

Managing busy athletic turf

Basic issues must be addressed to help heavily trafficked turf recover from injury.

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■ A sound, total turf management program is the best way to manage high-traffic, high-use sports turf fields.

Fertilization, mowing and irrigation must be addressed throughout the year.

Mow to maintain turf at the desired height for the level and type of activity. It may help to vary the mowing height, keeping grass longer when stresses are high. Mow frequently enough so that no more than one-third of the grass blade is removed in any one mowing.

Incorporate these specifics for intensive care of busy turf.

Irrigation—When irrigating, use a single, deep watering, applying one inch of water, rather than more frequent, shallow irrigation. With heavy soils, water to the point of runoff, allow the water to thoroughly infiltrate the soil, then repeat the cycle. On extremely heavy clay soils, it may be necessary to irrigate on successive nights to ensure one inch of water is applied.

Where no irrigation exists, flexible scheduling will maximize rainfall benefits. Make fertilizer applications before forecasted rains. Aerify following rain, when the soil is moist enough to allow for adequate penetration.

Maximize the time between irrigation and field use. Allow 24 to 48 hours as a minimum between watering and play. The greater the soil surface moisture during use, the greater the compaction.

Cultivation—Core-type aeration is the one practice that can be the most beneficial and the least disruptive, in terms of turf response.

When recovery time is adequate, use *core* aeration, dragging the cores back in. If the field use is so intense that you are concerned about surface appearance or disrupting play, use *hollow-tine* aeration followed by *solid-tine* or *slicing* blades.

On sites where naturally-occurring high bulk density runs deep into the soil profile, and/or compaction occurs below a four-

inch depth, *deep-tine* aerate.

Ideally, a combination of various cultivation will provide the best results.

Aerate prior to or during the maximum root growth period for the turf. (Normally, late winter or early spring cultivation on cool-season grasses, and later spring or early summer on warm-season grasses.) Then aerate again to relieve soil compaction after extensive use or following heavy rain or high irrigation levels. With warm-season grasses, a final aeration after the playing season will improve root growth the following spring.

Topdressing

Topdress during the playing season, but only as needed to adjust field levels. Topdressing can temporarily reduce the turf quality of most grasses, including vigorous grasses like bermuda.

Fertilization

It's important to properly time fertilizer applications. As a general rule, this means fall and spring applications on cool-season grasses; spring, summer and fall applications on warm-season grasses.

Provide adequate fertilization to encourage turf recovery. There is a tendency to use more nitrogen because fans are so in tune with field appearance. Too much nitrogen will sacrifice root growth for top growth.

Run soil tests once a year, at least until you have developed enough history on a specific field to know how it performs under your fertility program.

Money and people—Schedule downtime to perform more intensive practices. Flexibility and some adjustment of work schedules and resources can help take advantage of play rotations and optimum weather conditions.

Allocate personnel and resources to high-use, busy fields first. For example, fields with dense, healthy cover and lower levels of activity may need no in-season fertilization.

When multiple fields are involved, each with a heavy play schedule, it may be necessary to further narrow the allocation of resources. Concentrate on heavy-use areas—baseball infields, soccer goals, and between the hash marks on football fields.

To achieve the best results and keep within budget: maximize resources on high-use turf, minimize resources on low-use areas.

Herbicides—Use herbicides to minimize weeds. Fall is the most effective time for broadleaf weed control applications in both warm- and cool-season grasses.



The high-traffic area between the hash marks and around the bench area of this dormant bermudagrass football field have been invaded by annual bluegrass, which is wear-tolerant.

(Photo courtesy the author)

Summer annual grasses are easily controlled with pre-emergence herbicides.

Eliminating weed competition gives grass a better environment for recovery from heavy use. But be aware of the side effects of herbicide applications. Minimize the use of products with root pruning characteristics on thin turf areas.

Pre-emergence controls are beneficial, even when the turf is frequently aerated.

The best indicator of turf needs is your own eye. When reduction of growth or thin turf are revealed during mowing, take whatever action is suitable, in the earliest possible stages.

Remember to stick to the basics and do a good job with routine maintenance. Then be observant and adjust your program as needed.

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