# Who's Building Your Field?


*by Dr. Dave Minner*

Whether you hire an outside design and construction firm to build your new athletic field or you do the work in-house, you need to arm yourself with the same information. It's always best to start with some basic questions.

**What's wrong with my field?**

Study the successes and failures of your existing fields to develop realistic expectations for your new construction or renovation projects. Most often, my clients cite soil compaction and poor drainage as the reasons for developing new field systems.

Soils with high clay content are especially susceptible to compaction on intensely trafficked areas. A small amount of precipitation can turn a compacted soil into a dangerous, muddy playing surface.

If possible, increase the number of practice fields to reduce game-field activity. It's less costly to reduce traffic than to build a new field.

**Are sand-based fields the answer?**

Sand-based fields provide rapid internal drainage and they eliminate compaction problems. They provide a six- to 12-inch rootzone comprised of specially sized sand that may be mixed with organic amendments. A common mixture contains 80- to 90-percent sand and 10- to 20-percent peat.

The sand system is almost always sodded, preferably with a sod that contains at least 65-percent sand. The rootzone mix is placed above a 4-inch gravel blanket connected to a network of drains immediately below it.

This type of system usually costs between $450,000 and $800,000 for a 90,000-square foot football facility. To reduce material costs, some fields are being built with a shallower rootzone, and they're eliminating the gravel layer.

**Do sand-based fields have limitations?**

Excessive traffic on sand-based fields can remove the protective mat of sod, leaving an expensive and unusable "beach" system. Fortunately, these fields tend to come under great scrutiny, and consequently, use is generally very limited.

Sand-based fields will generally handle a 25-event schedule without severe break-through of the surface. Synthetics, such as SportGrass, Turfgrids, and Netlon Mesh Elements can be added to sand-based systems to help stabilize the sand surface as the grass wears away. However, sand-based fields are generally not suitable for facilities that have to handle heavier schedules.

**Can I simply add sand to my existing field?**

In general, the upper eight inches of your rootzone needs a minimum of 75-percent sand by weight. When properly mixed, this produces better initial water infiltration, reduces field hardness, and makes core aeration easier.

Compared to sand-based systems, "sand-tilled" systems have inferior water movement, porosity, and resistance to compaction. The mixing process that labs use to predict the ratio of sand to soil is difficult to reproduce in these tillage operations. If insufficient sand is used, the field can become harder and more compact than it was originally.

You can have good intentions, and can spend $30,000 tilling sand into your field, but you have little guarantee that conditions will improve.

**Who's building your field?**

I've been involved with a number of design companies and contractors that build fields on a national level, but I was surprised to learn that it was difficult to find local companies that build and renovate sports facilities.

I have listed a few of the companies that build fields at the national level. This list is by no means comprehensive. If you'd like to be included in this group, please send your company information to my e-mail address: dminner@iastate.edu. I will compile a directory of field builders that will be available through the STMA.

- SW Franks Construction Division of South West Recreational Industries Cleveland, OH (216) 664-1600
- Burton F. Clark, Inc. Delhi, NY (607) 746-2727
- Randal & Blake, Inc. Littleton, CO (303) 795-2582
- Motz, Inc. Cincinnati, OH (513) 871-3992
- Hellmuth, Obata, & Kassabaum, Inc. Kansas City, MO (816) 221-1576
- Ellerbe Becket Kansas City, MO (816) 561-4443 ❑

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