

EVALUATION OF FUNGICIDES FOR CONTROL OF POWDERY MILDEW IN KENTUCKY BLUEGRASS SEED PRODUCTION IN CENTRAL OREGON, 2002

Marvin Butler, John Orr, and Claudia Campbell

Abstract

Fungicides were evaluated for control of powdery mildew in a commercial Kentucky bluegrass seed field near Madras, Oregon. Fungicide applications were made when the disease was well developed. All fungicides significantly reduced powdery mildew compared to untreated plots. Stratego[®], Tilt[®], Laredo[®], Tilt plus Bravo[®], Folicur[®] and Bayleton[®] were more effective than BAS500[®] 22 days after treatment (DAT).

Introduction

Fungicides have been evaluated yearly for control of powdery mildew in Kentucky bluegrass seed production fields in central Oregon since 1998. This year fungicides Laredo, Folicur, Tilt, Tilt plus Bravo, Stratego, and the numbered compound BAS500 were evaluated. During 2002 the objective was to compare fungicide performance under high disease pressure where multiple applications may be needed.

Methods and Materials

Fungicides were evaluated for control of powdery mildew in a commercial first-year field of 'Merit' Kentucky bluegrass grown for seed near Madras, Oregon. Tilt plus Bravo were applied as the first of multiple treatments, to be followed by various second and third applications. Other fungicides included for comparisons were Bayleton, Laredo, Folicur, Stratego, BAS500, and Tilt applied alone. Treatments were applied to 10-ft by 25-ft plots replicated four times in a randomized complete block design. Plots were treated on April 12, when the disease was well developed. Fungicides were applied with Tee Jet 8002 nozzles on a 9-ft, CO₂-pressurized, hand-held boom sprayer at 40 psi and 20 gal of water/acre.

Plots were evaluated using a rating scale from 0 to 5, with 0 being no mildew present and 5 indicating total foliar coverage. Pretreatment evaluations were made on all plots on April 10. Post-application evaluations were conducted on April 26 (14 DAT) and May 3 (22 DAT). As the spring progressed, it became evident that the field was heavily contaminated with an off-type grass. At the end of April, the grower cooperater and his seed contractor made the decision to take the field out. The field was sprayed with Roundup[®] on May 2. As a result, follow-up applications could not be applied or evaluated.

Results and Discussion

All fungicide treatments significantly reduced powdery mildew 22 DAT compared to untreated plots (Table 1). There were no differences between the effectiveness of Stratego, Tilt, Laredo, Tilt plus Bravo, Folicur and Bayleton 22 DAT. However, all these materials were more effective than BAS500.

Table 1. Evaluation of fungicides applied May 12 on powdery mildew in Kentucky bluegrass, near Madras, OR, 2002.

Treatment	Rate	Evaluation date		
		April 10 Pretreatment	April 26 (14 DAT) -----Post treatment-----	May 3 (22 DAT)
Untreated	----	3.3 ¹	3.0 a ²	5.0 a
Folicur	6 oz	2.8	2.1 bc	2.1 cd
Bravo + Tilt	16 oz + 4 oz	3.0	2.0 c	1.7 cd
BAS500	9 oz	2.8	2.6 ab	3.6 b
Stratego	10 oz	2.9	1.9 c	1.6 d
Tilt	4 oz	3.1	1.8 c	1.7 d
Laredo	8 oz	2.9	2.0 c	1.7 d
Bayleton	4 oz	2.7	2.1 bc	2.4 c
		NS		

¹Rating scale was 0 (no mildew) to 5 (total leaf coverage).

²Mean separation with LSD at $P \leq 0.05$.