

Will my putting green turf survive winter?

Jim Skorulski is a USGA Senior Agronomist in the Northeast Region. Jim has made over 2,000 Course Consultation Service visits in over 20 years of service with the USGA. Jim can be reached at j Skorulski@usga.org.

QWhat has this winter been like so far in the Northeast?

There have been at least three severe temperature swings that occurred since November with the last occurring in January when temperatures in many areas reached the upper 50s and then plummeted into single digits or lower within a 48 hour period. Currently, most golf courses in the southern part of the Region are clear but those in more northern parts of the region and in Canada are not. There are reports of significant ice layers present in those areas.

QHas the turf survived the winter so far?

Yes, as of the end of January the reports from the field have been positive. This is based on a limited number of superintendents who have grown out turf plugs taken from greens. This is great news but we all know there is plenty of winter ahead and it is impossible to predict what might happen going forward.

Starting about mid-February the health of annual bluegrass can change rapidly as it begins to deacclimate and becomes more susceptible to rapid drops in temperature.

QAre there any other diagnostic tools to help a superintendent determine if the turf has survived?

The only definitive way to tell if the

turf has survived is to pull turf plugs and bring them indoors to see if they grow. This is a reliable technique, provided the plugs are taken from a representative area of the green.

We also recommend monitoring for the presence of an anoxic or anaerobic condition beneath the ice. It can occur fairly quickly under some circumstances, such as when the ground is not fully frozen, or soils are high in organic matter. A distinctive odor will be present that has been termed the “smell of death.” Begin monitoring for the condition under ice sheets that have been in place for three to four weeks, especially on greens that have a history of low temperature injury.

QShould a superintendent consider removing accumulated snow/ice from greens?

There are no guarantees when it comes to snow and ice removal from greens. There is always risk involved when the covered turf is exposed to lower temperatures, knowing that hardiness of those plants may be compromised. Removal of an ice layer should be considered on annual bluegrass greens if it is creating an anoxic condition. Initiate the work based on a favorable forecast for moderate day and night time temperatures. A winter cover or snow can sometimes be used to protect recently exposed surfaces.

QWhat are your thoughts about drainage as the snow and ice melt?

It is critical to keep water from collecting on the surfaces whenever possible. Open paths through snow and ice layers that impede water flow from the surface. Be sure that any snow that

is cleared from the surface is piled far enough away from a green so that snowmelt does not flow back onto the green.

QAnything else you would like to add?

Hopefully, our luck will continue through the rest of the winter season. However, if you end up having to deal with damaged playing surfaces, it is critical to be out front with the problem with club officials, golfers

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and other professional staff at your facility. Develop a sound recovery plan, procure the necessary resources and be realistic when estimating the length of the recovery process and importance of using temporary greens. Finally, it is a good idea to get the irrigation system charged up early if you expect some degree of damage has occurred. Early season irrigation may be critical to the survival of the weakened plants and a necessity for the establishment program.

Editor's Note

Jim Ross and his colleagues at the Prairie Turfgrass Research Centre at Olds College in Alberta, Canada conduct winter injury research on turfgrass and their information can be found at <http://www.oldscollege.ca/ptrc/home.html>.



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