

MANAGING GREENS UNDER STRESS

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Managing greens under stress can also be a very stressful time for the superintendent. Most of the game is played on or near the greens, so any injury or decline in turf quality on the putting surfaces will be seen by most, if not all, of the golfers playing that day. The low height of cut, heavy traffic, shade and other growing site limitations on the greens often combine to make the recovery of turf a slow process once injury occurs. An accurate diagnosis of the problem may help the superintendent decide which course of action to follow, but even when the cause of the stress is unknown the following measures should be considered to accelerate the rate of recovery.

Irrigation

Carefully limit irrigation to the green, although the injury to turf may be related to drought stress. A common reaction to turf decline on greens is to overwater, which only compounds the problem. In fact many problems regarding a decline in turf quality on greens are related to excess moisture, due to a frequent, heavy rainfall, poor irrigation coverage, inadequate surface and subsurface drainage, or a combination of these and other related factors.

Most superintendents agree that a stingy hand watering program is needed on problem greens, especially during hot, humid weather. The key is to apply irrigation only to portions of the green that dry out. Be sure to avoid excess irrigation to flat, or low lying areas of the putting surface that may already be affected by black layer and other problems. Inspect low areas frequently for black layer, which is an indication of anaerobic soil conditions. More turf on greens is lost each season through overwatering than by a lack of irrigation.

Core Cultivation

Core cultivation is the best way to relieve compaction and restore a healthy balance of air and moisture in the root zone. Needless to say, aerification will not be very popular with golfers during midsummer, but neither is dead turf and bare soil. Less aggressive methods of aerification, such as the use of a HydroJect or quadratines can be very effective without seriously affecting the quality of the playing surface.

Monitor the moisture levels frequently on greens that are aerified during the summer, particularly when the weather unexpectedly turns hot and dry. The open holes will greatly increase the evaporation rate of moisture from the root zone. As a result, the stressed turf can dry out, then wilt rapidly during hot, dry, windy weather, a concern related to the presence of a weak, shallow root system which usually accompanies stressed greens.

Hand Mow

Another way to limit a source of stress to greens going downhill rapidly is to switch from triplex mowers to hand mowers. Riding mowers simply cause more wear and compaction than hand mowers, especially along the clean up pass. If hand mowers are already being used, then switch to smooth rollers instead of grooved rollers. Raise the height of cut as much as possible, there is a considerable amount of truth in the adage, "better to putt on

slow greens, than no greens." The rapid recovery of turf on greens during midsummer maintained at 1/8" cut with triplex mowers equipped with grooved rollers is an unrealistic expectation.

Do No More Harm

Some superintendents compound the problem by killing the little turf that is left on the greens with kindness. A barrage of fungicides, biostimulants, fertilizers, and frequent irrigation can often eliminate what little turf remains on the putting surface. Simplify the maintenance program instead on complicating it. Use the safest fungicides possible, and only apply them when indicated. Light rates of contact fungicides will cause much less stress than high rates of, for example, DMI fungicides. Avoid the use of EC formulations during hot weather, even when applied in the morning.

Light rates of organic fertilizers are a safe bet during the summer. Many superintendents also utilize very light (1/10 lb or less) rates of soluble fertilizers, applied through the sprayer. Putting surfaces that have a limited root system may have a better chance utilizing soluble fertilizers applied at very light, frequent intervals than a standard application of a granular fertilizer.

Finally, make use of any and all sources of information available to diagnose and remedy the problem. University staff, superintendents, the USGA Green Section, and others are there to help and may be seeing similar problems at other courses. Try not to panic and keep it simple, as much as possible.