A Winter Report Card

By Jim Skorulski, agronomist, Northeast Region

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Golf in Upstate New York in short sleeves on Christmas? Who would believe it? The unusually warm weather was an unexpected Christmas present to golfers but also has spawned concerns for turf managers. The weather cycle has been dominated by periods of above-normal temperatures and rain followed by brief stretches of cold and spotty snow. Areas that have received snow have seen most of it melt, leaving bare ground or patches of snow and ice. The most recent weather cycle has brought significant lake-effect snow that should provide a longer-lasting and welcomed cover to some northern areas. However, southern areas of the Northeast Region remain free of snow.

A sensor is used to monitor temperatures above and below a cover system at the Yahnundasis Golf Club in New Hartford, New York.

Many have concerns regarding the potential impact of the unseasonal weather patterns on fall-applied fungicides. Fungicide applications that were made after the warm Christmas weather are probably fine. Applications made before the record-high temperatures likely have worn off, especially if they were contact products. Many have reapplied fungicides, particularly to greens that were mowed following fall applications.

There are justifiable fears that freeze cycles and cold temperatures might not be tolerated well by turf if it is not fully hardened off. The good news is that the temperature changes from warm to cold have not yet been too abrupt, so it is doubtful any acute injury has occurred. However, multiple freeze thaw cycles are

never desirable for turf, especially annual bluegrass and perennial ryegrass which are very sensitive to winter injury. Given the warm temperatures, turf beneath some covers may be more vulnerable to damage from dramatic freeze thaw cycles due to the potential for even higher temperature spikes under turf covers. Temperature spikes should be less severe beneath cover systems that utilize a white-colored outer cover or have insulation material. Short temperature spikes are probably not a concern. However, extended periods – i.e., longer than 48 hours – of temperatures greater than 45 degrees in the crown region can cause annual bluegrass to break dormancy. Plants that have broken dormancy can regain hardiness but are unable to achieve the same level they had before breaking dormancy. Elevated temperatures also increase plant respiration rates which can lower oxygen levels in the enclosed environment beneath impermeable cover systems. Plant exposure to low-oxygen environments for three- to four-day periods is not problematic, but extended exposure is certainly concerning. Fortunately, the lack of snow also has made it easier to access greens to remove outer covers or vent cover systems by blowing air. For those managing bermudagrass, temperatures have not likely been low enough to cause damage, but some are concerned about the impact of a sudden cold snap.

It certainly has been an interesting winter so far. February and March always have a significant impact on winter injury, so only time will tell the extent of winter damage on golf courses this spring. If the lake-effect snow squall out my window is any indication, we may be in for a much welcomed period of more stable winter weather.

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