

Maintenance Tactics for High Traffic Areas

by Abby McNeal

With the participation in sports continuing to increase at a rapid rate, existing fields receive more traffic than ever before. While no single tactic will answer the needs of turf in all situations, a combination of tactics will help to combat the damage and stress that excessive traffic causes. Developing a solid repertoire of maintenance tactics is essential for maintaining safe and aesthetic playing fields.

The tactics offered here can be used at all levels, from municipalities to professional sports venues. Some of the tactics require an investment of time, while others require an investment of money. Ultimately, it is up to the turf manager to identify the combination of tactics that work best for the situation.

Tactic 1: Field Layout

Where space permits, alternating the direction of the fields from one season to another is effective in shifting the wear pattern of the field. This tactic is most effective when you can rotate the field 90 degrees, such as going from an east-west orientation to a north-south orientation. Even rotating the field as little as 45 degrees can provide some relief. Changing the field orientation also allows highly stressed areas, such as goal mouths on soccer fields, a chance to recover for a longer period.

If there is not enough space to rotate the playing field, consider adjusting the width of the field. Check with the clubs using the field to verify that their rules allow for a variation in field sizes before adjusting the width. Adjusting the width changes the pattern of sideline wear from spectators, players and sideline judges.

Tactic 2: Scheduling

Getting involved in the scheduling is an important tactic in handling high traffic areas. The schedule dictates the amount of wear and damage to the turf, as well as when maintenance tasks can be performed. The turf manager acts as a voice for the field in making it known what level of traffic the field will tolerate.

In establishing a schedule consider:

- Alternating the age level of the users. If possible, alternate between adult teams and youth teams on the same field.
- Alternating the division level team using the fields. If possible, rotate competitive users and recreation league users.
- Non-field related events and how they play a part in the wear. Don't schedule a concert right before a long home stand.
- For facilities with multiple playing fields, try to incorporate a weekly rest for one field (i.e., one field a week is not being played on).
- Establishing cancellation rules and frost policies prior to the season starting will protect the field from unnecessary injury and facilitate the relationship with the teams. Ultimately, through working with the scheduler and the users, a better understanding of field expectations can be gained by all parties.

Tactic 3: Crumb Rubber

Crumb rubber, recycled tire materials that are ground down into a smaller particle size, is gaining popularity in helping turf managers maintain turf cover in difficult areas. Topdress the crumb rubber into areas where a mature stand of turf has been established, such as goal mouths, bench areas and sidelines, prior to damage occurring. The crumb rubber acts to protect the crown of the plant from damage, allowing the turf to recover more quickly. When applying crumb rubber, follow the product's directions and use multiple applications to build up a cushion for the turf.

One word of caution: *This material retains heat and could result in drought stress.*

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Tactic 4: Field Protection

Field covers enable the turf to start growing before it would normally come out of dormancy by creating optimal growing conditions. This tactic is particularly helpful when the fields are needed for play prior to the growing season.

For non-sport events on the field, a variety of flooring and protection products are available. Evaluate all the available options, keeping in mind the following:

- Amount of time material will be on the field surface
- Amount of traffic caused by the event
- Staging and/or speaker stand weight
- Maintenance impacts such as fungicide use and fertility schedule and any preventative chemical applications that may be necessary

Applying covers to worn or thin areas also helps establish the turf quicker. Smaller tarps work well for goal mouths, team bench areas, and center of the field or other small areas where the turf is worn or thin.

Before applying the cover, aerify, over-seed, topdress with the appropriate material and water the area sufficiently. While the cover is on the turf, monitor the temperatures above and below the cover to prevent possible burn

injury resulting from high temperatures. Generally, the temperatures should be no higher than 85 to 90 degrees Fahrenheit in the canopy below the cover. Remove the cover during periods of high heat and allow airflow to keep the temperatures in a safe range. Schedule enough time to "harden off" the younger turf plants before exposing them to traffic and cold temperatures. This process should be started at least two weeks prior to the first use of the field.

Sideline protection is important when you have football or soccer fields. Whether they are played on the same field or not, sideline protection helps protect the most abused area on the field. The most common sideline protection is a Geotextile type of material applied to the team bench areas on the day of the game. Applied the morning of the game, the material is staked to the turf and then taped down. Sideline protection must be removed immediately after the game. While the initial purchase of the sideline protection may be costly, one of the benefits of using sideline protection is eliminating the need for sideline renovation at the end of each season.

