

North Carolina State University

Clumpy Ryegrass Control in Bermudagrass

Trial ID: 03-D20
Location: Quail Ridge GC

Study Dir.: Travis Gannon
Investigator: Fred Yelverton

APPLICATION EQUIPMENT

	A
Appl. Equipment:	CO2 SPRAY
Operating Pressure:	42 PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	VS8002XR
Nozzle Spacing, Unit:	10 INCH
Nozzles/Row:	4
Boom Length, Unit:	40 INCH
Boom Height, Unit:	10 INCH
Ground Speed, Unit:	3 MPH
Carrier:	WATER
Spray Volume, Unit:	32.5 GPA
Propellant:	COMP CO2

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											LOLPE	LOLPE	LOLPE	LOLPE
											CONTROL	CONTROL	CONTROL	CONTROL
											%	%	%	%
											6-3-03	6-11-03	6-18-03	6-23-03
											6 DA-A	14 DA-A	21 DA-A	26 DA-A
Trt	Treatment	Form	Form	Rate	Rate	Product	Product	Grow	Appl	Spray				
No.	Name	Conc	Type	Unit	Unit	Rate	Rate	Stg	Code	Volume				
1	Flazasulfuron X-77	25	DG	0.5 L	oz/a % v/v			MAY 28 MAY 28	A A		0.0 a	50.0 bcd	93.3 a	100.0 a
2	Flazasulfuron X-77	25	DG	1 L	oz/a % v/v			MAY 28 MAY 28	A A		0.0 a	60.0 abc	93.3 a	98.3 a
3	Flazasulfuron X-77	25	DG	1.5 L	oz/a % v/v			MAY 28 MAY 28	A A		0.0 a	63.3 ab	95.0 a	100.0 a
4	Flazasulfuron X-77	25	DG	2.25 L	oz/a % v/v			MAY 28 MAY 28	A A		0.0 a	66.7 a	93.3 a	100.0 a
5	Flazasulfuron X-77	25	DG	3 L	oz/a % v/v			MAY 28 MAY 28	A A		0.0 a	50.0 bcd	93.3 a	100.0 a
6	Manor X-77	60	WG	0.75 L	oz/a % v/v			MAY 28 MAY 28	A A		0.0 a	56.7 abc	90.0 a	100.0 a
7	Manor X-77	60	WG	1 L	oz/a % v/v			MAY 28 MAY 28	A A		0.0 a	36.7 d	90.0 a	96.7 a
8	TranXit X-77	25	DF	1 L	oz/a % v/v			MAY 28 MAY 28	A A		0.0 a	61.7 abc	86.7 ab	91.7 a
9	TranXit X-77	25	DF	2 L	oz/a % v/v			MAY 28 MAY 28	A A		0.0 a	60.0 abc	93.3 a	98.3 a
10	Revolver		L	0.2	oz/1000 ft2			MAY 28	A		0.0 a	8.3 e	68.3 c	90.0 a
11	Revolver		L	0.3	oz/1000 ft2			MAY 28	A		0.0 a	51.7 a-d	85.0 ab	99.3 a
12	Revolver		L	0.4	oz/1000 ft2			MAY 28	A		0.0 a	55.0 abc	76.7 bc	99.3 a
13	Revolver		L	0.6	oz/1000 ft2			MAY 28	A		0.0 a	46.7 cd	91.7 a	100.0 a
14	Monument X-77	75	WG	7.5 L	g ai/a % v/v			MAY 28 MAY 28	A A		0.0 a	36.7 d	93.3 a	98.3 a
15	Monument X-77	75	WG	10 L	g ai/a % v/v			MAY 28 MAY 28	A A		0.0 a	60.0 abc	95.0 a	98.7 a
16	Monument X-77	75	WG	12.5 L	g ai/a % v/v			MAY 28 MAY 28	A A		0.0 a	38.3 d	93.3 a	99.3 a
17	MON44951 X-77	75	WG	0.06 L	lb ai/a % v/v			MAY 28 MAY 28	A A		0.0 a	13.3 e	55.0 d	76.7 b
18	Nontreated										0.0 a	0.0 e	0.0 e	0.0 c
LSD (P=.05)											0.00	16.11	12.20	11.84
Standard Deviation											0.00	9.66	7.32	7.10
CV											0.0	21.34	8.86	7.76
Grand Mean											0.0	45.28	82.59	91.48
Bartlett's X2											0.0	15.16	32.34	41.912
P(Bartlett's X2)											.	0.513	0.004*	0.001*
Replicate F											0.000	6.202	1.512	1.939
Replicate Prob(F)											1.0000	0.0051	0.2348	0.1595
Treatment F											0.000	12.559	30.147	32.991
Treatment Prob(F)											1.0000	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.

