

can be hired to assist in writing specs and in supervising construction so that the facilities are built right the first time.

All golf courses and golf facilities now building or in planning will do well to look to the GCSA. Its members have the know-how. They know the whereabouts of trained men. They are creating scholarships to bring us more trained men.

Q. We are sending a sample of soil and a sample of muck from a nearby farm. Our greens were built in 1924 with this clay soil and we have had a constant battle with compaction. They have improved some with aerifying but it leaves much to be desired. We topdress with 65% sharp sand, 20% topsoil, 15% humus. Gravel underlays the course but it is covered with 4 feet of clay.

How would you advise us to prepare the proper soil mixture for new greens we are going to build to replace the old unsatisfactory ones? Can we use the muck? Can we use slag? (Ohio)

A. After making several mixtures with the clay soil and the muck which you sent, it appears that the best mixture would be, measurements by volume:

Coarse concrete sand 70 per cent

Clay soil 20 per cent

Muck (brown, fibrous) 10 per cent

Black muck is highly colloidal and would be undesirable in the mixture if used in quantities over 10 per cent by volume. Use the brown fibrous portion — if you can. Mix the materials off the site if at all possible and haul them to the green, spreading it uniformly 12 ins. deep over the prepared well-drained base. By removing the clay and providing gravel for the base, you will need no tile.

These are very basic and incomplete directions or suggestions. They may or may not apply to another golf course, that has a different type of top-soil and subsoil.

You may double-check the calculations but I believe that 12 ins. of this mixture over 1,000 sq. ft. requires 40 cu. yds.

Yes, you may use agricultural slag to replace part of the sand. Slag will provide calcium and several trace elements. Without seeing your slag, I would suggest not more than half slag, half sand. A sample of slag would be appreciated.

Q. I am a doctor and I am constructing a small (10 x 25) putting green in my yard. Is there a small hand mower that would be satisfactory? I feel this size green would not require the usual power putting green mower. Also, I would like information on the proper type of grass and on the care and management of the turf. (UTAH)

A. The best information that I can give you is to solicit help from representatives of the Golf Course Superintendent's Assn. in your area. A. R. Emery, GCSA, Salt Lake City, is one who has given much help to others and in whom I have great confidence. If he can-

50-Year Veteran



John H. Dimmick (center), 50-year vet at Shawnee Inn, Shawnee-on Delaware, Pa., and course supt. there, was the guest around whom all festivities centered when the Pocono Turf Assn. held its annual banquet recently. John is flanked by Fred Waring (left), Shawnee pres., and Harry Obitz, vp and club pro.

not help you he can refer you to someone who can.

Hand putting green mowers are available and would be preferable on such a small area. Your local golf course supply dealers can brief you on hand mowers.

Care and management of bent putting greens is adequately described in *Turf Management* (McGraw-Hill) by H. B. Musser. A subscription to *GOLFDOM* and *Golf Course Reporter* also will keep you up-to-date. Your local golf course superintendents are well versed in the subject.

Q. Do you think that Milorganite has enough trace elements in it so that it will supply what my greens need? (Kans.)

A. Inspection of the analysis of Milorganite indicates that this fertilizer probably will supply most of your trace element requirements. Practical results on many courses support this view. The exception may be iron. When iron chlorosis appears, the sensible way to overcome it is by the application of soluble iron in iron sulfate, ferrous ammonium sulfate, or iron chelates.

Q. I am having trouble with my dirt tees. What would be the best dirt to use? We have 300 or more rounds of golf a day. (Mass.)

A. From our limited experience with bare-soil tees, we would suggest a sandy clay with 10 per cent by volume of sawdust mixed in to keep the soil open enough to permit the peg tees to be inserted when the soil is dry. Your soils department at the Agricultural Experiment Station could help you to locate or to mix a sandy clay that would be suitable.

Your chief problem probably is to replace and level the soil as it is worn away by golf shots and to keep it reasonably moist. The sand would keep it from being gummy and sticky in wet weather.