

Bermuda Survives Cold If Not Over-Cultivated

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The spring of 1963 found many South-eastern course supts. intently searching their greens for some trace of Bermuda-grass growth. Many of these men, situated north of a line from Birmingham, Ala. to Atlanta, Ga. and north to Charlotte, N.C., found that when winter grass disappeared Bermuda no longer existed.

Little or no winter injury was observed on Bermuda south of this line. In and north of the Memphis area, almost every course suffered enough damage to require some degree of re-planting. This was the first winter that Tifton 328 had suffered any appreciable cold damage in this area and this naturally called for investigation to find out what had happened.

An examination of weather records of selected cities within the Bermuda damage zone was quite enlightening. It revealed that the weather not only was abnormally cold but unusually dry. There was an insignificant amount of insulating snow cover. The weather was so severe, in fact, that many areas lost their overseeded winter grasses.

60-year Record Cold

As an example of the severity of the weather, Atlanta showed an average January temperature of 37.2 degrees — 7.6 degrees below normal. The last 12 days in January there averaged more than 14 degrees below normal, with a low of minus 3 degrees. During that month, Atlanta reported no insulating snow cover. The cold was even more extreme north of this area. Admittedly, the weather was unusual in that it was the coldest Atlanta winter in 60 years. But everyone agrees the same thing could happen again.

With this in mind, green committees took a long look at other grass species for possible use on Southern greens. The first reaction of many was to consider converting from Tifton 328 to one of the bents which is more cold tolerant. But a closer study of this possibility convinced them that bents would not do since they can't tolerate the humid heat of this area during the summer.

The statement has been made that the zone of transition between cool and warm season grasses is a sort of "no-mans land" for grasses, with no single species entirely



Greens in this aerial photo of the Sooner course in Bartlesville, Okla., show in white because Architect Floyd Farley specified limestone chips on the sub-grade as part of the drainage plan. Unusual photo was made by D. S. Willcox before topsoil was brought in.

suitable. This statement must be modified, however, to the extent that warm season Bermuda, perfect from early spring through late fall, simply must be properly prepared to survive severe cold and remain healthy. Practical experience and impartial research have established that Tifton 328 Bermuda is slightly more cold-hardy than U-3 Bermuda under identical management. U-3 has long been used for fairways and tees throughout the lower North and Midwestern states and, under management for these uses, has continually survived sub-zero weather.

Some Came Through

As reports of winterkill came in this year from the more seriously damaged areas, it seemed for a while that all Bermuda greens had been lost. Occasional reports of other courses were then received and indicated that a fortunate few had experienced no loss at all. A close examination of procedures at these latter courses revealed that either the normal practices prior to overseeding had not been followed, or that greens had been taken out of play and covered with straw for protection from the cold. This latter practice, while being the safest to follow, is not always possible since temporary greens are required if the courses remain open for play. Many clubs have memberships that discourage use of temporary greens.

If greens can be covered with a mulch, this should be done in the northern limits