFURON X-77 SPREADER	25	DG	3.0	oz wt/a				MAY 13	A		99.8 a	100.0 a	44.8 b-e
			L	0.25	% v/v				MAY 13	A				
	FLAZASULFURON X-77 SPREADER	25	DG	3.0	oz wt/a				JUN 3	C				
			L	0.25	% v/v				JUN 3	C				
3	FLAZASULFURON X-77 SPREADER	25	DG	2.25	oz wt/a				MAY 13	A		98.8 a	100.0 a	60.0 a-d
			L	0.25	% v/v				MAY 13	A				
	FLAZASULFURON X-77 SPREADER	25	DG	2.25	oz wt/a				JUN 3	C				
			L	0.25	% v/v				JUN 3	C				
4	FLAZASULFURON X-77 SPREADER	25	DG	1.5	oz wt/a				MAY 13	A		99.5 a	97.5 a	81.0 abc
			L	0.25	% v/v				MAY 13	A				
	FLAZASULFURON X-77 SPREADER	25	DG	1.5	oz wt/a				JUN 3	C				
			L	0.25	% v/v				JUN 3	C				
5	FLAZASULFURON X-77 SPREADER	25	DG	1.5	oz wt/a				MAY 13	A		93.5 a	97.5 a	99.0 a
			L	0.25	% v/v				MAY 13	A				
	FLAZASULFURON X-77 SPREADER	25	DG	1.5	oz wt/a				JUN 3	C				
			L	0.25	% v/v				JUN 3	C				
	FLAZASULFURON X-77 SPREADER	25	DG	1.5	oz wt/a				JUN 23	D				
			L	0.25	% v/v				JUN 23	D				
6	SULFOSULFURON X-77 SPREADER	75	WG	1.5	oz wt/a				MAY 13	A		100.0 a	99.5 a	73.5 abc
			L	0.25	% v/v				MAY 13	A				
7	SULFOSULFURON X-77 SPREADER	75	WG	1.33	oz wt/a				MAY 13	A		98.5 a	93.3 a	58.5 a-d
			L	0.25	% v/v				MAY 13	A				
	SULFOSULFURON X-77 SPREADER	75	WG	1.33	oz wt/a				JUL 28	E				
			L	0.25	% v/v				JUL 28	E				
8	TRIFLOXYSULFURON X-77 SPREADER	75	WG	0.47	oz wt/a				MAY 13	A		99.8 a	100.0 a	91.8 ab
			L	0.25	% v/v				MAY 13	A				
9	TRIFLOXYSULFURON X-77 SPREADER	75	WG	0.47	oz wt/a				MAY 13	A		99.0 a	97.5 a	99.0 a
			L	0.25	% v/v				MAY 13	A				
	TRIFLOXYSULFURON X-77 SPREADER	75	WG	0.47	oz wt/a				JUN 23	D				
			L	0.25	% v/v				JUN 23	D				
10	MANAGE X-77 SPREADER	75	WG	1.33	oz wt/a				MAY 13	A		99.5 a	92.5 a	43.5 cde
			L	0.5	% v/v				MAY 13	A				
11	MANAGE X-77 SPREADER	75	WG	1.33	oz wt/a				MAY 13	A		95.0 a	62.5 bc	99.0 a
			L	0.5	% v/v				MAY 13	A				
	MANAGE X-77 SPREADER	75	WG	1.33	oz wt/a				JUN 23	D				
			L	0.5	% v/v				JUN 23	D				
12	BUENO 6	6.0	L	2.0	lb ai/a				MAY 13	A		13.8 c	45.0 cd	24.8 de
	BUENO 6	6.0	L	2.0	lb ai/a				MAY 26	B				
13	IMAGE 70DG	70	DG	0.5	lb ai/a				MAY 13	A		48.8 b	35.0 d	20.0 de
	BUENO 6	6.0	L	2.0	lb ai/a				MAY 13	A				
	X-77 SPREADER		L	0.25	% v/v				MAY 13	A				
14	CHECK											0.0 d	0.0 e	0.0 e
LSD (P=.05)											10.54	25.72	47.20	
Standard Deviation											7.38	18.00	33.03	
CV											9.02	22.9	55.24	
Grand Mean											81.75	78.59	59.79	
Bartlett's X2											81.993	43.961	8.735	
P(Bartlett's X2)											0.001*	0.001*	0.462	
Replicate F											2.372	0.097	2.455	
Replicate Prob(F)											0.0851	0.9612	0.0775	
Treatment F											87.547	12.122	3.796	
Treatment Prob(F)											0.0001	0.0001	0.0006	

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

## POST YELLOW NUTSEDGE CONTROL IN TIFSPORT BERMUDAGRASS USING FLAZASULFURON AND OTHER SULFONYLUREA HERBICIDES AS WELL AS INDUSTRY STANDARDS

