

FIELD DEMONSTRATION

A BOLD MOVE — RANSOMES NEW

By Randy Smith

On October 24th, 1986, Nakoma Golf Club's maintenance staff undertook a relatively new version of renovating a green. Our number two green is basically native peat soil with years of topdressing on top. Poor drainage has plagued this green, causing standing water and ice to thin and kill the turfgrass in several places. This green is usually the factor for opening date in Spring or the opening hour following a storm. Short of complete rebuilding, which of course has not been ruled out, we (the green committee, the Board of Directors, and myself) elected to attempt to improve the conditions and drainage of this green with the methods as follows.

Using a Ransomes Bob-Cat Verti-Groove, designed and invented by Tom Mascaro, we sliced approximately 3000 lineal feet on the putting surface of our green. The grooves were cut with 4 passes of 3 slits at 1 foot spacings in the North to South direction, and 6 passes of 3 slits at 1 foot spacing East to West. Our directions were determined according to the natural drainage of the green, the "pockets" that would not drain, and the potential "French" drains around the outside of the green.

The slicing blades that we used were 1/2" wide and set to go as deep as possible. We penetrated and removed thin slices of topmix 4 1/2" to 5 1/2" deep. These slices were carefully removed after each pass with 3 blades. The trenches were immediately backfilled with sand (Waupaca Sand's topdressing sand). We found that dry sand works much better in filling the trenches than slightly moist sand. Shovels were used to specifically place the sand over the trenches. We then packed the sand in the grooves and "scraped" the sand into those trenches with 1/2"x6" boards. Those same boards were used to compact the sand in the trenches three times or until they were packed all the way to the surface such that grooves vs. turfgrass had the same firmness under foot. We felt that the backfilling process should be completed prior to making the next pass so that the grooves would not swell shut or cave in, thus losing the effectiveness of the French drain or puttability of the playing surface due to roughness.



Trying a Truckster to tow Verti-Groove.



Turf students compacting trenches with sand.



Tom Mascaro, Dave Legg, Randy Smith watching Chuck Frazier inspecting depth of grooves.



Cross sectional slices of topsoil being observed on bentgrass nursery at Blackhawk C.C.

RATIONS — 1986

RENOVATION WITH VERTI-GROOVE

Our method of pulling the vertigroove was first a Cushman 4-wheel truckster. Even with extra weight in the Cushman, we were about to break traction with 3 slicing blades in and set as deep as possible. Our second try was with a small Allis-Chalmers tractor with turf tires. As it turned out, the green was firm enough at this time of year that we did not cause any detectable tracking on the green. Please note that we did wait 2 days after a $\frac{3}{4}$ " rainfall and would not try this process in soft spring conditions.

Once the grooves were completed, we spiked the green with a hand spike, overseeded with $\frac{1}{3}$ # Penncross creeping bentgrass per 1000 s.f., topdressed the entire 7,000 s.f. green with 2 cu. yards of 80% sand/20% peat, dragged in the topdressing, mowed the green, and then rolled the green with one roller from a 3# gang-fairway roller (500 gallons each). We pulled the roller with a Cushman truckster. I would be reluctant to do this on a mineral soil green or where compaction would be of concern.

We fertilized this green with $\frac{1}{2}$ # actual N both 1 week and 2 weeks prior to this procedure to encourage recovery and hopefully uniform growth over the entire green. We felt that it was important not to fertilize with the trenches open as we did not want to create differential growth on the putting surface.

Playability has yet to be determined as we have not had weather conducive to golf since we accomplished this procedure. Our own observations of rolling golf balls over the grooves are relatively encouraging. We suspect that freezing and thawing over winter will necessitate rerolling next spring.

We were concerned about slicing this late in the year; however, we do cover this green with Warren's Terra Shield. In doing so, we hope to protect the green and potentially encourage early growth for recovery.

Some 65 hours were expended by 6 individuals to complete the process as described. Very little negative feedback has been received to this date and I guess I would look at that as being a plus although as I mentioned earlier, we have had limited play. Observing the trenches thus far, I would say that I am encouraged with the possibilities that this unit has. Future use for a putting surface still remains in question. We will have to see how playable this surface is next year.



Cross-slicing for drainage.



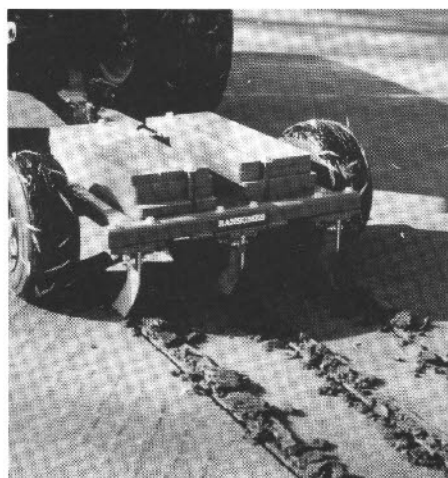
Various stages of the grooving process.



Backfilling trenches with sand.



Tom Mascaro - the designer/inventor of this unique machine.



The slicing process.