

Stop #8a: Evaluation of Fungicides for Control of *Pythium* Blight Disease on Perennial Ryegrass Turf

Pawel Petelewicz and Jim Baird
Department of Botany and Plant Sciences
University of California, Riverside, CA 92521

Objectives:

This study was conducted to evaluate ability of sixteen different fungicide treatments to control *Pythium* Foliar Blight disease preventatively on perennial ryegrass (*Lolium perenne*) turf maintained as an overseeded golf course fairway.

Materials and methods:

The study was conducted on mature 'Princess-77' bermudagrass turf overseeded with 'Wicked' perennial ryegrass (*Lolium perenne*) on August 10, 2018 at 1,600 lbs/A. Soil was Hanford fine sandy loam. Five days prior to overseeding, the study area was sprayed with tank-mix of Turflon at 16 oz/A and Reward at 32 oz/A. Furthermore, the day before seeding, turf was verticut and scalped followed by application Primo Maxx at 0.5 oz/1000 ft² to the mat. Turf was mowed 3 days/wk at 0.5 inches starting 14 days after overseeding. Twelve days after trial initiation, silt fence was mounted around the study area to decrease air movement and help incite disease activity. Experimental design was a randomized block with 4 replications. Plot size was 4x6 ft with 2-ft alleys.

Total of 16 fungicide treatments (including untreated control) were applied as described in Table 1 beginning on August 10, 2018. Initial treatment was applied to turf directly before the sowing of the seeds. Treatments were applied using a CO₂-powered backpack sprayer with TeeJet 8004VS nozzles calibrated to deliver 2 gallons/1000 ft².

Results:

Unfortunately for this experiment, weather conditions were not conducive for disease development leading up to publication of this report.

Acknowledgments:

Thanks to Bayer, PBI-Gordon, and Syngenta for supporting this research and/or for providing products.

Table 1. Treatments evaluated in Pythium Blight Fungicide trial. Riverside, CA, 2018.

No.	Treatment	Active ingredient	Company	Rate (oz/M)	Total applications (frequency)	Timing*
1	Untreated Control	-	-	-	-	-
2	Heritage Action	azoxystrobin, acibenzolar-S-methyl	Syngenta	0.40	2 (10 days)	AB
3	Subdue Maxx	mefenoxam	Syngenta	1.00	4 (14 days)	ACEF
4	Banol	propamocarb hydrochloride	Bayer	2.00	4 (14 days)	ACEF
5	Banol	propamocarb hydrochloride	Bayer	2.00	4 (14 days)	AE
	Chipco Signature	aluminium-tris	Bayer	4.00		CF
6	Banol	propamocarb hydrochloride	Bayer	2.00	4 (14 days)	AE
	Signature XTRA Stressgard	aluminium-tris	Bayer	4.00		CF
7	Banol	propamocarb hydrochloride	Bayer	2.00	4 (14 days)	AE
	Segway	cyazofamid	PBI-Gordon	0.90		CF
8	Segway	cyazofamid	PBI-Gordon	0.90	4 (14 days)	ACEF
9	Segway	cyazofamid	PBI-Gordon	0.45	1 (14 th day only)	C
10	Segway	cyazofamid	PBI-Gordon	0.90	1 (21 th day only)	D
11	UCR 001	<i>classified</i>	-	-	1 (14 th day only)	C
12	UCR 001	<i>classified</i>	-	-	1 (21 th day only)	D
13	UCR 002	<i>classified</i>	-	-	4 (14 days)	ACEF
14	UCR 002	<i>classified</i>	-	-	4 (14 days)	ACEF
15	UCR 002	<i>classified</i>	-	-	4 (14 days)	ACEF
16	UCR 002	<i>classified</i>	-	-	4 (14 days)	ACEF
	UCR 003	<i>classified</i>	-	-		

***Timing**

A	8/10/2018	Initial
B	8/20/2018	10 DAIT**
C	8/24/2018	14 DAIT**
D	8/31/2018	21 DAIT**
E	9/7/2018	28 DAIT**
F	9/21/2018	42 DAIT**

**DAIT - days after initial treatment / overseeding

Pythium Blight Fungicide Trial Plot Plan

(12 E 11 N) ↑N

101	102	103	104	105	106	107	108	109	110	111	112	113
Trt 1	Trt 2	Trt 3	Trt 4	Trt 5	Trt 6	Trt 7	Trt 8	Trt 9	Trt 10	Trt 11	Trt 12	Trt 13
201	202	203	204	205	206	207	208	209	210	211	212	213
Trt 7	Trt 5	Trt 9	Trt 12	Trt 1	Trt 13	Trt 6	Trt 3	Trt 10	Trt 2	Trt 16	Trt 15	Trt 14
301	302	303	304	305	306	307	308	309	310	311	312	313
Trt 4	Trt 15	Trt 8	Trt 16	Trt 11	Trt 14	Trt 3	Trt 9	Trt 1	Trt 10	Trt 7	Trt 5	Trt 12
401	402	403	404	405	406	407	408	409	410	411	412	413
Trt 10	Trt 5	Trt 12	Trt 9	Trt 14	Trt 2	Trt 8	Trt 16	Trt 6	Trt 11	Trt 15	Trt 4	Trt 13
501	502	503	504	505	506	507	508	509	510	511	512	X
Trt 8	Trt 16	Trt 2	Trt 15	Trt 4	Trt 13	Trt 6	Trt 11	Trt 3	Trt 14	Trt 1	Trt 7	