Tactic 5: Growth Regulators

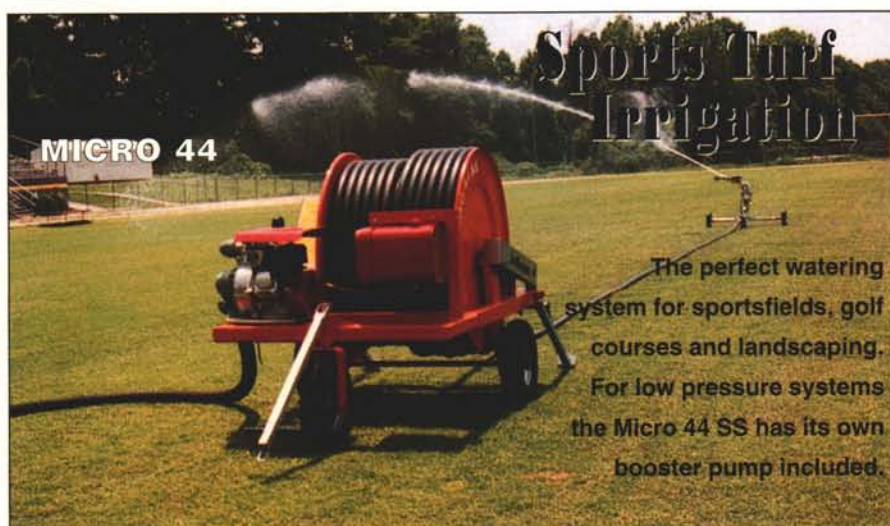
Painting fields is always a challenge when there is little time to mow and water the fields. Using a growth regulator in the paint helps to minimize the number of paintings needed during a week. Read the directions of the growth regulator to find the appropriate rate for the type of turf and to identify any other precautions that should be taken. Incorporate the regulator into the paint and apply. Depending on the type of growth regulator and frequency of applications, the time until the growth regulator takes effect will vary. The growth regulator will slow the growth rate of the turf in the line areas, which provides the benefit of not mowing off the lines each time the field is mown.

Tactic 6: Establish a Plan

A well-developed maintenance plan helps handle the demands that are placed upon the turf manager and the fields. The underlying concept of a maintenance plan is to keep the turf healthy, ultimately resulting in better playability, durability and aesthetics.

The maintenance plan should address the aerification program, overseeding, topdressing, fertility, irrigation and mowing height.

Aerifying should be done as frequently as possible. The method of aerification needs to be appropriate to the situation. From coring to slicing, the result will be improved pore space of the compacted soil which will help the roots get the air and water they need to survive. If the schedule doesn't allow time to aerify the entire field, assess the field and determine which area(s) need it the most. Soil type might need to be addressed and mitigated



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through aerification and topdressing to create a more compatible soil type. Modifying the soil type could help the fields drain better and recover better.

Overseeding with the appropriate grass species can help you get your fields back into playing shape quicker. Turf extension agents are a valuable source for determining what grass species may be appropriate for the needs of the field. For smaller areas, pre-germinated seed incorporated into a divot-like mix can also help high use areas recover quicker (see Sidebar).

Assess fertility needs based on the amount of wear the turf will be under, the time of year, cost and the results of fertility tests (soil and/or tissue). The turf plants will need more nutrients the more they are under stress.

Mowing height should be appropriate to the usage of the field. Maintaining the turf at a higher height will help the turf survive increased traffic.

Sodding extremely worn areas offers a solution with a quick turn around. The sod must have a similar soil structure as the area that you are repairing and time for the sod to establish (4-6 weeks minimum).

A good maintenance program takes years to develop. The plan is a living and breathing document that will change with time. Keep thorough records of what maintenance activities were done throughout the year to help establish the plan for the next year.

Tactic 7: Network

Networking with other turf professionals helps generate additional tactics for addressing high traffic problems. Get involved with the local sports turf chapters and visit other facilities to learn what tactics other turf managers use to meet similar challenges. Sharing ideas with one another will help us all become better at maintaining our overused fields.

Turf managers have many tools available that can make the job easier. Don't hesitate to try a new approach to tackling high traffic problem areas. Test a small area of the field first to see if the tactic will work for the situation. Taking a proactive approach in addressing the damage high traffic can cause is the

first step in helping the field survive, as well as remain safe and playable. ■

Abby McNeal is the athletic turfgrass manager for the University of Colorado and a member of STMA.

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