

INNOVATIVE GOLF COURSE MANAGEMENT TECHNIQUES

John N. Rogers, III

**Department of Crop and Soil Sciences, M.S.U.
East Lansing, Michigan**

One requirement of the Golf Turf Management Program at Michigan State University is a six month internship at a golf course. Because of the feeling that this part of the program is vital to a proper education in the area of turfgrass management, the Institute of Agricultural Technology at Michigan State University requires that the student receive an on-site visit from the turfgrass faculty/advisor. This job has been mine since August 1988, and while it has taken away time from my family and research, as it takes an average of 50 days to visit the 40 odd students spread over 20 states, this extensive travel to these golf courses has provided me with a plethora of innovative ideas utilized by golf course superintendents in the United States. This paper will outline some of the major topics that have developed from these travels.

The first area is turfgrass wear on a golf course. This wear can be in the form of foot or golf cart traffic. On teeing areas that have steep banks or limited entry points, one should consider building permanent steps or walkways to the tee from the cart path. These steps also give you the option of converting the sides of the tees to flower beds, thereby reducing mowing and increasing aesthetics. In shaded areas, these flower beds or just nicely mulched areas are excellent alternatives to fighting the constant battle of maintaining turfgrass where it is not naturally adapted! If you are worried that the exit points of the stairways will become compacted and not conducive to growing good turf, I would suggest that these areas are small in comparison to the problem that existed before you added the stairs!

When there are limited entry and exit points on greens and tees, the usual scenario that unfolds is unsightly hard worn paths (Goat trails I like to call them). The best remedy I have found for this problem is to quit trying to grow grass and replace the trail with an attractive path. Several materials have been proven effective with the use of railroad ties or similar material buried flush with the ground working best in most cases.

Another area of concern and effort is cart paths. In my travels there have been two aspects of controlling cart path traffic that come to the front. The first area is how to keep carts on the path, and second, preventing the entry and exit points off the cart path from being the worst looking place on the golf course. In an effort to keep the carts on the paths some courses put highway reflectors on the edge of the path (especially on curves) to warn drivers they are straying off the intended route. Painted cement blocks molded from pot pie tins has been used successfully in place of these reflectors at one course. A stronger message is sent to the golfer regarding this problem in the form of a curb between the path and

the fairway. While I have seen a curb of concrete several times, one golf course built the curb with preformed barriers made from recycled plastic, certainly an excellent reuse and not a bad PR move either!

When it comes to entry and exit points off cart paths, the single best way to save the turf is to distribute the traffic as much as possible. There are a couple of methods to accomplish this never ending battle. First, you can physically modify the exit point of the cart path. The idea here is to provide the golfer with many exit points, none of which are obvious. Examples I have seen include flaring the end of the cart path as well as bringing the end to a point. I have also seen the end of the cart path extended a few yards and turned into the rough. All of these give the golfer a variety of exit points, but none that he or she feels is or was the intended direction. The other method is to direct the entry or exit points yourself through markers, a practice employed by many. While I have seen ropes, paint, and directional markers all work with some success, this was usually a function of the golfer clientele as much as the effort by the golf course staff. One form of directional markers I have seen that is particularly effective is the portable post. This can come in many shapes and sizes, and vary in cost depending on the golf course. One of the better applications I see with these posts is to line the cart path with the posts and rotate the posts and subsequently the entry points onto the fairway from the cart path. It will take some effort similar to moving tees and cups, but the results will be quickly obvious. Some pitfalls to avoid with these posts include making them too short and painting them the wrong color (if at all!). Spacing is important to prevent the vehicles from driving through the posts. Also, in the case of the golfer that will disobey all rules and signs, don't get frustrated and call the project a failure. Keep in mind that 95% of the golfers are responding to your labor in the matter in which you intended and ask yourself or remember what the golf course or that particular area looked like before your efforts. The glass is always half full.

Communication is a constant battle that we all face in every walk of life, the golf course being no exception. Signs erected by the golf course are very effective and necessary, particularly in notification of pesticide application, danger (snakes, etc.), or wildlife habitat or identification (again, an excellent PR move). Some of the better signs I have seen involved those that were readily interchangeable but difficult to vandalize. One example is a simple square frame with long 2 X 4 boards hung parallel to the ground connected by hooks. The signs can be fairly secure while in place but have the advantage of being easily removed and interchanged. The aesthetic value of the sign can be left to individual tastes. Other signs that are valuable are those found in the maintenance facility. Assignments and mechanical trouble boards with permanent headings are very effective forms of communication on a golf course. Other excellent boards include maps of tees and greens to reference for work and repair as well as direct cup and tee markers.

Driving ranges are excellent for golf courses in many aspects, but are extremely time consuming in terms of maintenance. In my travels there is an increasing number of golf courses that are building an artificial turf hitting area to supplement the existing driving range teeing area. These artificial mats extend the practice times at both ends of the golfing season as well as provide periods of relief for the natural teeing areas. Country Clubs that open their doors on Mondays for corporate sponsored outings have found that these mats were effective in serving as warmup areas for their guests as well as preserving their space limited teeing areas. There are currently many artificial mats that are excellent for this purpose with the majority of the better rugs being filled with materials such as sand, acrylic beads, or crumb rubber. These materials are displaced during the impact of the club with the surface, providing a more natural situation.

The final topic of discussion is in the area of equipment modification. Many people have taken pieces of equipment and altered their use to some extent, however the one area of interest I would share is in various types of greens rollers. This is a topic of interest now as the demand for fast greens continues. If you have the proper soil base that is inherently resistance to compaction then rolling greens surfaces to temporarily increase green speed is an option, certainly favored over lowering cutting heights, particularly during environmental stress periods. Therefore the object of discussion becomes the options available for the rolling of the surfaces. As one might expect when a particular practice becomes in vogue a number of dedicated greens roller units have quickly become commercially available. While these will certainly accomplish the task at hand, I have seen modifications to greens mowers that ranged from replacing reel units with trays filled with metal bars to a box built on top of a frame set over a walking greens mower. This box is then loaded with sand or metal and the green rolled. Another unit that has

been successful has been a 3-gang roller unit pulled by a cart. The individual rollers are 18-inch diameter PVC filled with cement. All of these units will do the task required but the key still remains the soil profile at the surface must be resistant to compaction.

Golf maintenance in the United States has been and will continue to be the standard around the world. It is a tribute to the industry and those individuals involved in this business for the success enjoyed. Hopefully this article has served to provide you with one idea you can take forward to your golf course and implement in the coming season.