Effects of Ice Coverage on Creeping Bentgrass and Annual Bluegrass Survival. (C05-hamilton170226-Oral)

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Abstract:

The objective of this experiment was to determine the effects of air replenishment of a turf/ice interface on the survival of creeping bentgrass and annual bluegrass. Both species in a hardened and unhardened condition were capped with a 20 mm thick ice layer that created a 20 mm air space between the ice and turf. The two treatments involved daily injections of fresh air into the vented air space and no air injections. Plants were maintained in a freezer maintained at -4 C and were removed 30, 60, and 90 days after treatments began. Creeping bentgrass had significantly higher survival rates than annual bluegrass. The percent survival averaged across all three removal times for hardened creeping bentgrass, and hardened annual bluegrass was 87 and 17%, respectively. The reduction of survival when comparing hardened versus unhardened was much greater for creeping bentgrass, dropping from 87% survival for hardened plants to 18% for unhardened plants. There were also significant differences in percent survival for the air

injection treatments. The plants receiving air injections had a lower survival rate (29%) as compared to plants that were not flushed with air (38%).

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