(08-T26)

North Carolina State University

PREEMERGENCE SMOOTH CRABGRASS CONTROL IN TALL FESCUE USING AE 1170437 FORMULATIONS

Trial ID: 08-T26 Protocol ID: 08-T26
Location: WESLEYAN COLLEGE Study Director: L.S. WARREN
Investigator: Fred Yelverton

General Trial Information

Study Director: L.S. WARREN Title: RESEARCH ASSOCIATE
Affiliation: NORTH CAROLINA STATE UNIVERSITY
Postal Code: 27695 E-mail: leon_warren@ncsu.edu
Investigator: Fred Yelverton Title: PROFESSOR
Affiliation: NORTH CAROLINA STATE UNIVERSITY
Postal Code: 27695 E-mail: fred_yelverton@ncsu.edu

Trial Location

City: ROCKY MT. Trial Status: COMPLETED
State/Prov.: NC
Postal Code: 27804 Initiation Date: 03-06-08
Country: USA

Objectives:
TO EVALUATE EFFICACY OF DRY AND LIQUID FORMULATIONS OF AE 1170437 AGAINST BARRICADE 4F FOR PREEMERGENCE SMOOTH CRABGRASS CONTROL IN TALL FESCUE

Cooperator/Landowner

Cooperator: STEVE SPARKS Country: USA
Organization: WESLEYAN COLLEGE Phone No: (252)985-5222
Address 1: 4300 NORTH WESLEYAN BOULEVARD
City: ROCKY MT.
State/Prov: NC
Postal Code: 27804

Crop Description

Crop 1: FESAR Festuca arundinacea Tall fescue
Variety: KENTUCKY 31
BBCH Scale: BGRM

Pest Description

Pest 1 Type: W Code: DIGIS Digitaria ischaemum
Common Name: Smooth crabgrass

Site and Design

Plot Width, Unit: 5 FT Site Type: TURF - RESEARCH
Plot Length, Unit: 8 FT Tillage Type: NA
Replications: 4 Study Design: Randomized Complete Block

Soil Description

% OM: 1.61 Texture: SANDY LOAM
pH: 5.1
CEC: 6.1 Fert. Level: FAIR TO GOOD

Moisture and Weather Conditions

Overall Moisture Conditions: FEB 4.05"; MAR 3.28"; APR 4.42"; MAY 1.82"
Closest Weather Station: UPPER COASTAL PLAIN RES STA Distance: 8 Unit: MI

	Date	Amount	Unit	Type
1.	03-07-08	1.29	IN	RAIN

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	Application Description
	A
Application Date:	03-06-08
Time of Day:	4:00 PM
Application Method:	SPRY&SPRD
Application Timing:	PRE
Application Placement:	BROSOIL
Applied By:	L.S. WARREN
Air Temperature, Unit:	71 F
% Relative Humidity:	44
Wind Velocity, Unit:	2.7 MPH
Dew Presence (Y/N):	N
Soil Temperature, Unit:	65 F
Soil Moisture:	WET
% Cloud Cover:	0

	Crop Stage At Each Application
	A
Crop 1 Code, BBCH Scale:	FESAR BGRM
Stage Scale Used:	BBCH
Stage Majority, Percent:	MOWED 100
Height, Unit:	4.0 IN

	Pest Stage At Each Application	
	A	
Pest 1 Code, Disc., Scale:	DIGIS	W
Stage Majority, Percent:	PRE	100
Height, Unit:	0	IN
Density, Unit:	0	FT2

	Application Equipment
	A
Appl. Equipment:	BACSPR
Operating Pressure, Unit:	28 PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	XR 8002VS
Nozzle Spacing, Unit:	10 IN
Nozzle Calibration, Unit:	620 ML/MIN
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
Mix Size, Unit:	0.25
Propellant:	COMCO2
Tank Mix (Y/N):	N

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Trial Comments

GRANULAR TREATMENT APPLIED IN 2 TO 3 DIRECTIONS WITH SHAKER JAR WITH HOLES PUNCHED IN LID

05-08-08: DIGIS STILL ONLY IN 1-2 LEAF STAGE AT 0.5 INCH IN HEIGHT AND SPORADICALLY GERMINATING AT THIS TIME

06-24-08: TEST AREA EXTREMELY DRY AND COULD NOT BE RATED AT THIS TIME

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	Appl Code	1		2		3	
	Pest Type							W Weed		W Weed		W Weed	
	Pest Code							DIGIS		DIGIS		DIGIS	
	Pest Name							Smooth crab>		Smooth crab>		Smooth crab>	
	Rating Date							07-07-08		08-11-08		09-02-08	
	Rating Data Type							CONTROL		CONTROL		CONTROL	
	Rating Unit							PERCENT		PERCENT		PERCENT	
	Assessed By							L.S. WARREN		L.S. WARREN		L.S. WARREN	
	Days After First/Last Applic.							123 123		158 158		180 180	
	Trt-Eval Interval							123 DA-A		158 DA-A		180 DA-A	
	ARM Action Codes							P		P		P	
1	AE 1170437 00 WP20 A2	20	WP	0.049	OZ WT/1000 FT2	MAR 6	A	100	a	96	ab	91	abc
2	AE 1170437 00 WP20 A2	20	WP	0.0655	OZ WT/1000 FT2	MAR 6	A	98	ab	95	ab	94	ab
3	AE 1170437 00 WP20 A2	20	WP	0.082	OZ WT/1000 FT2	MAR 6	A	91	ab	96	ab	90	abc
4	AE 1170437 00 WP20 A2	20	WP	0.098	OZ WT/1000 FT2	MAR 6	A	98	ab	98	a	88	abc
5	AE 1170437 00 WP20 A2	20	WP	0.115	OZ WT/1000 FT2	MAR 6	A	98	ab	100	a	86	abc
6	AE 1170437 00 WP20 A2	20	WP	0.131	OZ WT/1000 FT2	MAR 6	A	100	a	98	a	99	a
7	AE 1170437	1.67	SC	0.047	FL OZ/1000 FT2	MAR 6	A	95	ab	93	ab	78	cd
8	AE 1170437	1.67	SC	0.063	FL OZ/1000 FT2	MAR 6	A	90	ab	89	ab	71	d
9	AE 1170437	1.67	SC	0.0785	FL OZ/1000 FT2	MAR 6	A	100	a	94	ab	95	ab
10	AE 1170437	1.67	SC	0.094	FL OZ/1000 FT2	MAR 6	A	88	b	93	ab	99	a
11	AE 1170437	1.67	SC	0.11	FL OZ/1000 FT2	MAR 6	A	95	ab	85	b	83	bcd
12	AE 1170437	1.67	SC	0.126	FL OZ/1000 FT2	MAR 6	A	98	ab	99	a	95	ab
13	SP 102000019626	0.0142	G	251	LB/A	MAR 6	A	100	a	94	ab	88	abc
14	BARRICADE	4	F	0.74	FL OZ/1000 FT2	MAR 6	A	98	ab	100	a	99	a
15	CHECK							0	c	0	c	0	e
	LSD (P=.05)							12.2		11.3		14.8	
	Standard Deviation							8.5		7.9		10.3	
	CV							9.51		8.91		12.37	
	Replicate F							1.883		1.081		0.295	
	Replicate Prob(F)							0.1471		0.3674		0.8287	
	Treatment F							34.688		39.645		22.382	
	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.