

Treatment ^c	Rate/1000 ft ^{2b}	Interval	I	II	III	Avg	DMR (.05) ^d
Thatch X + Trypt.	3 lbs	28 days	5	3	3	3.7	AB
Thatch X	3 lbs	28 days	5	6	3	4.7	A

^aTreatments followed by the same letter are not significantly different from each other at the 5% level.

^bRates listed are formulation unless listed as active ingredient (ai).

^cDeleted treatments are proprietary.

^dModerately severe phytotoxicity observed.

^eSevere phytotoxicity observed.

^fTreatments initiated curatively on 9/3.

NECROTIC RING SPOT FUNGICIDE STUDIES - 1993

Two necrotic ring spot (*Leptosphaeria korrae*) studies were conducted this year; one on a commercial lawn site in Grand Rapids, and another on a similar site in Lansing. Both sites consisted of diseased Kentucky bluegrass turf which was automatically irrigated and was fertilized at ½ lb N./1000 ft²/mo., except as noted on the data tables.

Initial applications were made on symptomatic turf with necrotic ring spot patches from previous disease activity on 5/28/93 (fertilizers and natural products) and 8/28/93 (fungicides) at the Lansing site and on 6/19/93 and 7/24/93, respectively, on the Grand Rapids site. Fertilizer and natural product applications were made on monthly schedules through October on both sites. The fungicides were reapplied approximately a month after the initial applications. Liquid applications were made as foliar sprays as previously described in this report while granular products were preweighed and hand applied to the 6' x 9' plots.

As Table 6 indicate, disease severity is inversely correlated to fertility level. At somewhat elevated nitrogen levels of 1 lb/1000 ft²/mo., Turf Restore and IBDU fertilizers provided virtually total control of patch symptoms. Statistically similar levels of disease control were achieved with lower levels of fertility (½ lb nitrogen/1000 ft²/mo.) combined with experimental fungicides such as ASC 67103, EXP 10307A, EXP 02164B, ASC 67098-X, Eagle, etc.

No phytotoxicity or significant turf greening was observed at any time in either of these studies, however, overall turf quality and density was best in the Turf Restore and IBDU plots.

Table 6. Necrotic Ring Spot Study (Lansing Site) - 1993

Rating Scale: percent recovery/plot from pretreatment disease levels
Rating Date: 9/10/93

Treatment	Rate/1000 ft ²	I	II	III	IV	Avg	DMR (.1) ^a
IBDU Fertilizer	1 lb N (nitrogen)/mo	100	100	100	100	100.0	A
Turf Restore	1 lb N/mo	100	96.0	100	94.0	97.5	AB
ASC 67098-X	6 oz	85	100	100	100	96.3	ABC
							A-D
D.2787 + ASC 67103	6 fl oz + 16 ml	80	90	100	100	92.5	A-E
EXP 10307A + EXP 02164B	3 fl oz + 2.4 fl oz	100	66.7	100	100	91.7	A-E
Eagle	0.6 oz	100	100	53.3	100	88.3	A-E
Thatch X Blank	3 lbs/mo	75	85.7	82.5	90	83.3	A-F
Thatch X	3 lbs/mo	71.4	66.7	90	88	79.0	A-G
D.2787 + ASC 67135	4 fl oz + 2 oz	100	40	88	76	76.0	A-G

48 GENERAL SESSION - HIGHLIGHTS AND UPDATES

Treatment	Rate/1000 ft ²	I	II	III	IV	Avg	DMR (I) ^a
RH 7592 + Latron B 1956	0.5 fl oz + 0.06% v/v	100	66.7	75	50	72.9	A-H
RH 0611	6 oz	80	100	60	50	72.5	A-H
E.I. DS (Strain #16)	3 lbs/mo	87.5	66.7	37.5	83.3	68.8	A-I
EXP 10307A	4 fl oz	50	50	66.7	100	66.7	B-I
EXP 10307A + EXP 02164B	4 fl oz + 3.2 fl oz	33.3	37.5	90	100	65.2	C-I
Fluazinam	2 fl oz	20	75	65	100	65.0	C-I
Banner	4 fl oz	40	100	75	40	63.8	D-I
EXP 10064C	2 fl oz	100	75	20	50	61.3	E-I
Banner	2 fl oz	28.6	37.5	100	60	56.5	F-I
Rubigan	4 fl oz	14.3	66.7	86.7	50	54.4	F-J
EXP 10307A	3 fl oz	25	46.7	60	85	54.2	F-J
Control (fertilized)	--	57.1	33.3	25	53.3	42.2	H-J
Fluazinam	1 fl oz	42.9	60	20	42.9	41.5	H-J
Herbruck Fertilizer	1 lb N/mo	41.7	6.7	50	60	39.6	IJ
Ch.26019 (WDG)	4 oz	16.7	50	33.3	0	25.0	J
Control (unfertilized)	--	0	0	-20	0	-5.0	K

^aTreatments followed by the same letter are not significantly different from each other at the 10% level.

