

Introduction

Golf greens in the south receive heavy use throughout the year. Many public courses receive over one hundred thousand rounds of golf per year with a heavily used course receiving as many as 400 rounds per day. This concentrated traffic combined with daily mowing with heavy triplex mowers almost ensures a potential for soil compaction, especially on poorly constructed greens.

Years ago, turf was usually grown on pasture-type soils, but as traffic intensity increased, the usually good structure of native soils began to break down (**Fig. 1**). Although the greens area of a golf course is approximately 2 percent of the total course area, 50 percent of the game is actually played on these. **If the desired putting surface is not to be a mud bath, then do not choose an ordinary soil for the root zone.** A golf green must accept and drain away excess water rapidly and at the same time retain enough moisture to prevent unnecessary frequent watering. The objective of this publication is to discuss the proper sequence of construction and decision making processes for constructing a putting green. The following steps are a logical sequence when formulating plans on golf green installation.

1. Initial Planning

- a. Location
- b. Drainage
- c. Shade
- d. Size and configuration

2. Construction

- a. Surveying and initial staking
- b. Subgrade
- c. Gravel and coarse sand layer (optional)
- d. Root-zone mix selection
- e. Root-zone installation
- f. Irrigation installation
- g. Soil sterilization
- h. Final grading

3. Planting and Maintenance

Initial planning committee

The most important phase of green construction is the initial planning. As the saying goes, "plan your work, then work your plan." Many questions need to be addressed before construction begins on a putting surface. A golf course planning committee should include the club's president, greens committee chairperson, golf course architect and/or

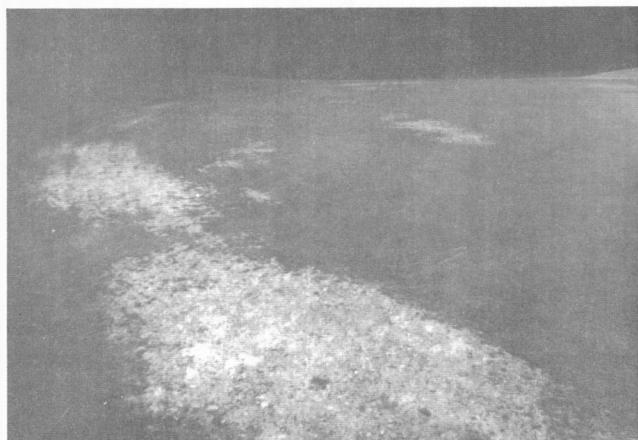


Figure 1. Thin, undesirable turf due to excessive traffic on greens constructed with poor soil.

club pro, building contractor, and most importantly, golf course superintendent. Communication is the key to success. Everyone knows how they would like to see the proposed putting surfaces evolve and only by having an open discussion will everyone's wishes be heard. Several key topics that need early priority include the following.

Location

Locating a proposed putting surface is almost as much an art as a science. Many non-agronomic inputs are important to provide the aesthetic background or challenging hole play to make any round of golf a success. Natural surrounding factors, such as a body of water, hillside or depression, overview of a scenic area, and strategic use of natural hazards such as trees, are incorporated into the location, shape, and size of a green. Agronomic inputs, such as surrounding soils, trees or water sources, should also be part of this decision. The best designed hole will only be as successful as those factors which influence the grass's natural ability to thrive.

Drainage

Being able to control soil moisture is the key factor in the success or failure of a golf green. Drainage and runoff from surrounding areas into the desired location of a golf green can be a key in regulating internal water content and can be a problem especially when the green is located downward from a hill-side location. Surface water runoff from higher surrounding ground should not flow over the green. Water flow from slopes should be intercepted and redirected away from the green, or possibly the green should be relocated. On the other hand, greens, bunkers and surrounding mounds should be located and shaped so that