Our Goal

The Buckeye Sports Field 10-Point Plan is a tool designed to help anyone that takes care of athletic fields in the northern US States. Our goal is to provide you with tips to keep athletic fields SAFE and PLAYABLE during the playing season.

For more information on Ohio State’s Sports Field Education Program, visit:

Buckeyeturf.osu.edu

Buckeye Turf
osuturf

(1) Boost Soil Air
Grasses need air for root growth, nutrient (food), and water uptake. Athletic events (games, band practice etc.) cause compaction on soil fields, effectively pushing the air out. Severe compaction can occur if the field gets foot traffic when wet. Compacted soil can become too hard for athletes to play on, it will not drain, and grasses will die.

- Using mechanical equipment, aerate the soil several times in early spring & late fall
- Aerate during the playing season with solid tines (don’t pull soil cores)
- If the soil is very hard and poor quality, investigate adding compost &/or sand after aerating (see Point 9)

10-Point Plan:
1. Boost Soil Air
2. Seed Often
3. Feed the Grass
4. Supply Water
5. Mow Often
6. Show Off!
7. Prevent Pests
8. Manage Traffic
9. Fix Problems
10. Be Professional

(2) Seed Often
The aim is to enter the playing season with 100% desirable grass cover. Suitable athletic field grasses are: Kentucky bluegrass, perennial ryegrass and tall fescue. Perennial ryegrass grows quickly and seed is cheap — so use it often.

- When should you apply seed? Anytime you see bare soil!
- Apply seed to goal areas before each game & slit-seed thin areas each fall
- Have a local sod supplier on call for highly trafficked areas like sidelines and goal boxes

Scuffing-up bare spots and seeding takes just a few minutes each week

Compacted soil creates a hard playing surface

A deep tine aerator, used to relieve soil compaction
(3) Feed the Grass
Turfgrasses need nutrients for growth, recovery from damage and to aid seed & sod establishment. Nutrients also provide color.
A soil test should be conducted every 3-5 years to determine the turf’s needs.

Turf fertilizer contains nitrogen, phosphorus*, potassium and sometimes others, like iron.
Ideally, the fertilizer should be 50% slow-release and applied at a rate no higher than 1 lb. of nitrogen per 1,000 sq.ft. of turf.

Apply fertilizer:
⇒ Late Spring, at half-rate (May)
⇒ Late Summer (August)
⇒ Fall (September &/or October)
⇒ Late Fall (Thanksgiving)

Follow directions on the bag for application method & rate

*Many fertilizers do not contain phosphorus, however, use a fertilizer with phosphorus for use during seed & sod establishment.

(4) Supply Water (judiciously)
Maintaining soil fields on the dry-side keeps them playable and prevents cancelled games because of quagmire conditions. It’s really important not to overwater (irrigate) a soil athletic field.

- Irrigate with an in-ground irrigation system, rain train or similar
- If it has not rained, apply 1-inch of water per week in two increments (0.5” inch/day for two days). Do not water every day because then grass roots are saturated. Grass roots need air!
- Water first thing in the morning. Watering in the afternoon wastes water through evaporation and can cause turfgrass disease.

(5) Mow Often
Regular mowing increases grass density, which in turn provides athletes with a safe playing surface.

- Mow highly maintained and irrigated fields 1.0 - 2.0 inches tall
- Mow low to medium maintained and non-irrigated fields 2.5 - 3.0 inches tall
- Mow twice/week in the spring and fall and once/week in the summer
- Do not mow drought stressed or frosted grass
- Keep mower blades sharp

(6) Show Off Your Skills!
Athletic fields that look good show a pride in one’s work and a certain level of professionalism.
Prior to game time:
- Paint crisp and bright lines and logos
- Mow the field twice to “burn” the mowing pattern in.
- Apply an iron-based fertilizer

*Many fertilizers do not contain phosphorus, however, use a fertilizer with phosphorus for use during seed & sod establishment.

Question:
How are light and dark stripes created on the field?

Answer:
Many ride-on and walk behind mowers have rollers on the back that bend the grass over as they mow.

