

North Carolina State University

**EFFICACY OF MESOTRIONE / PRODIAMINE TANKMIX TIMINGS FOR PRE AND POST SMOOTH
CRABGRASS CONTROL IN TALL FESCUE**

Trial ID: 03-T15

Study Dir.: L.S. WARREN

Location: NC WESLEYAN COLLEGE

Investigator: Fred Yelverton

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	FESAR MOWED	FESAR MOWED	FESAR MOWED
Stage Scale:	NA	NA	NA
Height, Unit:	3.0 IN	3.5 IN	4.0 IN

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code, Stage:	DIGIS PRE	DIGIS 2 LEAF	DIGIS 1-6 TILL
Stage Scale:	NA	0.25 INCH	1-4 INCH
Density, Unit:	0 FT2	1-5 FT2	1-5 FT2

APPLICATION EQUIPMENT

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

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Location: NC WESLEYAN COLLEGE

Study Dir.: L.S. WARREN
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Weed Code										OXAST	DIGIS	DIGIS	
Rating Data Type										CONTROL	CONTROL	CONTROL	
Rating Unit										PERCENT	PERCENT	PERCENT	
Rating Date										5-9-03	6-5-03	7-1-03	
Assessed By										L.S. WARREN	L.S. WARREN	L.S. WARREN	
Trt-Eval Interval										53 DA-A	80 DA-A	106 DA-A	
ARM Action Codes										P	P	P	
Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Product Rate	Product Rate Unit	Grow Stg	Appl Code	Spray Volume			
1	BARRICADE	4.0	F	0.65	lb ai/a			MAR 17	A		0.0 b	96.3 a	100.0 a
2	MESOTRIONE	4.0	SC	0.187	lb ai/a			MAR 17	A		93.8 a	98.8 a	100.0 a
	BARRICADE	4.0	F	0.65	lb ai/a			MAR 17	A				
	X-77 SPREADER		L	0.25	% v/v			MAR 17	A				
3	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B			99.8 a	100.0 a
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B				
4	MESOTRIONE	4.0	SC	0.125	lb ai/a			MAY 9	B			52.5 b	6.3 b
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B				
5	MESOTRIONE	4.0	SC	0.0625	lb ai/a			MAY 9	B			96.3 a	100.0 a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B				
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B				
6	MESOTRIONE	4.0	SC	0.125	lb ai/a			MAY 9	B			97.5 a	100.0 a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B				
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B				
7	MESOTRIONE	4.0	SC	0.187	lb ai/a			MAY 9	B			98.8 a	100.0 a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B				
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B				
8	MESOTRIONE	4.0	SC	0.125	lb ai/a			MAY 9	B			100.0 a	100.0 a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B				
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B				
	MESOTRIONE	4.0	SC	0.125	lb ai/a			JUL 1	C				
	BARRICADE	4.0	F	0.65	lb ai/a			JUL 1	C				
	X-77 SPREADER		L	0.25	% v/v			JUL 1	C				
9	MESOTRIONE	4.0	SC	0.187	lb ai/a			MAY 9	B			100.0 a	100.0 a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B				
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B				
	MESOTRIONE	4.0	SC	0.187	lb ai/a			JUL 1	C				
	BARRICADE	4.0	F	0.65	lb ai/a			JUL 1	C				
	X-77 SPREADER		L	0.25	% v/v			JUL 1	C				
10	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B			99.8 a	100.0 a
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B				
	MESOTRIONE	4.0	SC	0.25	lb ai/a			JUL 1	C				
	BARRICADE	4.0	F	0.65	lb ai/a			JUL 1	C				
	X-77 SPREADER		L	0.25	% v/v			JUL 1	C				
11	CHECK										0.0 b	0.0 c	0.0 c
LSD (P=.05)											12.49	21.51	5.44
Standard Deviation											7.22	14.90	3.77
CV											23.09	17.44	4.57
Grand Mean											31.25	85.41	82.39
Bartlett's X2											0.0	75.831	0.0
P(Bartlett's X2)											.	0.001*	.
Replicate F											1.000	0.480	1.000
Replicate Prob(F)											0.4547	0.6988	0.4064
Treatment F											225.000	17.939	433.000
Treatment Prob(F)											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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CRABGRASS CONTROL IN TALL FESCUE

