

Seedhead Suppression of Annual Bluegrass at Fairway Height

J. A. Borger, T. L. Watschke and M. B. Naedel¹

Introduction

This study was conducted on a mature stand of annual bluegrass (*Poa annua*) at the Valentine Turfgrass Research Center, University Park, PA. The objective of the study was to evaluate selected growth regulators for turfgrass color and the seedhead suppression of annual bluegrass under fairway height conditions.

Methods and Materials

Treatments were applied on Oct 29 (NOV 1), Nov 16 (NOV 15), Nov 29, 2004 (NOV 30), and April 14, 2005 (FB) using a three-foot CO₂ powered boom sprayer calibrated to deliver 40 gpa using two 11004 flat fan nozzles at 40 psi.

The study was a randomized complete block design with three replications. The April 14, 2005 application of materials was at forsythia full bloom. The turf was maintained using cultural practices for irrigation, mowing, and fertilization that would be typical for a fairway.

Results and Discussion

Turfgrass color was rated five times (Table 1). Unacceptable color was rated on April 4th for turfgrass treated with the combination of Primo plus Proxy. On the April 26th rating date, turfgrass treated with Proxy plus Primo applied NOV 15 plus FB and NOV 30 plus FB had unacceptable color.

The percent seedhead suppression was rated once on May 24, 2005 (Table 2). All treated turfgrass had significantly more seedhead suppression than non-treated. The greatest amount of seedhead suppression provided was 23.3%.

Although significantly different than non-treated turfgrass, a 23.3% reduction in annual bluegrass seedhead may not be a sufficient reduction for most turfgrass managers.

¹ Instructor, Professor and Research Assistant respectively, Department of Crop and Soil Sciences, Penn State University, University Park, Pa, 16802

Table 1. Color ratings of an annual bluegrass at fairway height on a scale of 0 to 10 where 0 = brown, 7 = acceptable, and 10 = dark green.

Treatment Form		Rate oz/M	Timing	4/8	4/12	4/20	4/26	5/4
(-----Color-----)								
PROXY	2SL	5	NOV 1	7.8	8.0	7.2	7.5	10.0
PROXY	2SL	5	NOV 15	7.7	8.3	7.3	7.5	10.0
PROXY	2SL	5	NOV 30	7.7	8.7	7.7	8.2	10.0
PROXY	2SL	5	FB	7.0	7.3	6.5	7.2	10.0
PRIMO	1EC	0.25	FB					
CHECK				7.0	7.3	7.0	7.3	10.0
PROXY	2SL	5	NOV 1/FB	7.5	8.3	6.8	7.0	10.0
PRIMO	1EC	0.25	FB					
PROXY	2SL	5	NOV 15/FB	7.7	8.2	6.5	6.7	10.0
PRIMO	1EC	0.25	FB					
PROXY	2SL	5	NOV 30/FB	7.5	8.0	6.8	6.8	10.0
PRIMO	1EC	0.25	FB					

Table 2. Ratings of the percent seedhead suppression of an annual bluegrass at fairway height taken on May 24, 2005.

Treatment Form		Rate oz/M	Timing	Percent Reduction
PROXY	2SL	5	NOV 1	16.7a ^{1,2}
PROXY	2SL	5	NOV 15	20.0a
PROXY	2SL	5	NOV 30	16.7a
PROXY	2SL	5	FB	20.0a
PRIMO	1EC	0.25	FB	
CHECK				0.0b
PROXY	2SL	5	NOV 1/FB	20.0a
PRIMO	1EC	0.25	FB	
PROXY	2SL	5	NOV 15/FB	23.3a
PRIMO	1EC	0.25	FB	
PROXY	2SL	5	NOV 30/FB	20.0a
PRIMO	1EC	0.25	FB	

1 – Means followed by the same letter do not significantly differ (P = 0.05, Duncan's New MRT).

2 – Data were transformed using Abbott's (% of untreated).