

USING COMPOST TO IMPROVE POOR SOILS

There is more to growing better grass than applying extra fertilizer and water.

by STANLEY ZONTEK



Compost materials are an excellent resource to help improve physical structure of soil and increase its organic matter content.

MOST GOLF COURSES do not enjoy a uniform depth of good soil in all areas. There are always places where the soil is poor and grass does not grow well. You know the spots. They are the first ones to dry out, the first ones to wilt, the hardest underfoot, and recurring eyesores where, in spite of your best efforts, you have trouble growing a good stand of grass. What to do?

The first question to be asked is why the soil is bad in the first place. Assuming you are not dealing with an insect or disease problem, an area of dense shade, extensive tree root competition, or a gap in irrigation coverage, the problem probably is related to soil structure. Specifically, the turf probably is trying to grow in subsoil rather than topsoil. Again, what to do?

If old soil textbooks can be believed, it takes nature something like 500 years to "create" an inch of topsoil. If you have time to wait, fine. If not, read on.

A faster method of improving the tilth or the physical structure of soil is to increase its organic matter content. In this case, it can be done by incorporating a generous layer of compost into the soil. How much to apply? One-quarter inch seems to work well. Lesser

amounts provide fewer benefits, although any amount should help the soil. Core aeration is the most used incorporation technique. This is the essence of this year's turf tip. It is inspired by several different golf course superintendents who are using compost to improve areas of poor soil on their golf courses.

The first is John Haley, superintendent at Chartwell C.C., in Annapolis, Maryland. John needed to improve the stand of grass in his roughs. His course is located near the Chesapeake Bay. The majority of soils on his course are comprised of a fine sandy clay loam lacking in organic matter. Spreading a ¼-inch of a locally available compost, composed of sewage sludge and wood chips, worked wonders. Areas where it was difficult to grow grass now have a better stand of grass on them. This may be due to the improved soil structure along with better nutrient and moisture retention enhanced by the compost applications.

Mark Silva, CGCS, Country Club of Virginia, Richmond, Virginia, is using the same technique to improve fairway turf on his Tuckahoe Creek and James River courses. As a result of renovation projects on both courses, areas of poor

soil in fairway cuts have been a frustration to the staff. Even bermudagrass, which normally responds well to extra water and fertilizers applied to these areas, never really thrived until composts were used. In the case of the Country Club of Virginia, the composts are homemade. They are comprised of leaves, clippings, sand bunker edging debris, and other golf course litter.

Our last two examples are both new golf courses. As with most new course construction, soils become compacted and intermixed, and even though there may be an attempt to save and replace topsoil, there are always areas of poor soil. Almost without exception, these areas are lacking in organic matter. Thus, in the case of new golf courses, using composts in areas of poor soil can be even more important. Again, the pictures tell the story. Better grass is growing where the organic matter content of the soil has been enhanced by the use of composts.

What is the bottom line? First, most golf courses do not enjoy good soils everywhere. To improve poor soils and to accelerate the accumulation of organic matter, composts of almost any type, if applied in the proper amounts and when incorporated into the soil in conjunction with core aeration, should help the stand of grass.

Is this a technique to be used on the entire golf course? Probably not. However, if you have a handful of problem areas with hard, poor soil, try using composts. This may be a useful technique to improve your problem soils and develop a quality stand of grass on these perennial problem spots.

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