

SAND BUNKER MAINTENANCE

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Every aspect of golf course maintenance has become more intensive. Faster greens, closely cut fairways, and there is better sand bunker maintenance.

For proper construction of bunkers, the proper sand is very critical. For the golfer, consistency of the sand from bunker to bunker throughout the entire golf course is of great importance. Once the golfer has experienced the conditions of one bunker, they then know what to expect and can play the shot with confidence. On some golf courses, golfers are carrying two sand wedges to use with varying sand conditions. Hopefully, this situation can be rectified by increased awareness of sand quality.

Sand for bunkers should have a fairly narrow size range (0.75-1.0 mm), preferably more toward 1 mm. Bunker sand should be free of clay, silt and or small gravel. Clay and silt cause the sand particles to flocculate and form a crust on the surface. It also delays the drying of the sand and makes it harder to maintain. Clay and silt are the major factors in reducing the quality of the playing surface in a bunker. To increase the useful life of sand, proper bunker construction is essential. Surface water from the surrounding area should be diverted away from the bunker. Only water falling directly onto the bunker surface should enter the bunker. Drainage tile should be installed in every bunker and connected to a proper outlet.

Sand does not wear out. It loses its favorable characteristic because it is contaminated with silt and clay.

White Silica sand is probably the most preferred type of bunker sand. The white color is probably the reason for its appeal. Unfortunately, throughout most of the United States it is unavailable at economical rates for bunker use. The white calcareous sand found in the Gulf and Coastal Regions is economical for the area and is highly desirable for bunkers.

Before the advent of the powered sand rake, maintenance of sand bunkers was done by hand raking. Cultivation of the sand was an arduous task requiring many hours of labor.

The mechanical sand rake reduced costs of bunker maintenance drastically. Sand was cultivated every day at less than one-fourth the labor cost. Golfers had to learn how to hit a shot from fluffy sand. Buried lies are frequently found when sand has been deeply cultivated. Ridges and tire marks caused by the powered sand rake required a higher skill level on behalf of the operators. Powered sand rakes have a tendency to level all areas they are used in. Hand raking is still required for edges and contoured areas of the bunker.

The leading or front edge of the bunker should have a lip of 1-2 inches to maintain the integrity of the hazard. The back edge of the bunker should

not have a lip. Sand should be even with the back turf area to enable the club head to make contact with the ball before it strikes the sand.

Edges of all bunkers should be well defined. The golfer must know if the ball is in or out of the hazard. Trimming or edging the turf on the perimeter of the hazard is easily accomplished with the small engine powered edgers or trimmers available today. If used frequently, hand work is held to a minimum. If widening or reshaping of the bunker is desired, than a mechanical sod cutter or square nosed spade with a very sharp edge is useful.

Proper construction of bunkers can save a considerable amount of time in their care and maintenance. If the bunker face is cut deep and straight down, it helps prevent erosion of the sand.

Drain tile should be enclosed in a geotextile fabric. The fabric prevents the sand from entering the drainage system. If the new, highly porous materials are used, the pea stone is not needed around the tile line. Drainage should always be installed below the base of the bunker to avoid any contact with maintenance equipment.

Liners have been used in bunkers before; however, they were not as permeable as the new geotextile fabrics of today. If a liner is to be installed, it should be placed well below the reach of any mechanical sand rake. Once the material has been inadvertently lifted to the surface, it is very difficult to put it back in place.

Sand depth should be checked frequently to insure an even depth. The power sand rake will move sand to certain areas of the bunker if the operator rakes the bunker the same way each time. To avoid distribution problems, the operator should vary the raking pattern along with the place the rake enters and exits the bunker. To move sand within the bunker, a front blade can be attached to the power rake. It is a very effective option and saves many man house when used by a skilled operator.

Sand may be added to bunkers to maintain the 6-8 inch depth which is most desirable. Small light weight vehicles can be used to carry the sand to the site. Heavy pieces of plywood can be used next to the bunker to avoid tire marks. If the amount of sand being added is a large quantity, then the superintendent may wish to add it during the winter when the ground is frozen to avoid damage to the area. Distributing large amounts of sand in large bunkers is quite effectively carried out by using a Bobcat or similar type vehicle.

Golfers prefer to play at well maintained facilities. You as the superintendent have the knowledge and skills to keep your facilities in the best condition. The popularity of golf is largely due to your ability to maintain superior playing conditions. Our industry is meeting the challenges of today through its aggressive positive attitude and a willingness to get the job completed. It is because of this attitude our industry remains viable and maintains growth. Golf is popular and you are part of the reason for its popularity.