The grass bent towards the eye looks dark and the grass bent away from the eye looks light.
(7) Prevent Pests

WEEDS like clover & dandelion can be tolerated on most athletic fields, but weeds like crabgrass (left), annual bluegrass and knotweed can cause footing problems for the athlete and create bare spots when they die. To prevent weeds, grow thick healthy turf, seed bare spots, use weed-free grass seed and if necessary, spot treat weeds with the best broad-spectrum weed killer (herbicide) for the job (visit Ohioline.osu.edu for details).

The most problematic INSECT pest is the white grub (left), and to a lesser extent the bluegrass billbug. To prevent grubs, limit their food source (thatch) and their adult habitats (local trees and shrubs). If there is a history of grubs or billbugs, apply a preventative insecticide in spring (visit Bugs.osu.edu for details).

Turfgrass DISEASES like rust and red thread are not too destructive, unlike pythium (left), brown patch and gray leaf spot which kill grass. To prevent disease, water and fertilize turf judiciously, especially in hot humid weather. Use more resistant varieties of grass and if turf starts to die, apply a chemical fungicide (visit Turfdis-ease.osu.edu for details).

(8) Manage Traffic & Wear

A soil field should be able to host ~50 events per year IF the weather cooperates. To get the maximum amount of games on a field:

- Prohibit use when it is overly wet, drought-stressed, frozen or thawing.
- Spread traffic & wear around the field (e.g. move goal posts and warm-ups)
- Restrict unofficial play and provide a practice field for teams & marching bands.

Schedule regular rest periods for field repairs. A growth blanket or germination sheet (left) can help keep field users off, as well as promote turf recovery.

(9) Fix Problems

Safety is the priority. An uneven surface full of holes is a liability that needs addressing. Poorly graded fields that do not drain need to be stripped of grass and re-graded with a 1-2% crown or slope. Minor undulations and holes can be fixed with topdressing (see below).

Topdressing describes covering the field with 1/4 inch of sand or sandy soil, the purpose of which is to (1) fill holes, (2) smooth the surface, (3) dilute thatch and (4) rectify surface drainage and compaction.

Using the right sand is critical. It should be a medium-coarse, uniform, sub-angular material. Take the time to find a good local source of sand.

Common Misdiagnosis

In July & August these symptoms are mistaken for a disease...

When in fact it is a weed grass called Rough Blue-grass that goes dormant during heat stress. It will recover in the fall and green back up.
(10) Be a Professional

With close to 80 million people in the US playing sports on turf each year, a sports field manager’s job is one of great importance. Parents and coaches alike entrust their young athletes to the professionalism of the athletic field manager, assuming that they will provide a safe and consistent surface.

Professionalism is enhanced in 3 ways:

1. Broadening one’s knowledge of the subject
2. Adopting key business skills in communication, planning processes and self image
3. Networking with peers

Mark Your Calendars!

First-Class Sports Field Education

⇒ January: STMA Conference (STMA.org)
⇒ February: The Ohio State University Sports Field Short Course (Buckeyeturf.osu.edu)
⇒ December: The Ohio Turfgrass Conference & Show (Ohioturfgrass.org)

The Ohio State University offers two top-class educational opportunities: First is the annual sports field short course held every February in Columbus, Ohio. The second is the Online Sports Field Certificate Program.

This online certificate program is:
- Internet based, so students study at their own location and at their own pace
- Broad in subject, encompassing sports field soils & water, agronomy, game preparation, IPM and synthetic turf
- Easy to navigate
- Managed by the OSU turfgrass team, with opportunities to interact via video-stream and social networks
- Graded by examination and professionally recognized, as well as carrying education points and continuing education credits from professional associations

Information on both educational opportunities can be found at Buckeyeturf.osu.edu

Seminars are a great way to pick up CEUs and also learn about topics such as people management, budgets, communication skills and new technology. In essence, networking with like-minded colleagues and re-energizing for a day or two is time well spent.

Sports Field Management Professional Organizations:

- Ohio SportsTurf Managers Association
- SportsTurf OLCA
- OPRA
- Buckeyeturf.osu.edu

Sports Field Education
Offered by The Ohio State University Sports Turf Program

The Ohio State University Turfgrass Science Program

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