

CONTROL OF ANNUAL BLUEGRASS SEEDHEADS ON A GOLF COURSE PUTTING GREEN USING PLANT GROWTH REGULATOR PRODUCTS, 2019

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This study was conducted at the Joseph Valentine Turfgrass Research Center in University Park, PA. The site was maintained as a golf course putting green with mowing performed 5 times per week at a height of 0.100 in. Greens soil rootzone was a modified sandy loam with a pH of 7.2 and 1.4% organic matter. Individual plots measured 3 ft x 6 ft and were arranged as a randomized complete block design with four replications. Treatments were applied with a CO²-pressurized backpack sprayer at 40 PSI with a single TeeJet AI9508EVS nozzle and calibrated to deliver 2.0 gallon of water per 1000 ft². Treatments were initially applied in the late fall and followed up with spring applications based a growing degree day model. Spring applications were initiated at 197 GDD (base 32), with sequential applications made at 488 and 720 GDD. All application dates are listed in the tables. Percent seedhead was visually assessed on a 0 to 100 percent scale where 0 = no seedheads present and 100 = entire plot area covered with seedheads. All data were subjected to analysis of variance and means separated at $P \leq 0.05$ according to Fisher's Protected least significant difference test.

Seedheads were first observed at the site in late April 2019. Seedhead pressure continued to increase until 20 May when peak pressure was reached with the nontreated plots having 78% seedhead coverage (Table 1). Seedhead pressure then declined within all treatments with the nontreated plots having 24% seedheads by 3 Jun. Plots treated with Proxy/Anuew provided excellent seehead control (1.3 to 3.3 %) when compared to the nontreated (12 to 78%) on all rating dates. No differences in percent seedhead were observed between Anuew-treated plots, regardless of application rates. Injury was not observed on any rating date.

Table 1. Percent *Poa annua* seedheads on a putting green following the application of plant growth regulators, 2019.

Treatment and rate per 1000ft ²		App Code ^y	Percent seedhead ^z					
			29 Apr	6 May	13 May	20 May	27 May	3 Jun
1	Proxy 5.0 fl oz.....	ABC	1.5 b ^x	2.8 b	3.3 b	3.3 b	2.5 b	1.3 b
	Anuew 1.3 grams	C						
	Anuew 2.6 grams	D						
2	Nontreated	-	12.3 a	33.3 a	66.3 a	77.5 a	47.5 a	24.0 a
3	Proxy 5.0 grams	ABC	1.5 b	2.8 b	3.5 b	3.5 b	2.8 b	1.5 b
	Anuew 2.6 grams	CD						

^z Percent seedhead was visually assessed on a 0 to 100 percent scale where 0 = no seedheads present and 100 = entire plot area covered in seedheads.

^y Treatments were applied on the following dates: A = 13 Dec 2018, B = 30 Mar, C = 17 Apr, and D = 26 Apr.

^x Means in a column followed by the same letter are not significantly different at $P \leq 0.05$ according to the Fisher's Protected least significant difference.