

# Keeping Football Fields in Top Condition Through Fall Play

By Mike Schiller

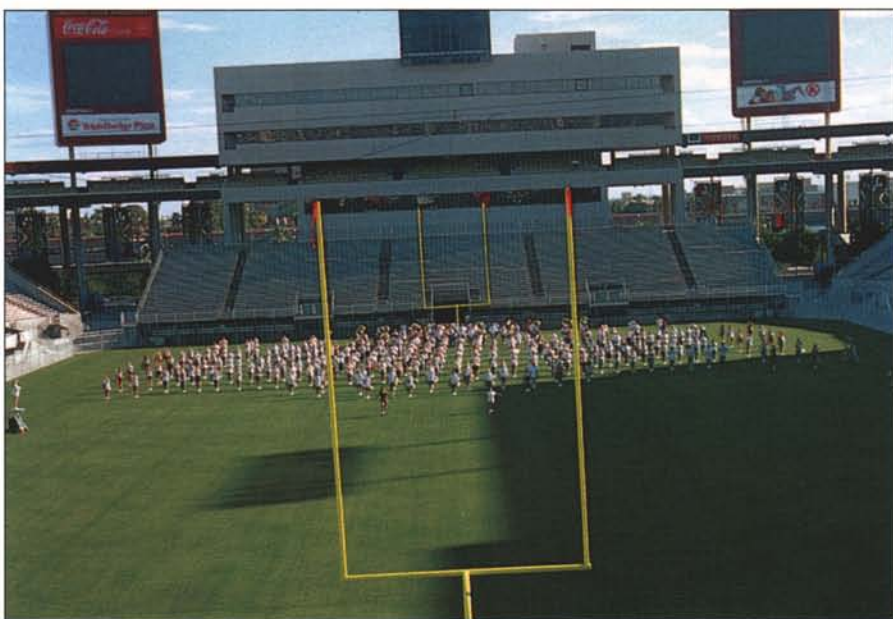
Although few sports turf managers can end the football season with their fields in the “near-perfect” condition of the first game, there are steps managers can take throughout the playing season to keep fields in the best shape possible.

In sports turf management, player safety and field playability come first. Even basic, sound agronomic practices take a back seat to those two major priorities, and aesthetics must follow that.

Unfortunately, while expectations of field quality have escalated among field users, facility owners and fans, field maintenance budgets too often have remained static or declined. Figures on the budget page may look basically the same from year to year, but adding more field area or expanding the use of existing fields without increasing funds, equipment and labor to handle the extra workload is, in reality, a budget cut. So, doing more with less is the norm, and sports turf managers at all levels must tap every available resource to keep fields in top shape.

## Expect Problems

Football fields get their heaviest use during the least favorable periods for



Special maintenance may be required when a stadium's design blocks sunlight from a certain area, as at Arizona State University. Photo courtesy: Trusty & Associates.

turf growth. In the southern regions and southern parts of the transition zone, cooler temperatures slow bermudagrass growth or bring on dormant conditions. The success of overseeding with perennial ryegrass depends greatly on how well the timing of field-use requirements coincide with temperature changes.

In northern regions and the northern parts of the transition zone, erratic weather brings unpredictable turf-growth patterns for cool season grasses and may trigger early dormancy. By mid to late season, turf growth in northern areas is limited to fields with underground heating systems and tarps. Snow removal replaces mowing on the priority list.

## Know the Territory

Basic agronomic conditions are different for every field, and often there are differences within an individual field. Invest the time and effort to investigate thoroughly and record the specifics.

Use soil probes (a long, hollow pipe will do) to remove a deep core and examine the soil profile of different sections of each field. Pick spots where turf thrives and drainage is good as well as where turf is thin or weak, soil is bare, or water is slow to drain. Compare the make-up and depth of the various soil types from the different areas.

Make detailed notes or map out the field and mark the various sections, including changes in materials within the soil profile and the depth of any levels and/or layers. Problem areas can be targeted for additional aeration and topdressing, for additions of soil amendments or even for reconstruction.

If you were not involved in the field's construction, find out if construction plans or as-built records are available and compare them to actual field conditions. Map out underground drainage systems, including drainage outlets. Use an irrigation system overlay or draw in the irrigation system specifics.