COMPOUNDS TESTED IN 1992-93 SEASON

<u>Product</u>	<u>Formulation</u>	<u>Manufacturer</u>
AND. 373 - AND. 376	N/A	The Andersons
ASC 67098-X	N/A	ISK Biotech
ASC 67098-Z	N/A	ISK Biotech
ASC 67103	N/A	ISK Biotech
ASC 67106	N/A	ISK Biotech
ASC 67135	N/A	ISK Biotech
Astron Plus	N/A	Floratine Products
Banner	1.1 EC	Ciba Geigy Corp
Bayleton	25 DF	Miles Corp
Calo Clor	90 W	Grace Sierra
Calo Gran	2.7 G	Grace Sierra
CGA 173506	75 WG	Ciba Geigy Corp
Chipco 26019	25 F	Rhone Poulenc
Chipco 26019 (WDG)	50 WDG	Rhone Poulenc
Cleary PCNB	75 WP	W.A. Cleary Chemical Corp
Curalan (DF)	50 DF	BASF Corp
Curalan	4.17 F	BASF Corp
Daconil 2787	40.4 F	ISK Biotech
Daconil SDG	N/A	ISK Biotech
Eagle	40 W	Rohm & Haas
E.I. DS (Strain #5)	N/A	Emerald Isle/Ocean Organics
E.I. DS (Strain #16)	N/A	Emerald Isle/Ocean Organics
EXP 02164B	45 C	Rhone Poulenc
EXP 10064C	1.67 SC	Rhone Poulenc
EXP 10307A	0.84 SC	Rhone Poulenc

<u>Product</u>	<u>Formulation</u>	<u>Manufacturer</u>
EXP 10364A	3.3 F	Rhone Poulenc
FCI-6444	N/A	Fermone Corp
Fertilizer (18-4-10)	G	Lebanon (Country Club)
Fluazinam	500 F	ISK Biotech
FP 0492	N/A	Floratine Products
Greenzit	N/A	W.A. Cleary Chemical Corp
GS-SM-01-GS-SM-18	N/A	Grace Sierra
Herbruck Fertilizer	10-2-10	Herbruck's
IBDU Fertilizer	31-0-0	Vigoro
ICIA 5504	50 WG	Zeneca Ag Products
ICIA 5504 (JFR 795)	N/A	Zeneca Ag Prods
ICIA 5504 (WF 1594)	N/A	Zeneca Ag Prods
ICIA 5504 (JF 12795)	N/A	Zeneca Ag Prods
KLM Liquid	N/A	Bio Grounds Keeper, Inc
KLM Compost	N/A	Bio Grounds Keeper, Inc
LAD	N/A	Vigoro, Inc
Latron B-1956	N/A	Rohm & Haas
Panasea Plus	N/A	Emerald Isle
Panasea Plus + Tryptophan	N/A	Emerald Isle
Phyton 27	N/A	Source Technology Biologicals, Inc
Prostar (NA 248/04)	70 WP	Nor-Am Chemical Corp
Prostar (NA 313/01)	70 WP	Nor-Am Chemical Corp
RH 0611	62.3 WP	Rohm & Haas
RH 7592	2 F	Rohm & Haas
Rubigan	1.1 F	Dow Elanco
S-4404	N/A	O.M. Scotts & Sons
Scotts FF II	14-3-3 fertilizer, 15.4% PCNB	O.M. Scotts & Sons
Sentinel	40 WG	Sandoz Agro, Inc
Spotrete	75 WDG	W.A. Cleary Chemical Corp
Terraclor	75 WP	Uniroyal Chemical Co
Terraclor (G)	10 G	Uniroyal Chemical Co
Thalonil	N/A	Terra International
Thatch X	N/A	Emerald Isle/Ocean Organics
Thatch X Blank	N/A	Emerald Isle/Ocean Organics
TRA 0028	N/A	Terra International
Turf Restore	10-2-6 fertilizer	Ringer Corp
UBI 1876	N/A	Uniroyal Chemical Co
UBI 4040	N/A	Uniroyal Chemical Co
Urea	46-0-0 fertilizer	The Andersons
X-77	surfactant	Nor-Am Chemical Corp