



Winter injury has been a concern for golfers, superintendents and agronomists throughout the 100-year history of the Green Section.

WINTERKILLING OF TURF

BY LYMAN CARRIER

BULLETIN OF THE GREEN SECTION OF THE U.S. GOLF ASSOCIATION

OCTOBER, 1923

Editor's Note: Winter injury on cool-season putting greens has long been a concern for golf course superintendents, in no small part because the exact reasons why turf falls victim to winterkill are not fully understood. Looking back at the article "[Winterkilling of Turf](#)", published in the Bulletin of the Green Section of the United States Golf Association in 1923, we find the same concern and confusion about winter injury, along with some of the same recommendations that we would make today to help reduce the risk of damage. Sometimes the more things change, the more they stay the same.

This is the season of the year when many of the northern greenkeepers are confronted with the matter of preparing their greens for winter. On some of the northern courses putting greens come through the winter in bad condition. Often much of the grass is dead, necessitating reseeding. The writer visited the Minneapolis-St. Paul district early last spring for the purpose of studying the subject of winterkilling of turf. In previous seasons New York and New England courses have been visited. One thing seems to be

clear: bluegrass, the bents, and fescue are not killed by cold weather anywhere in this country if the soil conditions are right for their growth.

As previously stated in THE BULLETIN, most of the winterkilling is due to faulty drainage. This was clearly evident on a number of the greens studied. In a few cases the killing was confined to depressions in the surface from which the water could not escape so long as the soil beneath was frozen. A great many of the greens that have winterkilling are built in side hills and the greens are waterlogged with seepage from below. No protective measure will save the turf on poorly drained greens except drainage. In some cases, this means a relocation or rebuilding of the green.

There was some winterkilling in the Twin City district which could not be charged to faulty drainage. Some greens had dead spots, definite in outline, indicating that weak plants had succumbed. Often adjoining these dead areas were perfectly healthy patches of velvet, creeping, and Rhode Island bents. It is not easy to identify the species of grass which make up dead turf on a putting green. There were sufficient remains, however, to show that the dead grass was mostly of the *Agrostis* genus, which includes redtop and the bents. The writer is indebted to Mr. Tom Vardon, the professional and greenkeeper at the course of the White Bear Yacht Club, near St. Paul, for an explanation of the trouble. Mr. Vardon's observations lead him to the conclusion that the winterkilling is confined mostly to the redtop which has been customarily seeded in the greens every spring. One thing is evident, that if the greens were all covered with the hardy strains of bent which are growing on some of them, there would be no winterkilling under ordinary winter conditions.

On several courses during the past two or three winters the greens have been covered with a layer of brush, which is covered with straw. The evidence is not very conclusive either for or against the practice. Some who covered their greens last year say they will not do so again; others contemplate trying the method further. It is the writer's judgment that the most effective remedies for winterkilling are (1) drainage if needed and (2) creeping bent turf.

To review all past issues of the USGA Green Section Record, dating back to 1921, visit our [online archive](#).