Trial ID: 03-T19  
Location: SANDHILLS TURF

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

Weed Code										CYPES	CYPES	CYNDA	
Crop Code										CONTROL	CONTROL	PHYTO	
Rating Data Type										PERCENT	PERCENT	PERCENT	
Rating Unit										7-23-03	9-3-03	7-8-03	
Rating Date										L.S. WARREN	L.S. WARREN	L.S. WARREN	
Assessed By										71 DA-A	113 DA-A	56 DA-A	
Trt-Eval Interval										P	P	P	
ARM Action Codes													
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Spray Volume			
1	FLAZASULFURON X-77 SPREADER	25 L	DG	3.0 oz wt/a 0.25 % v/v				MAY 13 A MAY 13 A		15.0 def	24.8 bcd	0.0 c	
2	FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER	25 L 25 DG	DG	3.0 oz wt/a 0.25 % v/v 3.0 oz wt/a 0.25 % v/v				MAY 13 A MAY 13 A JUN 3 C JUN 3 C		2.5 ef	20.0 cd	2.5 bc	
3	FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER	25 L 25 DG	DG	2.25 oz wt/a 0.25 % v/v 2.25 oz wt/a 0.25 % v/v				MAY 13 A MAY 13 A JUN 3 C JUN 3 C		42.5 cd	50.0 abc	1.3 c	
4	FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER	25 L 25 DG	DG	1.5 oz wt/a 0.25 % v/v 1.5 oz wt/a 0.25 % v/v				MAY 13 A MAY 13 A JUN 3 C JUN 3 C		60.0 bc	57.5 abc	2.5 bc	
5	FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER	25 L 25 DG 25 DG	DG	1.5 oz wt/a 0.25 % v/v 1.5 oz wt/a 0.25 % v/v 1.5 oz wt/a 0.25 % v/v				MAY 13 A MAY 13 A JUN 3 C JUN 3 C JUN 23 D JUN 23 D		57.5 bc	66.0 ab	10.0 a	
6	SULFOSULFURON X-77 SPREADER	75 L	WG	1.5 oz wt/a 0.25 % v/v				MAY 13 A MAY 13 A		41.3 cd	63.3 abc	0.0 c	
7	SULFOSULFURON X-77 SPREADER SULFOSULFURON X-77 SPREADER	75 L 75 WG	WG	1.33 oz wt/a 0.25 % v/v 1.33 oz wt/a 0.25 % v/v				MAY 13 A MAY 13 A JUL 28 E JUL 28 E		50.0 bc	80.8 a	0.0 c	
8	TRIFLOXYSULFURON X-77 SPREADER	75 L	WG	0.47 oz wt/a 0.25 % v/v				MAY 13 A MAY 13 A		76.3 ab	61.3 abc	0.0 c	
9	TRIFLOXYSULFURON X-77 SPREADER TRIFLOXYSULFURON X-77 SPREADER	75 L 75 WG	WG	0.47 oz wt/a 0.25 % v/v 0.47 oz wt/a 0.25 % v/v				MAY 13 A MAY 13 A JUN 23 D JUN 23 D		98.8 a	30.0 bcd	6.3 ab	
10	MANAGE X-77 SPREADER	75 L	WG	1.33 oz wt/a 0.5 % v/v				MAY 13 A MAY 13 A		31.3 cde	68.8 ab	0.0 c	
11	MANAGE X-77 SPREADER MANAGE X-77 SPREADER	75 L 75 WG	WG	1.33 oz wt/a 0.5 % v/v 1.33 oz wt/a 0.5 % v/v				MAY 13 A MAY 13 A JUN 23 D JUN 23 D		55.0 bc	56.0 abc	0.0 c	
12	BUENO 6 BUENO 6	6.0 L 6.0 L	L	2.0 lb ai/a 2.0 lb ai/a				MAY 13 A MAY 26 B		5.0 ef	38.8 a-d	1.3 c	
13	IMAGE 70DG BUENO 6 X-77 SPREADER	70 L 6.0 L	DG	0.5 lb ai/a 2.0 lb ai/a 0.25 % v/v				MAY 13 A MAY 13 A MAY 13 A		5.0 ef	18.8 cd	1.3 c	
14	CHECK									0.0 f	0.0 d	0.0 c	
LSD (P=.05)										30.34	45.90	4.37	
Standard Deviation										21.23	32.12	3.06	
CV										55.04	70.73	171.15	
Grand Mean										38.57	45.41	1.79	
Bartlett's X2										44.694	4.65	6.56	
P(Bartlett's X2)										0.001*	0.969	0.363	
Replicate F										3.773	3.834	3.951	
Replicate Prob(F)										0.0180	0.0169	0.0149	
Treatment F										8.146	2.145	3.676	
Treatment Prob(F)										0.0001	0.0331	0.0008	

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

## POST YELLOW NUTSEDGE CONTROL IN TIFSPORT BERMUDAGRASS USING FLAZASULFURON AND OTHER SULFONYLUREA HERBICIDES AS WELL AS INDUSTRY STANDARDS

