## Minnesota Golf Course Superintendents' Association

AFFILIATED WITH THE GOLF COURSE SUPERINTENDENT'S ASSOCIATION OF AMERICA

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## Dr. Donald White Reports

"Winter Kill" of Annual Bluegrass - 1976 or

Why Golf Course Superintendents Grow Old Before Their Time

1976 will go on record as one of those years that <u>Poa annua</u> didn't survive the winter. Minnesota golf course superintendents face problems like this on the average of once every four to ten years. So we shouldn't be completely disoriented with a spring like we're facing this year.

This year greens came out of the winter dead or maybe even looking normal for a few days only to go downhill rapidly. Everyone is disturbed and questions like "Are you sure you sprayed that green last fall?"; or "That blankety-blank Poa annua"; or "Those lousy blankety-blank greens" are heard every day. Fortunately, more constructive discussions such as "What caused the problem?" and "What can be done about it?" are heard more often than not.

That's the way to go! Find the cause and correct the situation.

In order to answer these questions, it is necessary first to have some kind of understanding about what "winter kill" really is. There are several types of winter kill that we face in Minnesota. One is desiccation. That's simply drying out of the grass over winter to the point where the grass does not survive. We find this usually associated with knobs on the greens or places where the wind is directed between buildings or between rows of trees and in open, exposed situations. Desiccation may be particularly bad in open winters. That wasn't the major problem last winter.

There are three other types of winter injury that are all related. These were the culprits last winter and spring. One is direct low temperature kill where plants are simply killed when subjected to low temperatures. This direct low temperature kill of plants is most often associated with compacted soils, poorly drained sites or low places. Some consider ice damage as a separate type of kill. However, ice damage can be associated with either the direct low temperature kill where the crowns are hydrated (when crowns take up water) and where grass has been subjected to low temperatures or to inhibition of gas exchange.