

COMPACTION

Golfers are blamed for causing it but how much is due to poor maintenance practices?

By ROWLAND B. ARMACOST

Several years ago, in April, I visited a Massachusetts course that was considering reconstruction of a green. The chairman accompanied me to the green site where we immediately noticed deep footprints indelibly marked in spongy turf. An unthinking golfer apparently assumed no damage would be done if he played on the soggy green or, if there was any damage, nature or the supt. would be able to repair it. What he didn't realize that nothing short of total renovation could have put the green back in shape.

There is no soil mix that I know of that resists marking when the ground is thawing, or is soggy or soft. Soil particles under these conditions slide into pockets formerly occupied by air and moisture. When the ground eventually dries, the soil structure is found to be solid, incapable of drainage and, for that matter, breathing.

Supts. are prone to blame the golfers when their greens become marked and compacted. But are only the golfers to blame?

Let's take a look at ourselves, our courses, our maintenance crewmen and the circumstances in which we work. Do we begin mowing immediately after watering the greens? . . . or water them while play is heavy? Do we work on our greens in the early spring and late fall when thawing and freezing are at their heights? In short, aren't we as guilty as the players

at our clubs for the bumpy and compacted condition of the putting surfaces?

Supt. Has To Repair It

Whether our guilt is as great as that of the players is something that can be argued interminably. Regardless of what the decision may be, we have to find the solutions to the compaction problem. How do we go about it?

First, we have to develop the best possible soil mix, do everything we can to improve drainage and, most important of all, devise a mechanical management program that can, in some way, cope with the compaction problem.

We need to develop better communications with our maintenance crews — to be explicit, tell our employees when they absolutely can't work on greens that may be damaged by even the lightest traffic.

How Much Manual Handling?

As an example of how a better management program can be set up, consider the irrigation system at your course. How much manual handling of hoses on and off the greens is required? Do you use sprinklers with bases that can be pulled off the greens without the maintenance workers stepping on them? Would pop-up valves around the greens alleviate the situation?

If you don't have the proper thunderstorm and lightening regulations at your club, it would be to your advantage to study those suggested by the USGA and have your club adopt them.

You should have the cooperation of the pro in preventing access to the course when weather and ground conditions aren't favorable for play. And, finally, you should ask your green chairman to take a firm stand against golfers going out on the course when there is a chance of damage from thawing and freezing.

Rowland B. Armacost retired less than a year ago after serving for many years as the supt. at Wahconah CC in Dalton, Mass. This article is condensed from a speech he made at a recent turf conference held at the University of Massachusetts.

Test Green Soil

If you're not sure of the quality of your putting green soil, it can be simply tested. That is by taking a sample, saturating it, balling it up tightly and letting it dry thoroughly. If it readily crumbles, the texture is good. If it has to be thrown against the side of a building or hit with a hammer to break it up, you have compaction.

It does no good to make a soil test if the ingredients are dry. There must be a normal degree of moisture and a normal degree of compaction because these simulate the field conditions with which you are concerned.

Drainage Test

There is a second test for soil drainage that is somewhat more complex, but you may want to try it to find out how quickly the soil on your greens is carrying off excess moisture. It requires the following apparatus:

1. A tin can with the top cut out;
2. A second can, same size, with both ends cut out;
3. A square of sash screen larger than the bottom of the can;
4. A rounded piece of sash screen, just large enough to fit in the can;
5. A beaker or coke bottle;
6. A pedestal to hold the beaker when it's upside down;
7. A funnel that is slightly larger at the mouth than the bottom of the can;

Place the tin can that has both ends out on the square of screen, with the screen resting on a table. Fill the can with the soil mix to be tested (the mix should have average moisture content).

Simulate Compaction

Then press the mix down with the thumbs until there is what should be a normal degree of compaction. Place the insert screen on top of this mixture (to prevent eroding the soil as the water pours in). Then place the can, with both screens held in place, on top of the funnel. Next place the funnel on the tumbler, with everything secured in an upright position.

Place the beaker upside down on the pedestal (holding the water in with the thumb) and allow the water to flow out slowly until the level of the water is at the beaker mouth.

Time the accumulation of water into

Growing Turf The Hard Way



By Tom Mascaro

Geographical Area: New York State

Problem: Raising tractor into truck to be hauled to junk yard. Equipment building had burned to the ground, destroying many thousands of dollars worth of equipment and supplies.

Solution: Keep constant check on electrical wiring and fuel storage. Remove oil soaked rags and other combustible materials. Initiate a thorough clean-up program and keep it up.

the tumbler when the flow starts, first at a one-inch level, and at a two-inch level, if desired. This will give you a good idea of the hydraulic conductivity of the saturated mixture, and, of course, tell you approximately how fast your greens dry.

Standards of Drainage

The USGA green section has suggested standards of drainage. There are testing stations that will make very accurate tests of your soil mixtures. If you avail yourself of these, you can determine with a great degree of certainty just how dense or how porous your green soil mixture should be.

My reason for suggesting tests and experiments is because that I feel we are
(Continued on page 64)

RAIN ON CUE

Don't rely on the whims of weather. Ask Miller to give you "rain on cue" by installing an automatic sprinkling system. Often, an automatic sprinkling system will pay for itself in labor cost alone. If your course is already irrigated, Miller can economically convert your present system to one that is fully automatic. Remember, peace of mind is a built-in advantage of Miller sprinkling systems...so don't be irritated...get irrigated.

MILLER SPRINKLING SYSTEMS

Division of A. J. Miller, Inc.

1320 North Campbell Road • Royal Oak, Michigan • 313, 542-8400

40 years of experience in designing and installing
sprinkling systems



Who Causes Compaction?

(Continued from page 28)

leaning too much toward sand as a base for greens sod in a not too well advised effort to provide quicker and more complete drainage. I have tested and played on greens constructed of 90 per cent sharp sand and found practically all of them to be hard at the surface. They undoubtedly drain better, but at the same time they probably require frequent irrigation, cultivation and heavier feeding than I think is good for turf.

Desirable Mixture

As far as I am concerned, a good soil mixture is made up of 35 per cent loam, the same amount of sharp sand, 20 per cent peat and 10 per cent Terra-Green or calcine clay. This mixture, under heavy traffic conditions, has good rebound quality, something that isn't found in soil void of organic matter. The drainage quality of the 35-35-20-10 mix is good. The use of calcine clay seems to aid permeability. It permits water to flow freely, yet intercepts enough to feed the grass roots.

In my 30 years in the golf business, we

have gone through several stages when a great deal of emphasis has been put on a single product, element or ingredient. Oldtimers recall the ammonia sulphate sieve, for instance. Pure peat was once thought to be the only type of material that should be used in topdressing. Phosphorus was thought to be the key to fertilization some years ago, and potash was a dirty word. Now, I'm afraid we are caught up in the sand stage. Overuse of sand, as far as I am concerned, is causing many but not all of our compaction problems. That, and play when conditions aren't favorable, and perhaps the maintenance department itself.

Seventh California Clinic

The seventh All Golf clinic and workshop, conducted by the California Association for Health, Physical Ed and Recreation and the National Golf Foundation, will be held June 20-23 in Monterey. It is staged with the cooperation of San Jose State College and the Northern and Southern Calif. PGA sections. Bill Wakefield is clinic chairman.