Trial ID: 03-T19  
Location: SANDHILLS TURF

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

										CYNDA PHYTO PERCENT 7-23-03 L.S. WARREN 71 DA-A P	CYNDA PHYTO PERCENT 9-3-03 L.S. WARREN 113 DA-A P		
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Product Rate	Product Rate	Unit	Grow Stg	Appl Code	Spray Volume		
1	FLAZASULFURON X-77 SPREADER	25	DG L	3.0 0.25	oz wt/a % v/v				MAY 13 MAY 13	A A		0.0 b	0.0 a
2	FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER	25 25	DG L DG L	3.0 0.25 3.0 0.25	oz wt/a % v/v oz wt/a % v/v				MAY 13 MAY 13 JUN 3 JUN 3	A A C C		0.0 b	0.0 a
3	FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER	25 25	DG L DG L	2.25 0.25 2.25 0.25	oz wt/a % v/v oz wt/a % v/v				MAY 13 MAY 13 JUN 3 JUN 3	A A C C		0.0 b	0.0 a
4	FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER	25 25	DG L DG L	1.5 0.25 1.5 0.25	oz wt/a % v/v oz wt/a % v/v				MAY 13 MAY 13 JUN 3 JUN 3	A A C C		0.0 b	0.0 a
5	FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER FLAZASULFURON X-77 SPREADER	25 25 25	DG L DG L DG L	1.5 0.25 1.5 0.25 1.5 0.25	oz wt/a % v/v oz wt/a % v/v oz wt/a % v/v				MAY 13 MAY 13 JUN 3 JUN 3 JUN 23 JUN 23	A A C C D D		1.3 b	0.0 a
6	SULFOSULFURON X-77 SPREADER	75	WG L	1.5 0.25	oz wt/a % v/v				MAY 13 MAY 13	A A		0.0 b	0.0 a
7	SULFOSULFURON X-77 SPREADER SULFOSULFURON X-77 SPREADER	75 75	WG L WG L	1.33 0.25 1.33 0.25	oz wt/a % v/v oz wt/a % v/v				MAY 13 MAY 13 JUL 28 JUL 28	A A E E		0.0 b	0.0 a
8	TRIFLOXYSULFURON X-77 SPREADER	75	WG L	0.47 0.25	oz wt/a % v/v				MAY 13 MAY 13	A A		0.0 b	0.0 a
9	TRIFLOXYSULFURON X-77 SPREADER TRIFLOXYSULFURON X-77 SPREADER	75 75	WG L WG L	0.47 0.25 0.47 0.25	oz wt/a % v/v oz wt/a % v/v				MAY 13 MAY 13 JUN 23 JUN 23	A A D D		3.8 a	0.0 a
10	MANAGE X-77 SPREADER	75	WG L	1.33 0.5	oz wt/a % v/v				MAY 13 MAY 13	A A		0.0 b	0.0 a
11	MANAGE X-77 SPREADER MANAGE X-77 SPREADER	75 75	WG L WG L	1.33 0.5 1.33 0.5	oz wt/a % v/v oz wt/a % v/v				MAY 13 MAY 13 JUN 23 JUN 23	A A D D		0.0 b	0.0 a
12	BUENO 6 BUENO 6	6.0 6.0	L L	2.0 2.0	lb ai/a lb ai/a				MAY 13 MAY 26	A B		0.0 b	0.0 a
13	IMAGE 70DG BUENO 6 X-77 SPREADER	70 6.0	DG L L	0.5 2.0 0.25	lb ai/a lb ai/a % v/v				MAY 13 MAY 13 MAY 13	A A A		0.0 b	0.0 a
14	CHECK											0.0 b	0.0 a
LSD (P=.05)											1.33	0.00	
Standard Deviation											0.93	0.00	
CV											261.16	0.0	
Grand Mean											0.36	0.0	
Bartlett's X2											0.0	0.0	
P(Bartlett's X2)											1.00	.	
Replicate F											1.368	0.000	
Replicate Prob(F)											0.2667	1.0000	
Treatment F											4.895	0.000	
Treatment Prob(F)											0.0001	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

POST YELLOW NUTSEdge CONTROL IN TIFSPORT BERMUDAGRASS USING FLAZASULFURON AND  
OTHER SULFONYLUREA HERBICIDES AS WELL AS INDUSTRY STANDARDS

Trial ID: 03-T19

Study Dir.: L.S. WARREN

Location: SANDHILLS TURF

Investigator: Fred Yelverton

## Trial Comments

05-26-03: TREATMENT 12 (BUENO 6) WAS RETREATED 13 DAIT INSTEAD OF 7 DAIT DUE TO FREQUENT RAINS THE WEEK OF MAY 19-23

07-08-03: CYPES SHOOTS BECOMING EVIDENT IN MANY OF THE TREATED PLOTS  
CYNDA PHYTO EVIDENT FOR FIRST TIME (SLIGHT YELLOWISH-GREEN APPEARANCE NOT CONSIDERED OBJECTIONABLE)

07-23-03: CYPES PLANTS CONTINUING TO GERMINATE IN MANY OF THE TREATED PLOTS  
CYNDA PHYTO NOT CONSIDERED OBJECTIONABLE

08-15-03: TEST AREA WAS VERTICUT AND COULD NOT BE RATED AT THIS TIME (NO CYPES PLANTS WERE EVIDENT)