

Sand bunker maintenance taken to new heights

By Terry Buchen

Golf course superintendents have taken maintenance of sand-filled bunkers to new heights in the 1990s to provide better playing conditions and to make them even more pleasing esthetically.

The ultimate objectives for most sand bunkers are:

- to eliminate hand shoveling of the sand back up onto the bunker faces after a significant rainfall;
- to have the bunkers drain fast enough so that players will not encounter casual water;
- to have good and rapid drainage eliminate the fine particles floating to the surface from the sand/native soil because of puddles of casual water standing for a long period of time; and
- to eliminate using wetting agents to make the sand drain faster, i.e. have the bunker sand bone dry by mid-morning after any type of irrigation the night before.

The water in a series of bunkers in a heavy thunderstorm area does not have to drain more than five feet to any tile line and no more than two feet on a steep slope. Adjustments obviously can be made for other parts of the country and for the severity of the slopes on any individual golf course bunker.

THE ALONZI METHOD

Bob Alonzi, superintendent at Winged Foot

Terry Buchen is course superintendent at Double Eagle Club in Galena, Ohio.



Alonzi method, top, and tile line installation, below, at Winged Foot Golf Club

Golf Club in Mamaroneck, N.Y., has developed a unique way to restore bunker bank faces and noses.

He uses a biodegradable burlap bag he discovered in Connecticut, filled with a heavy clay-type soil. After the soil-filled bags are in place and back-filled with a similar native soil, sod can be lain over the bags. This makes it much easier to freely establish the bunker shape as the architect designed it.

The sod root system can penetrate the burlap bags, making for easy rooting. The burlap will decompose easily. It is important to bring the new sod over the rounded edge of the burlap bag. After establishment, the sod can be edged. The bag size should be no larger than 15 by 24 inches for handling ease.

Alonzi's home work has restored bunkers to their original Tillinghast design.

NEW CONSTRUCTION

A relatively new practice during initial golf course construction is to add bunker sand before seeding. This usually is accomplished by adding the bunker drainage system, adding the bunker sand and spreading to the desired depth, then immediately sodding completely around the bunker while carefully hand-watering so as not to disturb the seed bed adjacent to the bunker and also not to wash any soil from the sod onto the sand surface.

With coordination between contractor and superintendent, it works well.

A notebook of advice on sand bunkers

Following are some recommendations on maintaining sand bunkers

✓ Remove the cultivator bar from the mechanical rake, as it can cause the native soil to mix with the sand when the sand level is too shallow. Also, for playability consider modifying the mechanical rake by use of metal leaf rakes which rake the top surface without "fluffing" the sand. Rake the slopes and edges by hand with a metal leaf rake.

✓ Most "new" bunker sand takes 90 to 120 days to settle properly. Where appropriate, consider adding sand in the off-season to allow it

to settle with the least player inconvenience. To help the settling process, use a mechanical engine-powered vibropacker machine, wheel tracking with a utility vehicle, letting a hose and sprinkler run frequently inside the bunker, et al.

✓ Have your bunker sand tested. Contact the USGA Green Section regional office to learn of bunker sands used at other clubs. This will help provide the proper particle size, shape, color and playability.

✓ The best playing sand has angular-shaped particles.

✓ Many superintendents have taken three or

four bunker sand samples, sectioned off a bunker, and added each sand separately for players to hit out of them. This provides player reaction and support.

✓ Take periodic readings of sand depth. Grade stakes positioned on five-foot centers checks consistency.

✓ On greenside bunkers, there usually is a two-inch lip, facing the green only, so a player can not putt out of it, whereas on the rest of the bunker the sand is raked equal to the top of the lip. On fairway bunkers, the sand is raked to the top of the lip so players have a fair shot, especially on the back side of a bunker.

✓ When sand accumulates on top of the turf from frequent sand shots, many superinten-

dents use an air compressor or high-pressure water hose to blow the sand back into the bunker.

✓ Sand accumulates on top of the turf in the direction of play and acts as a top dressing, which raises the turf level higher each year. Many superintendents strip the sod from the top of the bunker, remove the accumulated bunker sand, then re-sod the top to "put the bunker shape back as the architect/designer intended it to play."

This usually happens on older, established courses after years of use. Other superintendents leave well enough alone. Raising the turf level each year provides a dramatic visual and playability effect.

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