

Table 2.11 Comparison of average greenness index of preliminary efficacy experiments on the exogenous application of GB on creeping bentgrass (*A. stolonifera*) cv. Penncross at different DPT in the growth room.

Experiment ^b	Treatment	Greenness index ^a			
		7 DPT	14 DPT	21 DPT	28 DPT
180814	Water	0.593	0.498	0.536	0.480
180814	GB ^c	0.558	0.560	0.537	0.505
	P value	0.365	0.0004 ^d	0.002 ^d	0.004 ^d
180921	Water	0.524	0.548	0.520	0.483
180921	GB	0.558	0.560	0.537	0.505
	P value	0.201	0.009 ^d	<.0001 ^d	0.270
181026	Water	0.532	0.530	0.500	0.507
181026	GB	0.552	0.546	0.524	0.540
	P value	0.067 ^d	0.008 ^d	0.011 ^d	0.473

^a Greenness index values (ranging to 0=low to 1=high) were obtained by processing the image using FieldScout GreenIndex+ Turf Spectrum Technologies, Inc. version 2.0 app, and averaged from 5 replicates per experiment.

^b Experiment 180814 was started August 14, 2018, 180921 was started September 21, 2018, and 181026 was started October 26, 2018.

^c GB (0.52 mg/mL) applied to foliage on a weekly basis starting at 0 DPT and last applied on 21 DPT.

^d P-values were calculated from *t*-tests comparing average greenness values from 15 replicates over 1 experiment. P-values less than 0.05 show statistically significant differences.

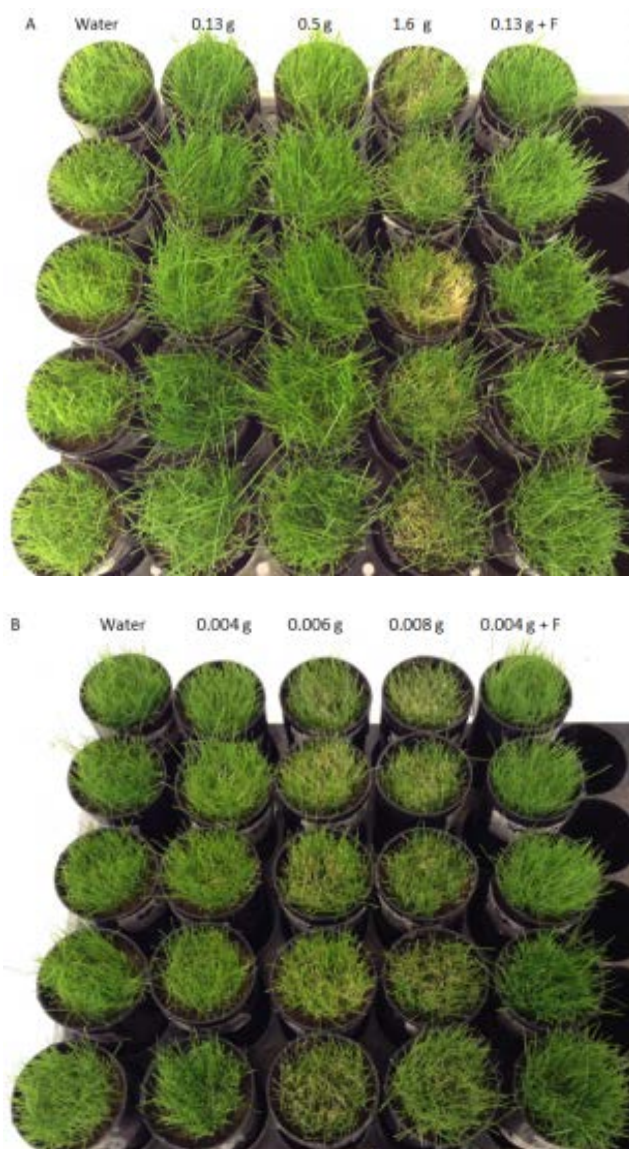


Figure 2.3 Dose-response foliar treatment for **(A)** Glycine betaine and **(B)** GABA on creeping bentgrass (*A. Stolonifera*) cv. 'Penncross' at 21 DPT.



Figure 2.7 Foliar effect of Glycine Betaine (GB) on the different turfgrass cultivars at 28 DPT.