Tour Stop #6: Managing Golf Course Putting Greens Utilizing Planetair Venting Aerification Technology

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INTRODUCTION

The practice of decomposing organic matter in place utilizing mechanical cultural practices has been termed "venting". Venting involves the repeated creation of vertical macropores which may allow an avenue for leaching salts, increasing infiltration, and encouraging gas exchange. Conventional core aerification may also enhance some of these physical properties but the frequency of coring needed to maintain a consistent vertical macropore would require extensive labor and cause excessive disruption of the playing surface. This new approach to maintaining golf course putting greens may simultaneously combat thatch accumulation with minimal disruption to both the player and the playing surface. Aside from anecdotal information however, few scientific data are available to suggest the effectiveness of venting aerification technologies in maintaining golf course putting greens.

The objectives of this project are: 1) determine the responsiveness and elasticity of *Poa annua* putting greens to Planetair venting technology, and 2) determine the main effects of fertility and venting frequency in order to establish a practical management regime for maintaining *Poa annua* putting greens.

MATERIAL AND METHODS

An existing *Poa annua* fairway turf was remodeled and renovated into a putting green during summer 2010. Individual aerification frequency main plots measure 18 ft. x 20 ft. with fertility rates arranged as a sub-plot and stripped transversely across main plots measuring 6.5 ft. x 18ft.

Treatments assigned to the plots are venting frequency: 1) 1x/week, 2) 1x/2weeks, and an untreated control; fertility rate: 1) 3 lbs. N/M/year, 2) 6 lbs. N/M/year, and 3) untreated control. Fertility regime will consist of both a foliar and granular combination nitrogen program.

Data collection will include: monitoring soil moisture fluctuation just beneath the soil surface, disease incidence, rooting differences, shoot density, ball roll, autumn color retention, spring green-up, and turf quality. In-season turf responsiveness to both foliar and granular fertilizer applications and any interactions between venting frequency and fertility will be monitored.

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