

Golf Stop 8

Three Soils And A Lightweight Greens Roller PartII

Tom Nikolai, B.E. Leach, M.A. Smucker, D. Gaffner, P.E. Rieke, and J.N. Rogers III

In the summer of 1992 three replications of three different soil types were randomly assigned and seeded with Penncross creeping bentgrass. An object of the design was to study differences that occur among the three most common soil types that exist in Michigan greens. The three soils include: 1) an 85% sand, 15% peat green built to U.S.G.A. specifications; 2) an 80% sand, 10% peat, 10% soil green mix; and 3) a native sandy clay loam green. Each soil type measures 40 feet x 40 feet. Furthermore; each section was split to accommodate two greens measuring 34 feet x 17 feet. One green from each section was rolled 3 times per week with an Olathe roller and the other green was not rolled. All greens are mowed at 5/32" 6 times per week.

In 1995 it was concluded that light weight rolling increases green speed 1 foot on the day they are rolled, 6" the day after rolling, and 4" two days after rolling. This has been corroborated in 1996 with averages of 1 foot, 7", and 4" respectively.

The effect of soil type on green speed has been negligible. However, last year in a demonstration that compared metal with plastic spikes the USGA greens had somewhat quicker green speeds than the other two soil types. The traffic demonstration of 1995 also indicated that both Greenspike and Softspikes maintain a green speed approximately 8" faster than greens trafficked with metal spikes. In 1996 this difference in green speed is holding consistent.

Disease counts have also yielded interesting data from the site. Diseases such as dollar spot, yellow tuft, and pink snow mold(as well as moss) show statistical differences in regards to soil type. Rolling the plots 3 times per week has also reduced the severity of dollar spot, brown patch, moss and localized dry spot.