



**PENN STATE**

**CENTER FOR SPORTS SURFACE RESEARCH**

## **From the Field: Dealing with Heavily-Used Fields**

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*Welcome to From the Field - A Guide to Athletic Field Safety and Care.*

*Throughout this series, we will focus on a sometimes overlooked but critical component affecting the safety and performance for athletes of all ages – the playing surface.*

*Our goal is to provide you with simple, helpful tips about playing conditions that maximize both safety and performance.*

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Football season is finally here with training camps under way across the country. The rigors of practices are not only hard on players and coaches, but the playing field too. Repetitive drills and multiple practices per day during the late summer heat can put a beating on your field before the season even begins.

A few simple tips can help minimize field wear and tear.

### **Rotate Drills**

One of the easiest ways to minimize damage from heavy field use is to constantly rotate the location of drills. However, this is often more easily said than done. It is a battle many field managers continuously fight, even in the NFL.

Coaches tend to find their “spot”, and whether it is a comfort level or superstition, it is often difficult to get them to move. Oftentimes shifting a drill even just a few feet can make a dramatic difference on field conditions. Constantly running the same drill on the same spot can eventually wear out the turf completely, creating a problem area on the field that may last all season.

In addition to a loss of turfgrass coverage, these areas are also prone to becoming muddy under wet conditions and hard under dry conditions as the air space in the soil is squeezed. Compacted soil can negatively affect playability and safety.

### **Seed Early and Often**

The importance of overseeding heavily-used field and heavily-used areas within a field cannot be emphasized enough. Seeding is likely the most important in-season maintenance practice on football fields.

You do not need to wait until the turf begins to thin. Seeding high-use areas before significant turf loss creates a “seed bank” in the soil, which is ready to spring into action as existing turf plants are worn out.

Information on types of seeds to use, amounts, timing, and spreading techniques are available in the Seeding for Success column.

### **Fertilizing**

Fertilizing is key to helping heavily-used fields recover. Fields containing cool-season grasses such as Kentucky bluegrass should typically not be fertilized during hot weather. However, as high temperatures begin to cool into the 70's, fertilizer should be applied. Depending on your location, you may need to wait until September before high temperatures are routinely in the 70's.

For fields containing warm-season grasses such as bermudagrass, fertilizer should be applied during warm weather, as this is the time of active growth. Bermudagrass grows aggressively and fertilizer can help recovery from early season damage. However, it is important to stop fertilizing bermudagrass once the cool fall weather begins.

Additional information related to selecting fertilizers, how much to apply, and timing can be found Mowing and Fertilizing Your Way to a Better Field column.

### **Watering**

Watering heavily-used fields has several benefits. First, it will help grass seed germinate. It will also help prevent the field from becoming hard. Finally, fertilizer should be watered in after application to release the nutrients to the grass and prevent the salts in fertilizer from “burning” the grass.

Watering should be done on a deep and infrequent basis in most instances. More frequent, lighter amounts may be needed during heavy use. Also, do not water immediately before field use as a wet field is more prone to damage than a dry field.

### **No Disruptive Maintenance**

The importance of surface-disrupting maintenance practices such as aerification during the off-season have been highlighted in the Spring Field Care column. However, these types of maintenance practices should be avoided during the season as they de-stabilize the surface and create additional stress on the turf.

These maintenance practices are necessary to improve field conditions, but require time for the field to recover and heal and are best done in the offseason. The primary maintenance activity during the season should be seeding.

### **Synthetic Turf**

Steps should also be taken to minimize wear and tear on synthetic turf fields. While practices such as seeding and fertilizing are obviously not needed, rotating drills is still beneficial.

Repetitive drills on synthetic turf can prematurely wear-out fibers and move infill (crumb rubber). As infill is displaced, surface hardness can increase.

Infill depth should be monitored in areas of high use and additional infill should be added if infill levels drop below manufacturer-specified levels.

Synthetic turf should also be groomed on a regular basis during heavy use to keep fibers upright and even out infill.