

# Evaluation of PGR Materials Applied to Fairway Height Creeping Bentgrass/Annual Bluegrass

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## Introduction

This study was conducted on a mixed, mature stand of fairway height ‘Penneagle II’ creeping bentgrass (*Agrostis stolonifera*) and annual bluegrass (*Poa annua*) at the Valentine Turfgrass Research Center, Penn State University, University Park, Pa. The objective of the study was to determine the efficacy of Primo MAXX and Trimmit, alone and in combination, using color ratings and fresh weight foliar yields.

## Methods and Materials

This study was a randomized complete block design with three replications. Treatments were applied on June 23 (JUNE) and August 3, 2010 (6 WAT) using a three foot CO<sub>2</sub> powered boom sprayer calibrated to deliver 87.12 gpa using one, flat fan, TP9508EVS nozzle at 40 psi.

The test site was maintained similar to that of a golf course fairway (Figure 1) with respect to pest control, irrigation, fertilization, and mowing. Clipping weights were taken once a week with a seven bladed John Deere reel mower bench set to a height of 0.450” and modified to collect clippings.

## Results and Discussion

Turfgrass color was rated nine times each during the study (Table 1). There was no unacceptable (less than 7.0) color rated turfgrass on any rating date.

Fresh clipping weights were collected and analyzed nine times during the study (Table 2). There were some significant differences found during the study. In general, there was a reduction of treated turfgrass fresh clipping weights found. Notable, there was very little significant difference when comparing the high rates of Trimmit and Primo MAXX to each other. Also, when comparing the mixtures at varying combination rates of each PGR there was very little significant difference found. These products have been tested both at universities and in the field and have proven to be outstanding PGRs in both arenas. These mixtures again prove the abilities of these materials to reduce clippings without harm to the turfgrass community.

With the introduction of Trimmit into a PGR program one would expect to reduce the most annual, annual bluegrass in the sward. Although this was not the focus of this test, it should be considered if using Trimmit.

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**Table 1.** Creeping bentgrass color ratings on a scale of 0-10 where 0 = poor color, 7 = acceptable, and 10 = dark green color, taken in 2010.

Treatment	Form	Rate oz/A	Timing	(------Color-----)				
				7/1	7/7	7/14	7/21	7/28
PRIMO MAXX	1MEC	12	JUNE/6 WAT	8.0	7.0	7.0	8.0	8.5
TRIMMIT	2SC	16	JUNE/6 WAT	8.0	7.0	7.0	8.0	8.5
PRIMO MAXX	1MEC	6	JUNE/6 WAT	8.0	7.0	7.0	8.0	8.5
TRIMMIT	2SC	10	JUNE/6 WAT					
CHECK				8.0	7.5	8.0	8.0	8.5
PRIMO MAXX	1MEC	3	JUNE/6 WAT	8.0	7.0	7.0	8.0	8.5
TRIMMIT	2SC	10	JUNE/6 WAT					
PRIMO MAXX	1MEC	10	JUNE/6 WAT	8.0	7.0	7.0	8.0	8.5
TRIMMIT	2SC	3	JUNE/6 WAT					

**Table 1 (cont.)**

Treatment	Form	Rate oz/A	Timing	(------Color-----)			
				8/4	8/18	8/26	9/2
PRIMO MAXX	1MEC	12	JUNE/6 WAT	7.5	8.0	8.0	8.0
TRIMMIT	2SC	16	JUNE/6 WAT	7.5	8.0	8.0	8.0
PRIMO MAXX	1MEC	6	JUNE/6 WAT	7.5	8.0	8.0	8.0
TRIMMIT	2SC	10	JUNE/6 WAT				
CHECK				8.0	8.5	8.5	8.5
PRIMO MAXX	1MEC	3	JUNE/6 WAT	7.5	8.0	8.0	8.0
TRIMMIT	2SC	10	JUNE/6 WAT				
PRIMO MAXX	1MEC	10	JUNE/6 WAT	7.5	8.0	8.0	8.0
TRIMMIT	2SC	3	JUNE/6 WAT				

**Table 2.** Fresh turfgrass clipping weight (grams), taken in 2010.

Treatment	Form	Rate oz/A	Timing	(------Weights <sup>1</sup> -----)				
				7/1	7/7	7/14	7/21	7/28
PRIMO MAXX	1MEC	12	JUNE/6 WAT	8.8b	11.4b	23.2ab	41.6a	31.5a
TRIMMIT	2SC	16	JUNE/6 WAT	10.1ab	13.1b	18.3b	33.0a	25.8a
PRIMO MAXX	1MEC	6	JUNE/6 WAT	10.7ab	11.6b	20.8ab	40.9a	30.5a
TRIMMIT	2SC	10	JUNE/6 WAT					
CHECK				15.4a	21.4a	27.6a	46.2a	35.2a
PRIMO MAXX	1MEC	3	JUNE/6 WAT	13.6ab	13.4b	22.4ab	48.2a	26.7a
TRIMMIT	2SC	10	JUNE/6 WAT					
PRIMO MAXX	1MEC	10	JUNE/6 WAT	9.6b	12.5b	22.5ab	44.8a	25.4a
TRIMMIT	2SC	3	JUNE/6 WAT					

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

**Table 2 (cont.)** Fresh turfgrass clipping weight (grams), taken in 2010.

Treatment	Form	Rate oz/A	Timing	(------Weights <sup>1</sup> -----)			
				8/4	8/18	8/26	9/2
PRIMO MAXX	1MEC	12	JUNE/6 WAT	18.1a	29.1b	50.3a	34.0a
TRIMMIT	2SC	16	JUNE/6 WAT	19.1a	25.2b	32.5b	32.1a
PRIMO MAXX	1MEC	6	JUNE/6 WAT	20.6a	27.7b	41.9ab	38.8a
TRIMMIT	2SC	10	JUNE/6 WAT				
CHECK				20.1a	41.2a	49.5a	38.5a
PRIMO MAXX	1MEC	3	JUNE/6 WAT	20.3a	28.9b	42.3ab	35.2a
TRIMMIT	2SC	10	JUNE/6 WAT				
PRIMO MAXX	1MEC	10	JUNE/6 WAT	19.6a	27.2b	41.7ab	36.5a
TRIMMIT	2SC	3	JUNE/6 WAT				

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



*Figure 1: Randomized complete block test area with three replications. The test site was maintained similar to that of a golf course fairway*