



*The telltale sign of traffic on stressed turfgrass demonstrates the need for better traffic control.*

gives demerits to violators, much like a traffic points system. When a certain number of points are accumulated, cart privileges are suspended. Education by the golf professional and course officials is the answer for the beginning golfer.

Golf carts have become part of golf for many people. The extent of their negative impact on golf courses will depend upon developing policies and methods of controlling traffic. Without penalties and enforcement, however, rules and regulations will probably provide little benefit.

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# Ideas You Can Take to the Bunker

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**P**ROPER UPKEEP and maintenance of sand bunkers on a consistent basis is unquestionably a time-consuming and labor-intensive task. Few other areas on a golf course demand as much attention as the sand bunker for maintaining acceptable appearance and playability on a day-to-day basis. Following are a few ideas to minimize the headaches encountered in maintaining top-quality sand bunkers.

A typical problem associated with sand bunkers is maintaining an acceptable edge at the sand/turf interface. Movement of sand out of the bunker by wind and water erosion or iron "blast" shots is a common occurrence. Foot traffic in and out of the bunkers further deteriorates turf quality on the slopes around these areas. Even with the best routine management programs, periodic renovation and resodding of the bunker edges is essential to reestablish an aesthetically pleasing character.

To assist in reestablishing bunker edges and slopes during bunker renovation, a method of vertical sodding may be just the ticket. George Thompson,

CGCS, at the Country Club of North Carolina, recently utilized this procedure and found it to be very beneficial in his bunker renovation program.

As the name implies, once the bunker edge is redefined and the slopes are properly prepared, strips of sod are installed vertically along the sand/turf interface. The turf side of the sod is installed toward the turf side of the bunker. The depth of the sod (width of the cut) is determined by the degree of slope immediately adjacent to the bunker. Naturally, the greater the slope, the deeper the sod should be installed to provide the desired results.

Using vertical sodding at the edges of more steeply sloped areas around sand bunkers provides an efficient method to promote sub-surface soil stabilization and, in turn, improved turf root development on the slopes. A more natural look is achieved, since the need for plastic or plywood edging is eliminated. Through natural degradation, the vertical sod gradually decomposes as proper establishment and root development of the surrounding turf is promoted.

Another problem that commonly "arises" with the proper upkeep of sand bunkers is the contamination of the sand with small rocks that migrate to the surface. As small pebbles or shell rock work their way to the surface, bunker playability becomes less desirable. Worse yet, these "clinkers" often end up on the turf surface, waiting to inflict damage to delicate mower bedknives during the next mowing operation.

If your bunkers are heavily contaminated with rocks and debris, the best approach is completely removing the old sand and replacing it with good-quality bunker material. However, if your bunkers are only slightly contaminated, a sand screening method observed at the Links of Key Biscayne will definitely assist in prolonging the life and quality of your bunker sands.

Harry Britt, District Supervisor with the Metro-Dade County Parks and Recreation Department, and his crew have taken ordinary aluminum scoop shovels and modified them with a wire mesh insert to serve as a portable,



*(Top left) Vertical sodding of bunker edges provides an effective method of soil stabilization to enhance turf establishment on bunker slopes. Arrow points to vertical sod piece. (Top right) A simple alteration to an aluminum scoop shovel produces an effective and efficient means to maintain clean bunkers and extend the life of bunker sand and mowing equipment as well. (Above) Add that extra touch to your bunkers during the next special event quickly and effectively by using a multiple-head hand rake.*

lightweight sand cleaning device. This simple and very effective tool is great for the removal of rocks, grass clippings, or any other debris while providing efficient return of desirable sand material to the bunker.

On a final note, hand raking the bunkers may be worth your consideration to enhance the aesthetic appeal and to produce that extra touch during the next "special event." While it can be cost prohibitive to hand rake bunkers daily, many superintendents have found this method beneficial for producing

that finishing touch at tournament time. Also, following bunker renovation and the addition of fresh sand, minimizing the use of mechanical rakes and utilizing hand rakes will assist in promoting the sand settling process and produce a more firm, desirable bunker in a shorter period of time.

Constructing a multiple rake apparatus helps facilitate the hand raking process. At the 1992 USGA Junior Amateur Championship, Dwight Kummer, superintendent of the Bay Hill Club, in Orlando, Florida, used

an aluminum frame to attach three leaf rakes together. The results were outstanding and the hand raking process was completed in a timely and efficient manner.

Maintaining consistently high-quality sand bunkers is undoubtedly a challenge. Through the implementation of suggestions such as these, your bunker headaches can be minimized. As future course management and improvement plans at your facility are being formulated . . . take these ideas to the bunker.