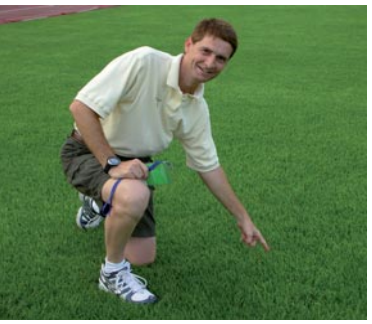
Q&A



BY DR. GRADY MILLER
Professor, North Carolina State University

Questions?
Send them to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or email grady_miller@ncsu.edu

Or, send your question to David Minner at Iowa State University, 106 Horticulture Hall, Ames, IA 50011 or email dminner@iastate.edu.

We lost our field, what next?

Now that the 2009 football season is over, our field is now a mud pit. In August our field was a beautiful bermudagrass field. We tried overseeding with ryegrass but no sooner than it came up and we were playing in the rain. After several weeks of playing games in heavy rain the field was reduced to muck. We have 70 games played on our field a year (local college football, high school football, youth football, and boys/girls soccer). A number of people insist we switch to a synthetic turf. I'm not sure where we would get the money for a synthetic field. Can you help us with our options? We already think that our spring soccer season will have to be moved to another site as our field is not safe in its present condition.

Brevard, NC

Most of our NC high school fields are constructed on native soils that have a high silt and clay content and poor water infiltration. Their only source of any significant drainage depends on surface flow due to the field's crown. With excess rainfall, especially during a sporting event, surface flow is inadequate to vacate the water. With semi-dormant to dormant bermudagrass underneath a player's feet, the root system may not adequately hold the surface together during aggressive play. The result is turf that rips, water puddling on the surface, and eventually a loose, mucky surface.

There is no one best solution to this problem. The school should consider long-term solutions in addition to any short-term band-aid approaches that may get through the spring soccer season.

In these cases, the first response is to replace the natural grass field with a synthetic surface. One strong selling point synthetic field companies make is that you can still use the field during a rain event and that their fields have increased wear potential in those conditions compared to natural grass fields.

While these statements are both true, I do not believe a synthetic field is the only option. One should consider that not only are synthetic fields very expensive to install, they also still require appreciable maintenance (brushing, grooming, seem repair, yearly topdressing, etc) and have a significant disposal/replacement cost after about 8 to 12 years of moderate use.

If the school would like to try a band-aid approach to repairing the field, here is what I suggest. As soon as the field dries out enough that they can get a roller on the field without getting stuck (or pushing water), roll it and then roll it again. Depending on the weather the field may not be dry enough to roll for days to months from now. There were a lot of bermudagrass chunks on the field that if pressed into the surface, will be fine come spring. Rolling will also allow them to more easily see if soil additions to the field center are needed to repair the crown. Any compaction can be address next year.

Just before rolling, I would suggest putting out more annual ryegrass. It is so late in the year that germination may not be very good. Since they have already overseeded with what sounded like a significant amount of seed, I would suggest only adding about 400 more pounds of seed on the center of the field. Depending on the (cold) weather, this still may not work. In that case they may get some field erosion during the winter and spring and ultimately require more prep work to fix this in the spring.

If field is not full with ryegrass in spring, they should do some spring-seeding of ryegrass once the temperatures begin to warm. With a March soccer season, they should consider seeding the ryegrass a couple of weeks before the season starts and then "dust" the field with more seed as needed during the season. Of course the successes of these approaches are all weather dependent.

Even if seeding works and they get through the spring, they need to consider re-establishing bermudagrass in the late spring to early summer in preparation for fall football. It would be better to start early to give the bermudagrass time to mature as much as possible before fall football. This should be done as part of the field renovation designed to minimize this problem in the future.

The "high-end" option is to build a conventional sand-based field that has gravel and pipe drainage adequate to handle heavy rain. As for costs, a contractor can evaluate the site and situation and provide an estimate based on materials, labor, and construction constraints. Note that anytime a field contains appreciable sand in its base, a good irrigation system becomes more important.

A less costly renovation option is to top the present field with a 5 to 6-inch sand cap. Traditional drain lines should be installed under the sand cap. Due to significantly less earthwork and sand needed compared to a total sand profile, the cost should be about half of a full sand-based field. Note this will require the removal of the top 5-6 inches of the present field.

A third renovation option is to slit drain the present field. One method that does not have drain lines (just sand-filled trenches) is called the Cambridge Athletic Field Drainage System or Sand Drainage System. It relies on using a grid of deep, closely-spaced slits cut into the field and backfilled with an appropriate sand. A similar alternative is to cut lateral slits and use narrow drainage pipe. These types of systems can be effective at removing water, but you still have a heavy soil on the surface (between drain line runs) that is subject to being saturated during a rainy event.

A fourth option is one recently tested by Dr Trey Rogers at Michigan State University. In his work they took relatively healthy fields, installing wide-spaced drainage lines, and quickly built up the field with repeated heavy

Continued on page 53

Please fill out this form in its entirety

❑ **Yes, please start/continue my FREE subscription to *Sportsturf***

FOR FASTER SERVICE visit our web site at http://www.submag.com/sub/tf or fax to 847-763-9569

❑ No, thank you.

Which version would you like to receive?

❑ Print ❑ Print/Digital

Signature: (required) Date:

Name: (please print)

Title:

Company:

Address:

City: State: Zip:

Phone: Fax:

Email: (required)

January 2010 - Expires June 2010 - RS1001

1 What is your company's primary business? *(check ONLY ONE)*

F ❑ Sports Complex
T ❑ School, College or University
G ❑ Athletic Field and/or Park Architect/Designer
P ❑ Park
H ❑ Other *(please specify)*_____

2 Which of the following best describes your title? *(check ONLY ONE)*

A ❑ EXECUTIVE/ADMINISTRATOR — President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Athletic Director

B ❑ MANAGER/SUPERINTENDENT — Superintendent, Landscape/Ground Maintenance Manager, Foreman, Supervisor

C ❑ GOVERNMENT OFFICIAL — Government Commissioner, Agent, Other Government Official

D ❑ SPECIALIST — Architect, Designer, Consultant, Agronomist, Horticulturist, Certified Specialist

F ❑ COACH E ❑ Other (please specify)_____

3 Do you have the authority to buy, specify or recommend products and/or services for your business or organization?

Y ❑ Yes N ❑ No

4 Yearly operating expenditures (excluding salaries)

F ❑ Over $1 million
E ❑ $500,001 - $1 million
D ❑ $100,001 - $500,000
C ❑ $50,001 - $100,000
B ❑ $25,001 - $50,000
A ❑ $25,000 and under

5 Please also send a free subscription to the following people at the same location

Name _____ Title_____

Name _____ Title_____

SportsTurf ADVERTISERS' INDEX

Continued from page 54

sand topdressings (1 inch per month). In their studies, they had good results with a cumulative topdressing rate of 2 inches applied over 2 years. They are currently also testing lesser depths. This is a relatively inexpensive option, but due to the current level of field/turf damage, not a good option for in this case.

Along with these options, I would also like to point out that for the cost of a synthetic turf field, one could easily renovate the football stadium field and another nearby field. I think it is important that school administration consider the possibilities of moving some events to another location. If two fields could be renovated and turned into top-quality fields, it would reduce the impact on the football stadium field.

This brings me to my last point. The field needs to be adequately maintained year-round to maximize its performance. This along with good construction will go a long way toward preserving a good field through a bad season. ■

Cut Here