

To summarize; if you buy commercially available top-dressing soil, or if you make your own, have it and your greens tested. A mechanical analysis will determine exactly what you are using as well as what makes up the original putting green soil. With this information, a better understanding and decision can be made regarding your top-dressing mixes and program.

Don't be afraid of the sandy types of top-dressing soils, i.e., those containing 70-85 per cent mason's sand, 5-8 per cent silt and

clay, and 10-20 per cent organic matter (peat or humus). These soils are indeed a tremendous departure from the old 1-1-1 mixes of sand, soil and peat used a few years ago. But in recent years, dramatic changes have taken place in golf. With heavier play and increasing golf course demands, turf management procedures and programs have also changed. Better top-dressing techniques and better putting green construction are but a part of your success in "Managing Turf in the 70s."

Top-Dress—But Don't Smother

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When we consider the topic "Top-dress But Don't Smother," the question arises "How much top-dressing can be applied before the grass becomes smothered?" The answer may well depend on exactly who is being asked. A light top-dressing to one individual may be considered heavy by someone else. To avoid this type of problem, we should concern ourselves with specific amounts of material applied to a given area. In addition, we must concern ourselves with the intervals between top-dressings. The frequency of top-dressing applications is just as important as the amounts applied.

Top-dressing, like fertilization, is best applied at light and frequent rates throughout most of the growing season. Top-dressing applied four times a year will give superior results to two applications, even though the same amount of material is applied. Generally, top-dressing is done in the spring, the fall, or perhaps during both seasons. This timing is used to help grasses overwinter in the cool-season regions, and help with overseeding and growth in the warm season areas. The point we would make here is that turfgrasses can also benefit from top-dressing on a three- to four-week interval throughout the growing season, as well as in the spring and fall.

It is difficult to estimate the amounts of top-dressing being applied by guesstimating the thickness of the soil layer on the putting green surface. Some of the material will filter through the plant leaves while the rest remains on the top of the plant. Therefore, the following chart will offer amounts of top-dressing to be used per 5,000 square feet of putting surface in order to judge the amounts of top-dressing being applied to a particular area. These figures will be given in cubic yards of material per 5,000 square feet of putting surface:

Cubic Yards per 5,000 sq. ft.	Inches Depth on Green
.9 to 1.0	1/16
1.9	1/8
3.9	1/4

If your greens are larger or smaller than 5,000 square feet, add or subtract .4 cubic yards for every 1,000 square feet over or below the 5,000 square foot figure.

With these figures in mind, top-dressing can be planned and applied on an accurate, knowledgeable basis. Once the desired amounts of material are known, calibration of the top-dressing spreader becomes the last requirement. With proper calibration exact amounts can be applied. Proper calibration of the new, scooter mounted top-dressing machines can make top dressing economically feasible again. This enables us to top-dress more frequently and use less material per application.

To illustrate, assume Superintendent Greenfield is initiating a top-dressing program. He has decided on the proper mixture and the amounts he wants to apply. His figures show his requirement will be about four cubic yards of material per green per year. He now is seeking the best results he can obtain from his top-dressing program. To realize these results, we suggest applying top-dressing four times during the coming growing season at a rate of slightly less than one cubic yard per 5,000 square feet. Thus, he would be able to apply his programmed four cubic yards of material throughout the growing season. Superintendent Greenfield will benefit more from this program than by applying the same amount of material in two applications. Of course, making one application at four cubic yards per 5,000 square foot green would not be good management. At the heavier rates, soil layers will form in the profile and there is a danger of smothering the turfgrass.

We realize top-dressing has been and still is an expensive procedure. Nevertheless, when it is done right, and with the assistance of new, efficient machinery, the cost per application is lessened and the results will more than justify the expenditures.