THE 1995 YEAR IN REVIEW

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Unusually stressful weather patterns played a significant role in the extensive losses of turf that occurred at numerous golf courses across the Midwest during the summer of 1995. Low soil and air temperatures between April through late June limited the growth and development of cool season turf. Root growth and the turf density of the playing surfaces may have been affected the most by the cool spring weather. Consequently, thin poorly rooted stands of turf entered the peak stress period of midsummer in a weakened condition. Extended periods of hot, humid weather and localized heavy rainfall arrived early, during late June, with little relief until September.

Losses of Poa annua were especially troublesome in high traffic areas, in shaded sites, and on greens maintained at heights of cut at or below 1/8 inch. Low mowing heights, double cutting, and rolling, alone or in various combinations were still employed to increase green speed at many courses in spite of the difficult weather conditions. Injury to Poa annua, however, was not only limited to the courses with fast greens. Thinning and symptoms of diseases such as summer patch and anthracnose, however, were often first seen on the more intensively maintained putting surfaces. Approaches to greens and the turf adjacent to the collars, called the surrounds, were also high risk areas for turf loss last season because these sites generally receive high traffic and inconsistent irrigation.

High temperatures and extended periods of high humidity made it nearly impossible to maintain a proper irrigation schedule due to surprisingly low evapotranspiration rate. Many superintendents were tempted to overwater the playing surfaces in response to the high air temperatures when, in fact, the plants and soil were losing relatively little moisture throughout the day. Overwatering intensified turf losses, as did poor scheduling of irrigation to weak stands of Poa annua.

Hand irrigation was the best method for supplying the needs of turf in many high stress areas of the golf course. Crews trained to limit hand irrigation only to high spots, collars and slopes were able to maintain higher quality turf compared to a course where nightly automatic irrigation was the norm. Root systems rapidly declined in response to unusually high soil temperatures which, in turn, necessitated the need for even more careful, but more frequent irrigation. Losses of weak, shallow rooted turf late in the season often coincided with heavy rainfall events - when maintaining control over the amount of water applied to the playing surfaces was hopeless.

Although the standard battery of mid summer turf diseases such as Brown Patch, Summer Patch, Pythium, anthracnose, etc. were more severe and more prevalent than usual, a considerable amount of turf loss likely occurred due to direct heat stress. As a result, frequent applications of fungicides did not always provide the anticipated degree or duration of disease control. The complex of disease pathogens active at any one time during the peak of turf decline also made the task of diagnosing the primary disease problem a challenge.

A few of the more effective ways used by superintendents to minimize the losses of turf last summer include:

1) Careful hand irrigation, especially to collars, high spots, and slopes.

2) Maintaining heights of cut no lower than 5/32 inch, and raising the height of cut to 3/16 inch, at the first signs of, and preferably prior to turf loss.

3) The use of walking greens mowers and the use of smooth rollers in place of grooved rollers to mow the putting surfaces.

4) Frequent aerification through spiking, quadratines, water injection, or standard hollow tine core cultivation.

5) Skipping the mowing operations for a day during peak stress periods.

Operations associated with more extensive losses of turf last season include:

1) Overwatering.

2) Poor drainage.

3) The use of growth regulators on greens and excessive use of fungicides that have growth regulating effects on turf.

4) Vertical mowing, grooming, rolling, double cutting, brushing and topdressing during periods when the greens were under stress.

5) Inaccurate diagnosis of turf disease problems and the inability to differentiate between disease and heat stress.

6) The reluctance of golfers to accept less than ideal playing conditions in spite of the unusually difficult growing conditions.