The question of bunker maintenance, as opposed to the positioning or size of some new bunker, is rarely heard discussed in most golf clubs. It seems that bunker maintenance is often regarded as unimportant and this should not be so. A bunker provides a bad enough hazard to the "unlucky" golfer who has to play out of it, but it becomes an unfair menace if it is not properly maintained.

**Smooth Surface**

Routine maintenance of bunkers consists mainly of keeping the sand surfaces smooth and the grass fringes and banks around them neatly cut. Raking out of the sand to correct unevenness should be a daily job, if possible, and the sand should be kept loose and well drawn up to the bunker faces. The work ensures that weed establishment in the sand is reduced and that the player called upon to execute a bunker shot is provided with a fair lie. The work done by the greens staff is not sufficient to ensure satisfactory conditions for play at all times and the golfers must be regularly reminded of their responsibility to correct damage they do, after playing a bunker shot. This is particularly important where the greens staff has not time to complete the daily raking.

Cutting the fringes of the "run-up", the lip and banks of bunkers, is important if they are to serve their intended purpose and provide fair conditions for play. This trimming is needed at no more than fortnightly intervals, though, no doubt, many a club cannot afford to do this so regularly. An effort should, however, be made to keep the bunker surrounds reasonably well trimmed, otherwise conditions result which give rise to complaints.

Other items of maintenance work are less frequently required than raking and mowing, but nevertheless they are important. The sand is regularly being blasted out of the bunker and, on seaside courses particularly, a lot is often blown out by wind. Replacement of the sand is needed on occasions to keep the bunker "full" and this generally presents no problem on the seaside course, where new sand is often readily available. On the inland courses, new sand has to be brought in and, therefore, the wise club ensures that the right type of sand is obtained. It is not satisfactory to accept the cheapest sand from the most handy supplier, as the bunker sand needs to be fairly sharp, hard, not too fine and certainly free of silt. Dirty, fine sands tend to pack down and provide poor surfaces for playing a bunkered shot. The same applies to a soft sand, which quickly breaks down and turns to "slurry" during wet weather.

**Lime Free Sand**

It does not follow that all sands obtained from inland sources are free of lime. Clubs who are in doubt as to whether the sand they propose to obtain is satisfactory, should have a sample tested. Frequently it is impossible to pick out a sand which contains lime by visual inspection only.

Drainage of bunkers is often a problem, if they are made "self draining". Many bunkers are made by excavating to form a basin shape in such a manner that sub-soil is exposed. Where this is clay, drainage problems arise as the bunker forms a collecting point for water.
which percolates away only slowly through the clay base. If possible, a tile drain should be laid through the clay base of bunkers and connected to an existing land drain. The drain should fall towards its outlet end and it need not be deep. If set 4 in. below the sub-soil surface at its high end, it would be satisfactory, but it should be covered to the level of the sub-soil surface with porous material, e.g. gravel or hard clinker ash. It is desirable to cover this backfilling with turf placed upside down before the sand is introduced. The turf prevents the sand from being washed into the backfilling material and then down the drain.

Bunkers are regarded as a necessary feature on a golf course, but every effort should be made to keep their number to the minimum due to difficulties of maintenance. Often natural features exist which can form a hazard comparable in effect to a bunker and these should be utilised wherever possible. At the same time, the careful placing of a bunker in association with a natural feature can do much to help make the game of golf more interesting.

New List available from Suttions:

Messrs. Suttions have prepared their 1965 list of grass seed and fertiliser mixtures, together with all the other products which they keep available for golf course maintenance. The book is attractively produced in two colours and with all its illustrations and prices will be a useful addition to the greenkeeper’s reference shelf. An article by Mr. R. W. Pain, Manager of the Grass Department, describes the care with which Messrs. Suttions have studied the problems of grass selection over more than one hundred years and a picture showing part of a consignment of 283 cwt. of grass seed for a new golf course near Paris illustrates their world-wide fame and the important contribution which a firm with this experience can make to the export drive. Any greenkeeper requiring a copy of this booklet should write to Suttions Grass Advisory Service, Reading, Berkshire, mentioning this magazine.

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