Note special conditions that have an impact on turf growth and vigor. For example, the design of a stadium may block sunlight from a specific area of the field for much of each day or restrict air movement. Irrigation patterns on open fields may be disrupted by seasonal changes in prevailing winds. You'll need to adjust maintenance procedures in the affected sections of the field to compensate for these conditions.

Check out your turf. Watch for changes in color and density. Pull plugs to examine root development and crown condition. Ask for feedback from mowing crews on changes they observe in turf growth. Slowed growth may signal the early stages of insect or disease activity. Unexpected growth variations

within an area may indicate a problem developing in irrigation or drainage systems.

### Allocate Your Resources

When poor conditions can't be changed, plan field-maintenance programs to compensate for them. Because there's never enough time or money to do everything you'd like to do for your fields, allocate your resources where they'll accomplish the most.

Base *fertilization* programs on soil test results. Where budgets permit, add periodic tissue tests to determine how effectively the turf uses available nutrients. You may need to adjust pH to release nutrients tied up in the soil or find you can cut back on phosphorus (P) or potash (K) because existing levels are adequate.

Where possible, plan an aggressive *cultivation* program to combat compaction. Combine core aeration with spiking, slicing and water injection to meet field needs without disrupting practices and play. If you can't aerate all the fields, concentrate on the most heavily used fields. If necessary, aerate those fields only from 10 yards into the end zone to the 20-yard line at each end of the field, the sidelines sections where players and coaches gather, and between the hash marks. Even if aeration between the hash marks on the game field is all you can work in, do it.

Explore new or different turf varieties and variations in *seeding* sched-



Note the most heavily used parts of a field and concentrate aeration on those areas. Photo courtesy: Mike Schweitzer, Trinity University.

ules. Talk to the researchers at area seed-testing facilities and to other sports turf managers with conditions similar to your own. Find out what worked, what didn't, and why. Maybe seeding a week earlier, or later, with a different combination of seed varieties will improve your late-season turf density.

Little things can produce excellent results — like spreading seed prior to play and letting the players cleat it in and adding regular or pre-germinated seed to your field repair divot mix.

Experiment with *irrigation* schedules and rates. While you don't want to put turf through unnecessary stress, the wetter the soil, the greater the compaction. Moving your last pre-game irrigation ahead half a day, or even a few hours, may reduce compaction without increasing turf damage. Or, if you can't change the timing of pre-game irrigation, maybe a slightly lower application rate will reduce compaction.

If you've always scheduled field repair and irrigation the morning after a night game, try moving these procedures to the same night, right after the game. Maybe fewer irrigation cycles for longer intervals will increase root depth and improve turf vigor.

Experiment with *mowing* patterns and height of cut, too. Your crews probably alter directions with each mowing already. If they use only two patterns, you may want to add a third or fourth to ensure the mower wheels cover a slightly different area with each mowing. Try moving your height of cut up one notch and monitor the results. You may need to check with the coaches of your field-user groups before you take this step, or try it out on the most heavily used practice field first.

### Communicate

Work with administrators and coaches of your field-user groups and, for high school and college fields, with the athletic director, band director and drill-team advisor to develop workable field-use schedules. It's not a situation of you against them. You all want the best possible fields as



Examine the soil profile of different sections of each field — not only where turf thrives but where it doesn't. Photo courtesy: Trusty & Associates.

often as possible and as long into the season as possible.

Help them understand the long-term benefits of rotating practices to other fields, or to different areas of the same field. Explain the need for specific maintenance procedures and the positive results they produce. Ask for their cooperation in staying off the fields or restricting the length of field use during adverse conditions.

Listen to their concerns and be as flexible as possible.

### Seek Funding

Document your results. If you can show that focused maintenance procedures on heavily used fields produced such significant results as maintaining playability longer into the season or allowing a key game to be played when other area fields were unplayable, you improve your chances for increased funding in next year's budget.

Be creative. Use positive results as an incentive to improve field conditions as you explore alternate sources of funding. Make sure the parents support group or team booster club is aware of your efforts and ask for their help. Maybe they can't contribute funds, but can assist with pre-game field lining or painting or with post-game repairs or clean-up. Every hour saved gives your crews an hour for more technical tasks. □

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