Trial ID: 03-T15

Study Dir.: L.S. WARREN

Location: NC WESLEYAN COLLEGE

Investigator: Fred Yelverton

Weed Code								DIGIS	DIGIS			
Rating Data Type								CONTROL	CONTROL			
Rating Unit								PERCENT	PERCENT			
Rating Date								8-4-03	9-2-03			
Assessed By								L.S. WARREN	L.S. WARREN			
Trt-Eval Interval								140 DA-A	169 DA-A			
ARM Action Codes								P	P			
Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Form Rate	Product Rate	Product Unit	Grow Stg	Appl Code	Spray Volume		
1	BARRICADE	4.0	F	0.65	lb ai/a			MAR 17	A		71.3	b
2	MESOTRIONE	4.0	SC	0.187	lb ai/a			MAR 17	A		60.0	b
	BARRICADE	4.0	F	0.65	lb ai/a			MAR 17	A			
	X-77 SPREADER		L	0.25	% v/v			MAR 17	A			
3	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B		93.8	a
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B			
4	MESOTRIONE	4.0	SC	0.125	lb ai/a			MAY 9	B		2.5	c
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B			
5	MESOTRIONE	4.0	SC	0.0625	lb ai/a			MAY 9	B		99.0	a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B			
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B			
6	MESOTRIONE	4.0	SC	0.125	lb ai/a			MAY 9	B		96.5	a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B			
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B			
7	MESOTRIONE	4.0	SC	0.187	lb ai/a			MAY 9	B		96.3	a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B			
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B			
8	MESOTRIONE	4.0	SC	0.125	lb ai/a			MAY 9	B		99.0	a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B			
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B			
	MESOTRIONE	4.0	SC	0.125	lb ai/a			JUL 1	C			
	BARRICADE	4.0	F	0.65	lb ai/a			JUL 1	C			
	X-77 SPREADER		L	0.25	% v/v			JUL 1	C			
9	MESOTRIONE	4.0	SC	0.187	lb ai/a			MAY 9	B		99.5	a
	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B			
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B			
	MESOTRIONE	4.0	SC	0.187	lb ai/a			JUL 1	C			
	BARRICADE	4.0	F	0.65	lb ai/a			JUL 1	C			
	X-77 SPREADER		L	0.25	% v/v			JUL 1	C			
10	BARRICADE	4.0	F	0.65	lb ai/a			MAY 9	B		99.5	a
	X-77 SPREADER		L	0.25	% v/v			MAY 9	B			
	MESOTRIONE	4.0	SC	0.25	lb ai/a			JUL 1	C			
	BARRICADE	4.0	F	0.65	lb ai/a			JUL 1	C			
	X-77 SPREADER		L	0.25	% v/v			JUL 1	C			
11	CHECK										0.0	c
LSD (P=.05)								13.25			19.29	
Standard Deviation								9.18			13.36	
CV								12.35			19.96	
Grand Mean								74.3			66.93	
Bartlett's X2								56.015			47.513	
P(Bartlett's X2)								0.001*			0.001*	
Replicate F								1.298			2.176	
Replicate Prob(F)								0.2933			0.1115	
Treatment F								69.979			37.352	
Treatment Prob(F)								0.0001			0.0001	

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

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Trial Comments

04-11-03: MESOTRIONE 4SC TREATED TALL FESCUE DISPLAYED PALE YELLOWISH-GREEN INJURY SYMPTOMS ON THE UPPER 1/3 OF THE LEAF BLADES; PHYTOTOXICITY 30% AND VISUALLY UNACCEPTABLE
DIGIS IN OPEN AREAS BEGINNING TO GERMINATE AND IN THE VERY EARLY 1 LEAF STAGE AT 0.25 INCHES

05-09-03: DIGIS WAS TOO SMALL AND HARD TO SEE DUE TO THE TALL FESCUE CANOPY TO ACCURATELY RATE AT THIS TIME
TALL FESCUE WAS 3.5 INCHES TALL WITH NO INJURY SYMPTOMS OBSERVED FROM THE MAR 17 TREATMENTS