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Sand topdressing and covers prevent winter desiccation on turf

April 10, 2020



Spring green-up at Awarii Dunes Golf Course in Axell, NE after the protective covers were removed in mid-March.

Lack of season-long snow cover can result in substantial winter desiccation injury for golf course turf. The damage can pose serious economic consequences on golf and sports turf facilities the following spring. Under ideal conditions, winterkill from desiccation stress heals by mid-summer, but under-supported golf courses in rural regions may not have the means to recover from desiccation stress and could close permanently.



Winter desiccation stress was enhanced at the JSA Turfgrass Research Center in Mead, NE. The lowest three treatments survived the stress with protective covers and sand topdressing. The other treatments had severe winter desiccation injury.

The intermittent nature of winter desiccation has made it difficult to study the efficacy of different preventative practices and products. This has led to widespread adoption of various prevention techniques with varied levels of success.

In an article recently published in *Agronomy Journal*, researchers in Nebraska evaluated winter desiccation survival on creeping bentgrass (*Agrostis stolonifera* Hud.) fairways treated with different prevention treatments in late fall. The treatments were applied at several golf facilities across Nebraska to increase the likelihood of lethal winter desiccation stress.

Treatments that covered the turfgrass during the winter had minimal winter desiccation injury the following spring. These treatments included permeable and impermeable protective covers and a liberal application of sand topdressing in

November. Treatments that were spray-applied in fall did not provide sufficient protection to limit desiccation injury. The researchers also found that desiccation damage was significant when crown moisture content fell below 50%, which can be used to diagnostic lethal winter injury in the early spring.

Dig deeper

Michael, D.J., & Kreuser, W.C. 2020. Sand topdressing and protective covers impact creeping bentgrass crown moisture during winter. *Agronomy Journal, 112*. https://doi.org/10.1002/agj2.20058

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