

TURF STRESS MANAGEMENT

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Effective turf management strategies involve the preparation for, survival of, and recovery from the several environmental stresses we face each year. The many grass plants that comprise a stand of turf are not static, but quite dynamic. Each plant is in line for replacement over time. This replacement over the course of many days and weeks is what gives a turf its 'perennial' characteristics. Managers are faced with the challenge of growing tomorrow's turf today. Success builds a dense and useful surface, failure results in a thinning stand that is often more susceptible to injury from environmental stress.

Cold, heat, drought and other environmental stresses move a turf toward the 'edge of failure' on the management plateau. In order to move back away from the 'edge' a manager must take actions that enhance stress resistance. It is often necessary to have taken actions many months earlier. Fall management practices have a strong influence on the summer performance of cool season turfgrasses and the winter/spring performance of warm season species. In this view of turf management, the objective is to stay on the turf management plateau at a reasonable distance from the edge so that a challenge from mother nature does not result in a fast slide down hill to turf loss and poor performance.

Recognizing a turf's shift toward the edge requires a combination of art, science, and expert management skills (eg. planning and attention to details). Mother nature is more predictable than one might initially imagine. Soil temperatures can and should be tracked through the course of the year. A chart of current conditions and long term average soil temperatures should be maintained and referred to regularly (eg. posted on the wall). A difference between air and soil temperature in excess of 10 F (even under 'cool' conditions) favors desiccation of a turf. Tree shade generally increases over time, and prolonged cloudy weather can represent a significant problem for weak turf (eg. bentgrass during the late-summer or bermudagrass during spring transition from winter overseeding). Monitoring (eg. recorded and charted) a turf's performance is equally important. Possible measures include shoot color, stand density, rooting depth, areas affected by pests, growth rates, crown appearance, soil infiltration rates, green speed, etc.

An Agronomic Plan should be developed to help ensure for planned success. This written plan documents anticipated problems and solutions. It also serves to keep staff and management working in the same direction (eg. everyone has the same management/turf performance goals). The components of an agronomic plan include 1) Identification of Turfgrasses, 2) Identification of Goals for Each Turf Area, 3) Identification of Fixed Constraints for Each Area (eg. existing schedules, contracts, policies, etc.), 4) Outline of the Cultural Program for each Area (What will be done? When are the target dates? What are the expected benefits? What are the expected risks/costs?), 5). Develop Contingency Options (What are the anticipated obstacles? Which stresses are likely?), 6). Review of Plan with your Staff and Superiors (an Executive Version is helpful), and 7). Regular reference and adjustments to the Plan (Note Successes, Failures, & Unknowns).

Such a planning process seeks to match our best skills, tools, and actions against the 'expected obstacles' towards an identified and measured turf performance goal.