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THE SETTING: The small but scenic 16th tee at Secluded Woods Golf Club. Dappled light flickers on the teeing ground through the tall oaks. After several practice swings and a few divots, the golfers prepare to play.

THE COMMENT: "Why can't we grow grass on this tee!"

Only a lucky few golf course superintendents have never had to answer this question. Most superintendents speak of their problem tees with a hint of frustration and forced resignation, feeling that the ultimate solution to improving them would not be acceptable to the golfers. While this may be true in certain instances, it is often possible to make adjustments to the tee itself or to the surrounding environment so that acceptable turf can be maintained.

Problem tees usually suffer from one or more of the following maladies:

small size

- tree effects
- poor construction
- insufficient maintenance and management

Most often a combination and interaction of three or four of these factors leads to turf failure, but it is probably safe to say most problem tees have one thing in common: they are simply too small to accommodate the play they must take. To a certain point, adequate tee size can compensate for almost any other weakness. The ability to distribute wear over a large enough area is the key.

A good rule suggests that there should be at least 100 square feet of usable teeing area for every 1,000 rounds of golf played annually, with 200 square feet available for every 1,000 rounds played from tees where irons are used. If this was the situation at most golf courses, there would most certainly be fewer problem tees.

Many tees were not small to begin with, but rather, they evolved over the years. Consider the great architects of the 1920s building golf courses to accommodate perhaps 5,000 to 10,000 rounds. Had they only known that today their courses are being stampeded by up to 40,000 to 50,000 golfers each year. Construction specifications, too, were not what they are today. Old tees built of native soils can't handle the same amount of traffic as a tee constructed to modern specifications.

Finally, the growing environment around many tees has changed over the years. The negative effects of maturing trees and the demands for more closely cut turf have pushed tees beyond their limits without intensifying maintenance practices. When this occurs, most golf clubs would be best advised to rebuild or enlarge their tees to better accommodate the traffic they recieve.

Tree Effects

A major complicating factor contributing to problem tees is the effect of near(Opposite page and below) At Whitinsville Golf Club, Massachusetts, the 4th tee before and after trees were removed.

(Bottom) But it is too late for this tee. Trees should have been removed years ago.





by trees. While most golfers consider the shade and aesthetic beauty of these trees, from a turf standpoint they are a nuisance. Shaded turf is inevitably weaker, less vigorous, more prone to traffic injury, and less able to recover quickly from damage. Too many trees block air circulation, leading to problems with heat and disease.

Wherever possible, nearby trees should be selectively culled, and branches on remaining trees should be pruned and thinned to increase sunlight and increase air circulation. If it is done carefully, the turf can be significantly improved without harming the aesthetic appeal of the area.

While it is easy enough to see how shade affects turf, tree roots are the hidden menace. Contrary to popular opinion, tree roots can extend well beyond the dripline in their search for moisture and nutrients, robbing the turf of essential elements. In most instances, root pruning around the outside of the tee can make a dramatic difference in the condition of the turf on the tee. Tree root pruning is easily done by slicing or digging a two- to three-inch-deep trench between the tee and trees. If a trench is used, place tar paper or sheets of heavy plastic along the wall of the trench and backfill. Root pruning may have to be repeated every three to five years, depending on the species and their proximity to the tee.

Trees also affect tees by effectively making them smaller. As trees planted off the front and sides of tees become larger, they block part of the tee. As a result, the actual useable teeing area is reduced, and the remaining surface is subjected to greater and greater play. Where this has occurred, trees should be removed or brances should be pruned back to help reclaim the entire surface.

Tee Construction

Many problem tees were unknowingly built to self-destruct. While it is common for new greens to be built to the latest improved specifications, such is not the case with many new tees. The use of pond dredgings or on-site topsoil, the lack of adequate drainage, and poor grading are among the common mistakes.

Where substantial quantities of fill are used, the material is not always compacted or allowed to settle adequately before the topmix is added and the finishing work is done. As a result, settling occurs later and the tee becomes uneven. When this happens, the useable area on the tee is reduced, and the remaining level areas are subjected to heavier play than anticipated.

New tee construction should receive the same kind of consideration as if it were for a green, especially where heavy play is anticipated.

The Role of Maintenance

Where time and resources are available, intensifying maintenance practices can partially overcome the effects of small size, poor construction, and tree competition on problem tees.

Any practice that improves the health and vigor of the turf is certainly helpful on problem tees. One of the easiest and yet most overlooked programs is turf fertilization. Tees frequently require twice as much nitrogen fertilizer as greens, yet they often receive less than greens. Because of heavy wear and their need to recover quickly from damage, use of 3/4 to one pound of nitrogen per 1,000 square feet per growing month is common.

To help overcome the effects of heavy traffic and soil compaction, aerify (core cultivate) problem tees as often as possible. If the soil is poor, remove the cores and incorporate good quality topdressing into the holes, then overseed the tee with the appropriate type of grass, which in the case of problem tees is often peren-

Root pruning along right side of tee to eliminate tree root competition. Garden City Golf Club, New York.



nial ryegrass. Ryegrass germinates and developes quickly, is wear tolerant, and it survives on shaded, compacted tees better than bentgrass.

One of the best techniques for encouraging quick recovery of damaged areas is to fill divot scars daily, weekly, or as often as possible with a mixture of topdressing and seed. This helps to keep the tee surface smoothed and helps minimize the establishment of certain weeds.

Because mowing problem tees with triplex mowers can contribute to soil compaction and turfgrass wear problems, try to use walk-behind units. If this can't be done, then request that the triplex mower make its turns off the teeing surface itself.

In the realm of tee management, many things can be done to maximize useable teeing area and to take advantage of every available square foot of space. Depressions should be selectively topdressed on a regular basis until they conform with adjacent turf. Severe undulations or settling over irrigation lines may require that the sod be lifted, the subsurface levelled and the sod replaced.

Trees which interfere with play or block the use of part of a tee should be removed or pruned back so that golfers can legitimately use the entire surface.

Where the situation presents itself, build ladies tees (or forward tees) to take a certain amount of traffic off the regular tee and to open up a new area for the regular markers where the forward markers had previously been placed. The construction of alternate tees at a different distance or angle would serve a similar purpose.

Careful movement of tee markers from day to day can also be very helpful in distributing traffic over the entire useable area. Using just 1/3 or 1/2 the width of the tee when possible, move the markers in a set rotation so the golfers are forced to use the entire tee over a period of time and not just their favorite areas.

Some of these practices and programs may sound out of reach to the less affluent courses, but since there are often just one or two problem tees, many should be within the realm of most maintenance programs.

Dealing successfully with problem tees involves intensifying maintenance and management practices and minimizing the effects of nearby trees. When this does not resolve the problem satisfactorily, enlarging or rebuilding the tee to good specifications is the only alternative.