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Weed Code											LOLPE	LOLPE	CYNDA	CYNDA	CYNDA
Crop Code											CONTROL	CONTROL	PHYTO	PHYTO	PHYTO
Rating Data Type											%	%	%	%	%
Rating Unit											7-9-03	7-24-03	6-3-03	6-11-03	6-18-03
Rating Date											42 DA-A	57 DA-A	6 DA-A	14 DA-A	21 DA-A
Trt-Eval Interval															
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	25	DG	0.5	oz/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
2	Flazasulfuron X-77	25	DG	1	oz/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
3	Flazasulfuron X-77	25	DG	1.5	oz/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
4	Flazasulfuron X-77	25	DG	2.25	oz/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
5	Flazasulfuron X-77	25	DG	3	oz/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
6	Manor X-77	60	WG	0.75	oz/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
7	Manor X-77	60	WG	1	oz/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
8	TranXit X-77	25	DF	1	oz/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
9	TranXit X-77	25	DF	2	oz/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
10	Revolver		L	0.2	oz/1000 ft2			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
11	Revolver		L	0.3	oz/1000 ft2			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
12	Revolver		L	0.4	oz/1000 ft2			MAY 28	A		98.3 a	96.7 a	0.0 a	0.0 a	0.0 a
13	Revolver		L	0.6	oz/1000 ft2			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
14	Monument X-77	75	WG	7.5	g ai/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
15	Monument X-77	75	WG	10	g ai/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
16	Monument X-77	75	WG	12.5	g ai/a			MAY 28	A		100.0 a	100.0 a	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
17	MON44951 X-77	75	WG	0.06	lb ai/a			MAY 28	A		73.3 b	81.7 b	0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A						
18	Nontreated										0.0 c	0.0 c	0.0 a	0.0 a	0.0 a
LSD (P=.05)											11.43	7.85	0.00	0.00	0.00
Standard Deviation											6.86	4.71	0.00	0.00	0.00
CV											7.38	5.05	0.0	0.0	0.0
Grand Mean											92.87	93.24	0.0	0.0	0.0
Bartlett's X2											6.389	2.301	0.0	0.0	0.0
P(Bartlett's X2)											0.011*	0.129	.	.	.
Replicate F											0.896	0.647	0.000	0.000	0.000
Replicate Prob(F)											0.4177	0.5301	1.0000	1.0000	1.0000
Treatment F											36.767	75.731	0.000	0.000	0.000
Treatment Prob(F)											0.0001	0.0001	1.0000	1.0000	1.0000

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Weed Code											CYNDA	CYNDA	CYNDA
Crop Code											PHYTO	PHYTO	PHYTO
Rating Data Type											%	%	%
Rating Unit											6-23-03	7-9-03	7-24-03
Rating Date											26 DA-A	42 DA-A	57 DA-A
Trt-Eval Interval													
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	25	DG	0.5	oz/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
2	Flazasulfuron X-77	25	DG	1	oz/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
3	Flazasulfuron X-77	25	DG	1.5	oz/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
4	Flazasulfuron X-77	25	DG	2.25	oz/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
5	Flazasulfuron X-77	25	DG	3	oz/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
6	Manor X-77	60	WG	0.75	oz/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
7	Manor X-77	60	WG	1	oz/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
8	TranXit X-77	25	DF	1	oz/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
9	TranXit X-77	25	DF	2	oz/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
10	Revolver		L	0.2	oz/1000 ft2			MAY 28	A		0.0 a	0.0 a	0.0 a
11	Revolver		L	0.3	oz/1000 ft2			MAY 28	A		0.0 a	0.0 a	0.0 a
12	Revolver		L	0.4	oz/1000 ft2			MAY 28	A		0.0 a	0.0 a	0.0 a
13	Revolver		L	0.6	oz/1000 ft2			MAY 28	A		0.0 a	0.0 a	0.0 a
14	Monument X-77	75	WG	7.5	g ai/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
15	Monument X-77	75	WG	10	g ai/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
16	Monument X-77	75	WG	12.5	g ai/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
17	MON44951 X-77	75	WG	0.06	lb ai/a			MAY 28	A		0.0 a	0.0 a	0.0 a
			L	0.25	% v/v			MAY 28	A				
18	Nontreated										0.0 a	0.0 a	0.0 a
LSD (P=.05)											0.00	0.00	0.00
Standard Deviation											0.00	0.00	0.00
CV											0.0	0.0	0.0
Grand Mean											0.0	0.0	0.0
Bartlett's X2											0.0	0.0	0.0
P(Bartlett's X2)											.	.	.
Replicate F											0.000	0.000	0.000
Replicate Prob(F)											1.0000	1.0000	1.0000
Treatment F											0.000	0.000	0.000
Treatment Prob(F)											1.0000	1.0000	1.0000

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Trial Comments

5-28-03 - Trial initiated. Trial area very wet. Perennial ryegrass clumps were unmowed and ranged in size from 1 - 3 inch diameter with 0 - 5 clumps per ft².

6-3-03 - Trial evaluated for clumpy ryegrass control and bermudagrass phytotoxicity. No control or injury symptoms present.

6-11-03 - Trial evaluated for clumpy ryegrass control and bermudagrass phytotoxicity.

6-18-03 - Trial evaluated for clumpy ryegrass control and bermudagrass phytotoxicity.

6-23-03 - Trial evaluated for clumpy ryegrass control and bermudagrass phytotoxicity. Plot #106 (Manor 0.75 oz) contains prostrate spurge plants which are about 70% injured and plot #305 contains some poa trivialis which is about 70% injured.

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Clumpy Ryegrass Control in Bermudagrass

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7-9-03 - Trial was evaluated for clumpy ryegrass control and bermudagrass phytotoxicity.