

Winter brings perennial N'east problem

Ravis discusses solutions to supers' woes

BY PETER BLAIS

Dessication, disease and low-temperature kill are the three most common forms of winter damage to turf in the Northeast, according to Chuck Ravis of Augusta (Maine) Country Club.

Simply put, dessication is grass losing water faster than it takes it in, explained Ravis during last month's Maine Turfgrass Conference and Show in Portland. In winter, soil water is often frozen, so no uptake occurs through the roots. But evaporation still occurs.

Visual symptoms are a straw-brown color. Damage can be superficial if it only affects the leaf. Or it can cause death if the crown area is affected. Windy, sunny, cold days with little snow cover are the times of maximum damage. It is a special problem on high, wind-swept sites due to lack of snow cover.

Preventive measures can include windbreaks designed to stop the wind or build up snow cover; straw or brush covers; heavily applied top dressing; protective covers.

Ravis has found covers to be the best. They must be installed in late fall and allow for water passage. The critical factor is when to remove them.

"Remove it too early and the turf is very susceptible to dessication. Remove it too late and there will be an excess of growth or possibly disease damage" said the 12-year head man at Augusta.

Pink and gray snow mold are the most common types of fungus at Augusta. Snow cover and unfrozen turf, this winter's conditions, favor their formation. Most damage occurs in late winter as the snow melts.

"From what I see and hear, it's going to be a pretty difficult snow mold year," said Ravis.

Fungicides are an effective control. Ravis said they should be applied in early- to mid-November, before the snow flies. There are many chemicals on the market. But options in northernmost states, like Maine, are limited to fungicides that are effective from November through April, about five months.

Cool-weather pythium has also been a fungus problem at Augusta. It appears as yellowish-orange patches, occurring most frequently where water flowed or accumulated. It mostly affects poa annua and, in limited cases, bentgrass, said Ravis.

"To my knowledge, little research has been done on cool-weather pythium. And none under Northern climates, where we might have snow cover for four or five months," said Ravis.

Texas A&M University researcher James Beard believes ice may act as barrier to gas exchange,

said Ravis. Bentgrass is fairly resistant to ice. But poa annua can be severely damaged if covered more than 75 days.

While ice can cause damage, Ravis said crown hydration and low temperatures, which he terms "direct low-temperature kill," are the major culprits. Grass becomes hydrated in standing water, ice forms within the plant and cell walls rupture.

Plants are more hardy in early winter than late winter, so most damage occurs in February, March and April. Grass is also more susceptible to the frequent

freeze-thaw-freeze cycle this time of year.

Ice-damaged turf turns dark brown or black with a distinct, septic odor caused by rot. It most frequently occurs in low areas with poor drainage, but also where water flows.

Snow depth helps protect turf through the winter. But late in the season, removing snow from certain areas, greens in particular, may help prevent damage. Snow can be removed by plowing or snow blowing. Sand can then be spread to help melt the ice.

"Removing ice not only removes

potential moisture, it also allows the turf to dry out and avoid repeated crown hydration and re-freezing as the ice melts during the day and cold temperatures freeze it at night," said Ravis.

Success depends on whether snow and ice removal was done before any direct, low-temperature kill occurred, and the weather after they are removed.

"One of the most important things we can do to prevent winter damage is grow bentgrass," said Ravis while showing a winter-damaged section of poa annua next to a re-planted area of relatively



healthy bentgrass.

Height of cut can be an important factor, he added. Taller grass is healthier with better roots and more carbohydrate reserves. Additional plant mass provides additional insulation.

Drainage of wet areas, hand-mowing greens, triplex mowing fairways, light-frequent top dressing, avoidance of over-watering, aeration to avoid compaction and overseeding with bentgrass can all have positive results.

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