Reader forum

Are trees vital to a golf course?

NO. Trees are not vital, they are nice, but not vital. There are very good tests of golf in the United States as well as Scotland that prove the point. It is very unfortunate that so many people equate big trees with good golf courses. I submit that it has become a stereotype concept that unless there are big trees all around most every hole, the average golfer immediately asked **when**, not **if**, trees are going to be planted.

Golf courses are not parks. They should not be highly manicured from fence to fence. There should be natural looking features such as grassy knolls that can sometimes go dormant and give contrast, streams or lakes that are not always entirely rimmed with concrete, and there should be trees or shrubs if they are natural to the area. Above all, golf courses should not be alike. It makes no sense to me to try to establish a course that looks like it was cut out of an Eastern deciduous forest when it is located out on the great plains.

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Aerify before adding sand topdressing

Mr. Kallander's excellent article in the October issue of **GOLF BUSINESS** was read with great interest and his conclusion that you do not improve the permeability of a green by adding a highly permeable layer to the surface is incontrovertible.

On the other hand, I would take issue with his statement that a screen analysis is only useful if it forecasts permeability. If you mix equal parts of gravel (highly permeable) with clay, you will decrease the already poor permeability of the clay. This is simply an extreme example of the general statement that adding a permeable material to a less permeable one does not always improve the permeability. A careful study of the screen analysis of the two materials will give you a clue, but the problem is so complex that you will have to go to the laboratory to get definite answers.

Mr. Kallander treats topdressing as a material which is applied to the surface of a green which, by definition, it is. However, when it is being used as part of a program to improve permeability, it should be preceded by aerification and followed by being dragged into the aerifyer holes.

Assuming that the topdressing is highly permeable, the permeability of the green is immediately increased in three ways:

1. The effective surface area of the green is increased since water can enter the soil thru the sides of the aerifyer holes, as well as the surface of the green.
2. There is hydraulic pressure on the lower portion of the holes which will further absorbtion.
3. The holes punch through the most compacted and therefore least permeable portion of the soil profile.

It may be argued that this is a benefit of aerification, not topdressing, but without topdressing, the aerifyer holes would soon close up.

If topdressing is used in this way, it is often advisable to occasionally leave the plugs on the surface, verticut them, and drag them back into the aerifyer holes thus the topdressing is gradually incorporated into the base soil Under these circumstances particle size is very important. Consider two sands, each with a permeability of 15 inches per hour:

Sample One is a very coarse 1 to 2 mm sand which would have a **very** high permeability except that it is contaminated by enough clay (perhaps 15%) to reduce the permeability to 15 in./hr.

Sample Two is a very uniform fine sand (perhaps .1mm) with a permeability of 15in./hr.

Sample One would be detrimental to the permeability of most soils in most concentrations. In spite of its good permeability, it would not be a suitable topdressing.

Sample Two, on the other hand, would improve permeability of most soils in most concentrations. While it might not be the optimum particle size topdressing for all greens, it is difficult to imagine a circumstance where it would not be a suitable topdressing, assuming of course that it would not be followed by later soil topdressings which would produce layering.

Until recently the only relatively inexpensive way to improve the permeability of tight greens was to aerify as deeply as possible with a spoon as large as the members would tolerate and then topdress with a suitable material which was brushed into the holes. If done several times a year for several years, great improvement could be made in the permeability of the top few inches.

Fortunately there is now equipment available which can inject sand nine inches deep into a green and which can do more to improve permeability in one day than it was previously possible to do in several years.

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Lime vs Japanese Beetle

The merits of liming turf are known to the experienced turf managers in the humid region of the United States. When the Japanese beetle was first devasting turf in the Washington, D.C. area, Mr. Rubin Hines laid out liming test plots. His efforts showed the beetle larvae did not damage the limed areas on his golf course.

J.B. Polivka and R.J. Wessel, entomologists at the Ohio Research & Development Center in Wooster, Ohio, summarized an eight-year study, 1949-57, with this statement: **"That the Japanese beetle larvae population is directly correlated with soil acidity seems to be definitely established. The studies also indicate that it is possible to obtain reduced levels of grub population by applying lime."**

At Lyons Den Golf, 100 pounds of pulverized dolomitic lime was applied per 1,000 sq. ft. (2Ta) to change the 4.6 pH in the heavily disease-infested thatch. A year later, we observed that the limed thatch had no noticeable grub damage.

Eight-and-one-half of the five-year old fairways and roughs that were not limed, were heavily damaged.

Aerifying after liming seemed to have broken the lime barrier and the grub population returned. Now we aerify first, then apply lime.

The 100 pounds of lime per 1,000 sq. ft. has not moved into the soil. The pH just below the limed layer in the thatch is the same as before liming, 4.6. Liming thatch is like liming a cellotex board. It will not go thru, not even with 100 inches of water.

Yet our lime layer did inhibit beetle egg laying. It is known that the Japanese beetle lays its eggs in the soil, not thatch. Was it possible that the lime barrier inhibited the female going to the soil to deposit eggs? No research has been done on the LIME: THATCH vs JAPANESE BEETLE, so far as this writer knows.

To do an in-depth study from our observations would require several years of study by entomologists, next by agronomists on the effects of continued liming on different soils, and then the pathology department to tell us of changes in the fungi population in thatch and soils.

The findings of these researchers working as a team would require a lot of people and people have to be paid. It is a national problem, where ever there is grass, not just golf courses. Yet, the great investment in golf course turf that must be protected from grubs, calls for leadership to come from golf club and course owners.

It is up to all of us to "squeal our wheels" and let the Secretary of Agriculture know that the threat exists. The State Directors of Agriculture and the heads of research centers must be told of the need. Will you help?

Researchers will have to tell us how much money will be needed, before asking for funding. In this inflated economy, costs will be higher and funds will be difficult to come by, yet if we don't, the Japanese beetle grub will destroy the greatest "spirit lifter" of all to the human race. GRASS.

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