

# Minnesota and Wisconsin Courses Featured In Winter Damage Study

*Testing Being Done at St. Croix National,  
Indian Hills and River Falls*

If you work in the north central United States, you may wonder if heavy rates of topdressing on golf greens just prior to winter increase winter damage.

Donavon Taylor, Ph.D., professor of soil science at the University of Wisconsin—River Falls, wants to find the answer to that and other topdressing questions. Taylor and his research team have established trials on three golf courses in Wisconsin and Minnesota.

"All three superintendent have been great to work with," Taylor says. "All three trials are on practice greens. They vary considerably in the construction of greens. One is new and has bentgrass. Another one is older and has native soil with a two-inch buildup of sand and soil. The other one has a mix."

Taylor explains that the differences in sands used for topdressing in Minnesota have centered on perceived differences in water relations of some of the most popular types of sands. Silica sand and mortar sands have received the greatest amount of discussion among superintendents.

"The uniform, round, white sand has caused the most controversy. It became popular 10-15 years ago. Speculation is that it holds more water," Taylor says. "The mortar sand has gained popularity in the last five years. There is no documentation to determine the differences between the uniform silica sand and the mortar sand."

The research started in the summer of 1997. In late fall of 1997, a topdressing layer was applied after winter disease fungicides were applied. Treatment combinations consisted of the following:

- A control plot with no topdressing applied.
- Four sands or mixes: uniform, silica sand, mortar sand, 85/15 by volume silica sand/peat and 85/15 by volume mortar sand/peat.
- Two topdressing depths: 2.4 millimeters (0.09 inches) and 4.8 millimeters (0.18 inches)
- Brushed vs. unbrushed treatment.

"As soon as anything starts happening in spring we will start measuring the temperature of the surface and just below the surface. We will measure moisture and we will measure any damage," Taylor says.

Minnesota experienced a mild winter, and Taylor says he welcomes mild conditions and is glad he has two more winters for the project.

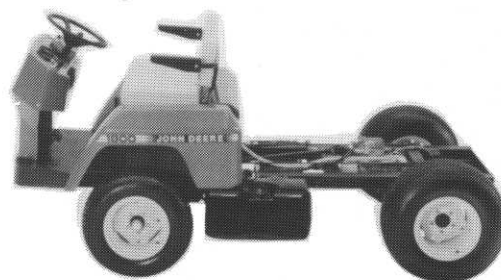
"If this were the only winter we were testing I might be concerned. The results of this winter may be different than at the end of three years. I'm perfectly happy to take the mild winter," Taylor says.

Taylor is assisted by Kevin Clunis, CGCS at St. Croix National Golf Club in Somerset, Wis.; Richard Grundstrom at Indian Hills Golf Club in Stillwater, Minn.; and Daniel Swenson at River Falls Golf Club in River Falls, Wis.

The project was co-funded by the Minnesota GCSA and the GCSAA Foundation. Each organization has committed \$18,925 over a three-year period. — GCSAA

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