

helpful in minimizing disease. Good drainage is another device which helps in water control and definitely helps to reduce disease.

Some grasses have much greater resistance to diseases than others. The use of the better grasses is a big step toward minimizing interference. We are trying to look at this whole operation from the long-term standpoint. We know that an attack of disease must be dealt with on the spot and not sometime later.

Late Afternoon Work

It has been a pleasure to work with supts. when a course was to be prepared for a major championship. At the moment we shall refer to Canterbury where we worked with Mal McLaren getting ready for the Open. One of the operations that made history was that of mowing when the grass was dry. During the tournament the fairway mowers were started on the first hole as soon as the last match had cleared the second tee. What a pleasure it was to see the dry grass fly behind the units and to see the near-perfect job that was done.

Frequently we have asked the question, "Why can't grass be mowed when it is dry?" When it has rained for two weeks that becomes a pretty silly question because grass has to be cut before it gets too high, wet or not. Maybe more mowing might be done in late afternoon when most players have finished for the day and there would be minimum interference with the players. Labor has a great deal to do with this idea but we have seen it work some places.

For several years we have been calling attention to the fact that well-fed turf requires less irrigation. Grass that is well supplied with nutrients can make much more efficient use of the water that is available to it. It is a fact that nitrogen is cheaper than water. To budget-minded people this should be great news because it means that golfers can have better turf at lower cost. This paragraph refers mainly to tees and fairways, not to greens.

Constructing A Course

Q. I am in the initial stages of building an 18-hole course on my farm. Please send me a list of textbooks, literature, etc., that would help me in building and maintaining and operating the course after completion. Also, would you advise me to tile the greens where there is good surface drainage? I plan to build up my greens with clay, topping with topsoil and then adding approximately 85 per cent sand. (South Carolina)



Fred H. Williams, (left front), USGA green section executive secy., who retired recently after 37 years in that position, receives a gift check from the USGA, presented by Joseph C. Dey, executive dir. of the Association. Check along with a similar gift from Mid-Atlantic GCSA were given to Fred at a luncheon held in Beltsville, Md. In the background are (l to r): T. T. Taylor, James E. Thomas, Robert L. Elder, A. E. Rabbitt, Martin F. McCarthy and Alexander M. Radko.

A. Under separate cover I am sending you a list of reference material that has been published. This should be helpful in building your library.

The best help in building the course will be to secure the services of a competent course architect. The pres. of the American Society of Golf Course Architects is David W. Gordon, Doylestown, Pa.

The best way to maintain the course after completion is to secure the services of a topnotch supt. Headquarters for the GCSA is P. O. Box 106, St. Charles, Ill.

If subsoil under your greens is clay, which will slow the rate of water percolation, I would definitely advise a tile system. If, however, you have sand and gravel, which will permit the ready drainage, then you will not need tile. Surface drainage is advisable in any case, whether or not the subsoil structure demands the use of tile.

I'm a little fearful of your plan to first build up your greens with clay, then top with topsoil and then add approximately 85 per cent sand. If you build up your greens with clay, then it must be that you have a clay soil. This is the building material. This demands that the tile be installed in the clay base to assure good drainage. I would mix the topsoil and the sand together with a bulldozer, motor patrol grader or some mechanical device so that the materials are mixed properly and uniformly off the site. Properly prepared top mixture can be hauled to the green, dumped and spread so that you have a perfectly uniform sandy soil on top of your drainage system. This will assure well-drained greens, deep roots and much greater golfing satisfaction in the years to come.

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