

MISMANAGEMENT IN TOPDRESSING GREENS

Stanley J. Zontek
USGA Green Section
Crystal Lake, Illinois

Any program on a golf course can be mismanaged. Too much or too little of almost anything can be applied at one time, poor timing of the application, poor quality materials or a misunderstanding of what that particular chemical or program is supposed to do all can lead to mismanagement problems. The purpose of this presentation is to discuss mismanagement in putting green topdressing programs.

There basically are three areas where a topdressing program can be mismanaged. These opportunities for error are:

- A. The rate of application
- B. Timing of the application
- C. The materials used for topdressing the greens.

Each area, if not understood and planned properly, can result in a program that, in the short term, can give less than the desired results and, in the long term, can cause major turfgrass management problems. Topdressing in today's management scheme on the golf course is an extremely important program for turfgrass maintenance and player enjoyment. The vast majority of golf greens we see in our travels as agronomists for the U.S. Golf Association Green Section that are smooth, relatively fast, firm (not hard) and true putting surfaces are those on courses that utilize a good topdressing program.

Therefore, a good topdressing program is an opportunity to properly manage high quality putting green turf for the golfer, but as with most everything, there is always the possibility of problems arising unless an agronomically sound program is followed. The following are some of our observations on areas where mismanagement can occur in topdressing greens.

THE RATE OF APPLICATION

By far, heavy, infrequent applications of topdressing offer the greatest chance for membership inconvenience and turfgrass management problems. Many years ago, it was a common practice to heavily topdress greens in the early spring and the late fall. Under certain circumstances (protection against winter desiccation, soil modification, seed bed preparation, etc.), heavy topdressings still have their place, but as a general rule, it is far better to apply light (one-third to three-quarters cubic yard per 5,000 square feet) and more frequent applications of topdressing. A light, frequent program avoids thatch/topdressing layers and results in less membership inconvenience with debris and topdressing material that does not work in to the surface. Further, with the ever-increasing usage of straight sand or high sand content topdressing materials, there is sometimes the temptation to topdress heavier to more rapidly build up a sandier root zone. Resist this temptation! Light dustings of high sand content products on a frequent basis is the proper procedure to follow. Deviate from this program and mismanagement problems can occur.

Also, heavy topdressing, in conjunction with poor timing (during hot, humid and wet weather), can cause direct turf loss problems. You don't want to topdress heavily when it is too hot.

TIMING

As mentioned above, improper timing can cause problems with a topdressing program. We have seen a number of times throughout the region where topdressing bentgrass/Poa annua greens with straight sand during hot weather results in increased and sometimes uncontrolled Poa annua wilt. It only makes sense that high sand, especially if it is applied heavily when hot, will absorb heat much like sand at the beach, and the grass will suffer. Once this grass is lost in the summer, it is difficult to bring it back. So, in managing a topdressing program, especially when using straight sand, look at timing both from the aspect of common sense turfgrass management and public relations (try to avoid topdressing immediately before a club event!). The rate and timing of topdressing materials is extremely important.

THE TOPDRESSING MATERIAL

Entire turf conferences have been devoted to the subject of what is the best topdressing material to use on golf greens. We will not attempt to discuss this topic in depth other than to say that it is essential that whatever topdressing material you use, be it straight sand, high sand or a sand/soil/peat topdressing, you use quality materials and have them tested. Mismanagement problems are well documented when topdressing greens with poor quality materials. Soil layers can readily be found if topdressing materials are constantly switched. Thus, decide what material is best for you under your circumstances and then stay with it. If you are unsure or unsatisfied with your current topdressing material, have them tested and, if appropriate, then switch. It all depends on what type of putting green soils you have now, how these greens are performing and how you would like them to perform in the future.

Of the materials we see used for topdressing, a few points can be made. When using straight sand, the sand should not be too coarse or too fine. Both are bad. Sand size ranges are well established, so when in doubt, have the sand tested and retested periodically as a means of quality control. Also, "hard rock" or silica sands are preferred over calcium-based or calcareous sands, which may have long-term stability problems. Calcium-based sands literally can dissolve with time.

In using high sand or sand-soil-organic matter materials for topdressing, proper timing is just as important. All too often, we have seen "good looking" topdressings test out to have zero or near zero water infiltration rates. Obviously, when applied as a topdressing to a green with even reasonably good internal drainage, this slow draining topdressing soil can literally seal the upper soil surface, causing serious short and long-term water movement problems.

Various soil testing laboratories are available to test topdressing materials. The USGA supports such a lab at Agri-Systems, Inc., 2 Sunny Lane, P. O. Box 3757, Bryan, Texas 77805...713-846-6543. (attn: Dr. Marvin H. Ferguson) So, if you are in doubt, have your topdressing material tested. For the expenditure of a few dollars, solid information and piece of mind can be had.

IN SUMMARY

There are many benefits to a good topdressing program. Poor soils can be modified, turfgrass health can be maintained and putting surface quality for the golfer can be improved by a good topdressing effort. As with any program, problems can arise and mismanagement can occur. However, if you know what you want your topdressing program to accomplish, you can select a

good material, have it tested, apply it at the correct time and at the proper rate. The end result can be healthier and more playable putting green turf. For the golf course superintendent, this should be an important goal, well worth the effort involved, in first selecting the proper material and applying it, following established agronomic principles and good common sense judgement.