



DENNIS HENDRICKSON

New Research Project Approved

The following proposal has been received from Dr. Taylor, Dr. Blake and Dr. White by the Research Committee and has been approved by the Board of Directors of the M.G.C.S.A. Work will begin on this proposal as soon as possible.

TITLE: Sand Topdressing to Salvage Old Greens

PERSONNEL: D. H. Taylor, G. R. Blake, D. B. White

LOCATION: St. Paul Campus Experimental Farm
University of Minnesota

OBJECTIVES: (1) To determine the effectiveness of frequent sand topdressing treatments in converting old problem greens into manageable greens. (2) To compare unamended sand to various soil mixtures, as well as existing soil, as a topdressing material. (3) To compare a frequent topdressing program to the more traditional semiannual topdressing program.

NEED FOR STUDY: A topic of great interest and importance to golf course superintendents is the sand topdressing program. Many are already experimenting with it in one form or another. Although successful renovation of old greens has been achieved using this program in other parts of the country, results on golf greens here have been mixed. In some cases management problems have become severe when the sand layer at the surface has reached a depth of around one inch. The sand layer may become droughty and nutrient-deficient yet contain almost all the roots. If, however, these problems can be minimized or eliminated, a significant increase in the quality of the greens might be achieved and rebuilding costs could be greatly reduced. Detailed research on sand topdressing programs in this area would help determine the cause of some of the problems occurring and the benefits and disadvantages of frequent sand topdressings.

METHODS AND MATERIALS: Experimental field plots will be established at the University of Minnesota to assess the impact of various topdressing programs on the quality of turf. Three main plots will consist of differences in initial soil and turfgrass species. Each main plot will be divided into subplots on the basis of topdressing treatments.

Five topdressing programs are anticipated and will be evaluated continually for a period of ten years or more. The topdressing programs will consist of: (1) Biweekly topdressing during the growing season with sand; (2) Biweekly topdressing during the growing season with a sand-soil-peat mixture containing 90% sand; (3) Semiannual topdressing with sand; (4) Semiannual topdressing with sand-soil-peat mixture containing 70% sand; and (5) Semiannual topdressing with soil identical to the initial soil in the plots.

Plots will receive management practices similar to golf putting greens including compaction, semiannual aerification, fertilizer rates determined by soil tests, mowing height, frequency and irrigation.

COSTS: The initial costs of getting equipment, establishing field plots, and maintaining plots for the first year should be around \$1500, broken down as follows:

- \$700 equipment and supplies including a compaction unit;
- \$300 use and maintenance of existing equipment - seeder, aerifier, topdresser, mower, etc;
- \$500 student help in establishing and maintaining plots.

Following the first year, costs of maintaining the experiment should be less and will be evaluated at that time.