



## “Too Much Water is Worse Than Too Little”

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Jim Latham has been cleaning out his desk as the December retirement date draws near. As one might expect, notes, letters, and articles that have been buried for years were discovered in the process. One gem found near the bottom of a drawer was an old article that was the source of the quote used for the title of this short review of the 1994 growing season. The article consisted of excerpts from a January 1938 issue of “The Greenkeepers’ Reporter”, written by O.J. Noer. The excerpts were sent to all members of the Royal York Golf Club in Toronto after a particularly difficult season during 1937.

The article emphasized careful use of irrigation, fertilizers and the importance of utilizing improved cultivars of turf for greens. It’s surprising how little things have changed over a span of 50 to 60 years. During an “easy” season there is plenty of time to experiment with growth regulators, new fertilizers, rollers, biostimulants, and other practices to fine tune the maintenance program. In contrast, when the Milorganite hits the fan during an extended period of hot, humid weather it’s time to keep it simple and follow the basic principles of sound turf management. One of the more important, but most often overlooked, maintenance practices to consider is amount and frequency of irrigation.

It was a “sneaky bad” season for a number of superintendents in the Midwest this year, particularly in the Chicagoland and Detroit areas. If one would review the weather records for the summer, there would be little to suggest a period of severe turf stress, yet significant losses of turf on greens occurred during late July and August. The pattern for turf loss was surprisingly similar at many courses. Injury generally occurred on greens in problem sites, those usually affected by shade, poor air movement, tree root competition, and inadequate surface drainage across the putting surface. It was not unusual to find 16 or 17 greens in excellent condition and one or two greens (those found in heavily-wooded sites) to be very thin and weak.

The golfers’ unreasonable expectations for ultra-fast green speed, regardless of the weather conditions, were also partially responsible for the injury to greens. The midwest experienced a period of hot, humid weather just before the Fourth of July that caused a flush of turf growth. It became almost impossible to provide a fast, firm playing surface at many courses due to the vigorous growth of turf. The frequent rain and high humidity made the greens soft and, for

lack of a more descriptive term, “puffy”, more so on greens that possessed a significant amount of organic matter or thatch near the surface. Golfers at a few courses found they were playing a temporary green by late summer because of the additional stress caused by a shaded site and/or their unwillingness to allow the superintendent to aerify, raise the height of cut, hand water, or initiate other practices to relieve stress on dying greens. A considerable amount of *Poa annua* and bentgrass turf was lost due to excessive rolling, double cutting, and ultra-low mowing heights during the peak stress period of midsummer — not to mention the adverse effects of using plant growth regulators at that time. Unfortunately, these practices were sometimes mandated by the golfers.

It quickly became obvious that more turf was lost by too much automatic irrigation than by too little irrigation. More black layer related problems were seen this summer than in any of my previous seasons with the Green Section. Superintendents who turned off the sprinklers early and switched to hand watering fared better than those who had neither the manpower nor experience to do so. To be fair, an unfavorable growing site was sometimes more to blame than any other factor, and the loss of turf was beyond the superintendent’s control.

Fans increase air movement and fungicides can reduce the potential for disease but they cannot compensate for a lack of sunlight. To borrow a favorite saying of Jim Moore, the Director of the Mid-Continent Region: “The three most effective fungicides for use on a number of stressed greens this summer would have been Stihl, McCullough, and Homelite”. Unfortunately, many golfers still believe the trees on the course are more important than the quality of playing surface.

Careful management of irrigation is always important but even more so on shaded putting surfaces. Five minute cycles might still provide excess irrigation to low lying portions of shaded greens during humid weather. I was surprised to find plenty of soil moisture in poorly drained areas of shaded greens even after 5 or 6 days without irrigation or rainfall.

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Hand watering is often necessary in spite of a modern, sophisticated irrigation system. More importantly, hand irrigation **only** to the portions of the green and collars that need irrigation. Too much hand watering is just as detrimental as too much automatic irrigation. A comment I have heard (and agree with) from more than one superintendent who has been successful in keeping the greens dry is that “few superintendents have a feel for how much moisture stress greens can tolerate without causing permanent injury to the turf.” Perhaps a point to ponder before firing up the irrigation on greens during the first dry day next spring? O.J. Noer was right over fifty years ago and he is still right today.