

RUTGERS CORNER -

EVALUATING YOUR SPORTS TURF MOWING PROGRAM

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Mowing Height

Turfgrass species and variety, mowing frequency, environmental conditions, and available management resources are factors that govern the lowest mowing height possible for a turf. Tall fescue is best mowed at height of 2 inches or more. At lower heights, tall fescue will steadily thin out and become infested with weeds. Perennial ryegrass can be mowed as low as ½ inch under intensive management including routine mowing, irrigation and pesticides; however, mowing heights of 2- to 3-inches are necessary under less intensive management. Certain varieties of Kentucky bluegrass can tolerate mowing as low as ¾ inch; however, annual bluegrass will eventually invade and dominate under such low mowing. A 1.5- to 2.5 inch mowing height is more acceptable for Kentucky bluegrass grown under moderate levels of management.

The budget and labor constraints placed on the field managers at many school and municipal operations typically do not allow mowing heights lower than 2 to 2 ½ inches for a majority of fields. In some cases, more intensive mowing management is feasible on limited basis for high priority playing fields.

Mowing towards the lower end of a species tolerance range will stimulate shoot growth, increase tillering/shoot density, and encourage a finer leaf texture, and ultimately improve playing surface conditions. Mowing below the height tolerated by a species will increase leaf succulence, decrease wear tolerance, reduce carbohydrate (food) reserves, and decrease root, stolon, and rhizome growth.

Mowing Frequency

Increasing the mowing frequency without lowering the mowing height is one immediate adjustment in a mowing program that can quickly improve turf and playing surface quality. Mowing more often so that less than 1/3rd the length of the leaves is removed will be less stressful to the turf than lowering the mowing height to achieve better playing surface quality. More frequent mowing results in less leaf tissue being removed in a single mowing and allows the turf to better adapt to the height of cut compared to a less frequent mowing program.

The proper minimum mowing frequency is determined by the 1/3rd rule, which refers to the concept that no more than 1/3rd of the height of the leaves (turf canopy) is cut in a single mowing. For example, a turf mowed at 2 inches should be no more than 3 inches high when it is mowed (1 inch is cut off the 3 inch high turf, 1/3rd). Turf should be mowed at 2.5 inches when the leaves are 3¾ inches high. And when the turf reaches 4½ inches it should be mowed no lower than a 3-inch height.

A lower mowing height requires more frequent mowing because shoot growth of the turf plants is stimulated as the mowing height is lowered. Thus, more frequent mowing is needed to keep up with the greater shoot growth and avoid scalping of the turf. Some examples of minimum mowing frequencies include mowing three to four times per week at 1½ inches or less, two times per week at 2 inches, and once a week at 3 inches. Infrequent mowing at low heights will scalp the turf and result in long-term decline of turf and playing surface quality.

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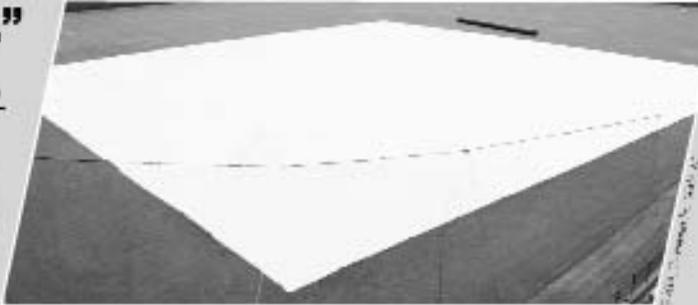
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