

# Evaluation of Chemical Methods for Control of Take-all Patch (Spring Applications)

J. S. Gregos, G. Jung and B. Lisi  
Department of Plant Pathology

## INTRODUCTION

To evaluate chemicals for the control of take-all patch of colonial bentgrass maintained at fairway height cut caused by *Gaeumannomyces graminis*

## EXPERIMENTAL METHODS

Individual plots, 3 ft x 4 ft, were arranged in a randomized complete block design with six replications. The experimental area was not inoculated and all disease is caused by natural occurrence. Treatments were applied with a CO<sub>2</sub>-powered boom sprayer, using XR Teejet 8005 VS nozzles, at 30 psi, in water equivalent to 2 gal per 1000 sq ft. The treatments were then water in with 1/4" of water. Preventative applications were initiated on April 27. The curative applications were initiated on May 25 after symptom development was observed. All treatments were also applied on October 2 and 30, 2000. The experimental area received 3 lbs. of nitrogen during the growing season from the following applications: 1/2# N (46-0-0) on May 25, 1.5# N (Spring Valley 25-3-4) on June 19 and 1# N (46-0-0) on July 28. Percent damage was evaluated on May 25, June 19, July 16, and 29 2000. Data obtained was subjected to analysis of variance and LSD was used to determine significant differences between treatment means.

## DISCUSSION

No irrigation was applied to the area two weeks following the last treatment (to encourage symptom development). Generally the spring applications had little affect on the development of take-all patch symptoms. Some of the treatments that did show some significant symptom reduction included Heritage, Chipco Triton, Bayleton and the Experimental. The Experimental treatments also displayed a trend with rate increase, with the curative applications providing similar results to the preventative. The study will be evaluated trough the summer of 2001 and data will be reported later. As with fall applications it is believed that any chemical application must be in combination with routine irrigation to get desirable results.

**Table 1. Percent Take-all Patch Damage**

#	Treatment	Form.	Rate	Rate Unit	Interval <sup>1</sup>	% Damage		% Damage		% Damage		% Damage	
						5-25-00	A-E	6-19-00	AB	7-16-00	DEF	7-29-00	A-G
1	Heritage	50 WDG	0.4	Oz/M ft2	28 Day SP/FA	18.3	A-E	0.8	E	10.0	DEF	5.0	H
2	Compass	50 WDG	0.25	Oz/M ft2	28 Day SP/FA	22.5	ABC	17.5	AB	17.5	B-F	10.0	C-H
	Banner Maxx	1.24 MC	2.0	Fl Oz/M ft2									
3	Compass	50 WDG	0.2	Oz/M ft2	28 Day SP/FA	14.2	A-E	9.2	B-E	21.7	A-D	17.5	A-D
	Banner Maxx	1.24 MC	2.0	Fl Oz/M ft2									
4	Compass	50 WDG	0.25	Oz/M ft2	28 Day SP/FA	15.8	A-E	17.5	AB	31.7	AB	20.0	AB
5	Compass	50 WDG	0.2	Oz/M ft2	28 Day SP/FA	12.5	A-E	13.3	A-D	17.5	B-F	15.8	A-E
6	Banner Maxx	1.24 MC	2.0	Fl Oz/M ft2	28 Day SP/FA	16.7	A-E	16.7	AB	20.0	A-E	12.5	B-H
7	Experimental A	XXXX	0.24	Fl Oz/M ft2	35 Day Prev	24.2	AB	17.5	AB	34.2	A	17.5	A-D
8	Experimental A	XXXX	0.47	Fl Oz/M ft2	35 Day Prev	20.0	A-D	15.8	ABC	26.7	ABC	21.7	A
9	Experimental A	XXXX	0.94	Fl Oz/M ft2	35 Day Prev	18.3	A-E	10.0	B-E	21.7	A-D	13.3	A-H
10	Experimental A	XXXX	1.88	Fl Oz/M ft2	35 Day Prev	12.5	A-E	5.0	DE	11.7	DEF	7.5	E-H
11	Experimental A	XXXX	2.83	Fl Oz/M ft2	35 Day Prev	5.0	E	1.7	E	5.8	EF	8.3	E-H
12	Experimental A	XXXX	0.24	Fl Oz/M ft2	35 Day Cur	13.3	A-E	10.0	B-E	15.8	C-F	12.5	B-H
13	Experimental A	XXXX	0.47	Fl Oz/M ft2	35 Day Cur	25.0	A	16.7	AB	15.8	C-F	6.7	FGH
14	Experimental A	XXXX	0.94	Fl Oz/M ft2	35 Day Cur	15.8	A-E	8.3	B-E	20.8	A-D	13.3	A-H
15	Experimental A	XXXX	1.88	Fl Oz/M ft2	35 Day Cur	14.2	A-E	8.3	B-E	10.0	DEF	9.2	D-H
16	Experimental A	XXXX	2.83	Fl Oz/M ft2	35 Day Cur	20.0	A-D	8.3	B-E	7.5	DEF	7.5	E-H
17	Heritage	50 WDG	0.4	Oz/M ft2	35 Day Prev	21.4	ABC	6.7	CDE	12.5	C-F	11.7	B-H
18	Compass	50 WDG	0.25	Oz/M ft2	35 Day Prev	15.8	A-E	15.0	ABC	16.7	C-F	18.3	ABC
19	Heritage	50 WDG	0.4	Oz/M ft2	35 Day Cur	10.0	CDE	0.8	E	7.5	DEF	10.0	C-H
20	Compass	50 WDG	0.25	Oz/M ft2	35 Day Cur	17.5	A-E	20.0	E	15.8	C-F	15.0	A-F
21	Chipco Triton	1.67 SC	1.0	Fl Oz/M ft2	28 Day SP/FA	11.7	A-E	6.7	A	5.0	F	6.7	FGH
22	Bayleton	50 WDG	2.0	Oz/M ft2	28 Day SP/FA	10.8	B-E	6.7	CDE	10.8	DEF	5.8	GH
23	Heritage	50 WDG	0.2	Oz/M ft2	14 Day SP/FA	6.7	DE	3.3	E	5.8	EF	5.0	H
24	Check					15.8	A-E	2.5	E	15.0	C-F	14.2	A-G
LSD						13.38		9.67		14.70		8.84	

Means followed by the same letter do not significantly differ (P=0.05)

<sup>1</sup>SP = Spring Applications, FA = Fall Applications