



SAND BUNKERS

Alistair Beggs, STRI Turfgrass Agronomist, writes about the maintenance of the sand in your bunkers.

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Introduction

Some of the most common complaints from golfers up and down the country relate to the condition and performance of sand bunkers on their course. Higher handicap players can't get out of them at all - better players can't get out of them consistently well enough to maintain their handicaps. Many complaints are justifiable and often relate to poor drainage of a bunker in wet weather and its effect on the sand or the poor floor/base angle of the hazard, which can in some circumstances make a visually tame bunker very difficult. However, what is often overlooked is the maintenance and condition of the sand in a hazard and it is this which, in my opinion, is responsible for the poor performance of many bunkers.

This article is concerned with the maintenance of the sand, assuming that other factors are sound. If you do have problems with the construction and/or form of your hazards, or they do not drain sufficiently, then the first step must be to contact a golf course architect so that collectively your bunkers can be made fairer and more visually appealing.

Historic perspective

The modern attitude to bunkers is very different from that of our forefathers who invented the game. In those days, hazards were hazards and with sand pits untended and trampled by sheep, you approached them with trepidation and often exited them with your reputation as a good bunker player in tatters. With the majority of golf being match play in those days, the penal effects were less dramatic than they are upon the modern game which is dominated, of course, by stroke play. The loss of a hole as a result of a debacle in a sand pit was eminently more digestible than a tattered scorecard.

However, the move towards stroke play did not stop Henry Fownes (the autocratic benefactor and designer of Oakmont Country Club) from developing the furrowed rake. Each bunker (and in those days there were 220) was raked with it to create furrows 50mm (2in.) deep. This made the consistent extrication of golf balls very difficult and, according to Fownes, was part and parcel of the game of golf.

Jimmy Demaret, who was one of the premier exponents of the time, was quoted as saying, "You could have combed North Africa with it and Rommel wouldn't have got past Casablanca ". The rakes were used for many years to maintain Oakmont's fearsome reputation and to perpetuate the myth that this was the toughest golf course in the world.

The development of stroke play signalled the end of the truly penal bunker and the widespread use of methods to make extrication more difficult. Over the last thirty years the effect of the bunker on the game of golf has been sequentially diluted. We are now in the ludicrous situation of having tour pro's preferring to miss greens in a hazard rather than missing greens in the rough. Discussing the pros and cons of this argument is not a subject for this article but surely, even when hazards are well maintained, they should retain some degree of penalty to the good player?

What should a bunker provide?

The modern perception is that sand hazards on the golf course should be consistent in terms of the sand they contain and the way it performs. It is the job of the greenkeeping staff to ensure this is so given the disruptive effects of climatic extremes and modern playing levels.

All bunkers, whether fairway or green side, should offer a degree of risk and reward thereby allowing skill and expertise to be shown by those who judge and execute accordingly.

The floor of the bunker must be designed to collect the ball - it should be concave without excesses of sand build up at any point. This is dependent to some degree upon surround contouring but also the correct maintenance of the sand, which should be moulded appropriately.

The upper surface must be firm with no more than the top 12-17mm (1/2 - 3/4inch) raked to allow passage of a sand wedge under the ball. Excesses of loose sand, either applied or raked up, are unsatisfactory and lead to the development of plugged balls. This is the most common complaint and is more often due to the poor application/maintenance of the sand than the physical characteristics of the sand itself.

As intimated earlier, the shape and depth of the bunker must be appropriate and the base must drain. This latter point is less to do with the sand and more to do with what it sits on top of. We must never lose sight of the fact that bunkers are seaside features that were transported inland with the development of the game. If acceptable conditions are to be consistently provided by inland bunkers, then regular thought needs to be given to their maintenance.

Meeting the golfing requirement

Whilst there are many examples of bunkers around the country whose performance is flawed by poor drainage, poor shaping of the hazard floor or poor sand selection, I am convinced that there are equally as many whose performance could be positively influenced by adhering to the following points:

- 1) Maintaining bunkers and the sand within them features relatively low on the priority list of many course managers. It is my opinion that a greater time allocation must be given to the management of bunkers and particular the sand within them.

- 2) Whilst ideally rakes shall be left for golfers to use, the assumption must be made that they alone cannot maintain good sand/floor characteristics. Over time, sand is inevitably dragged/pulled towards the rear lip leading to excessive amounts of material in this area and often a dearth of it in the hitting area. Consequently, the shape of the bunker floor is changed and extrication made much more difficult by trying to explode balls from what become downhill lies.

The minimum requirement therefore is for bunkers to be raked by staff on a daily basis, replacing displaced sand moved either by golfers or the elements.

- 3) Rakes should be shallow toothed to a depth of no more than 25-30mm (approximately 1in.). Deep-toothed rakes disturb too much sand and can result in a very soft top surface which is prone to plugging. Furthermore, they increase the rate at which golfer-induced sand displacement occurs.
- 4) Topping up of bunkers should be carried out regularly to ensure there is sufficient sand over the whole base of the bunker. When new material is applied, it should, of course, be identical to that already in the hazard and furthermore it should be applied moist. Thereafter, the applied material should be thoroughly heeled and/or rolled to consolidate it prior to light shallow raking.

The above points are simple and, for the most part, relatively straightforward to execute. When implemented alongside sound fundamentals, eg adequate drainage, appropriate shaping and correct sand selection, there is no excuse for poor bunker performance.

Reference

Lodge, T.A. (2000). *Thoughts on bunker construction. International Turfgrass Bulletin* 207, 10-13

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