

The Dirt on Infield Maintenance

Maintaining your infield with mixes and conditioners before summer arrives is essential

By Rob Meyer | MANAGING EDITOR

With spring training kicking off this month, it's time to discuss a crucial aspect of any baseball diamond — the infield. Specifically, choosing the right soil mix and conditioner for your infield and maintaining it properly to ensure a safe and playable surface.

SOIL CONDITIONERS 101 — What to Look For

Know your mineral: What is the base material of the product? Minerals perform differently. Montmorillonite has the best structure for a soil conditioner.

Absorption: Has the mineral been thermally optimized for maximum absorption?

Color: Will the product help you meet the standards for professional looking fields, like a deep red color to enhance contrast with the white ball?

Liquid-holding capacity:

This measures the internal pore volume of the mineral. Will your conditioner absorb and, more importantly, retain moisture?

Stability: Will your conditioner resist breakdown and deliver long-lasting performance?

Minimal use: Will the product apply cleanly and not blow away?

COURTESY OF PRO'S CHOICE SPORTS FIELD PRODUCTS

“All mixes are made of certain percentages of sand, silt and clay,” says Dave Cygan, director of sales for Pro’s Choice. “This is really what gives your mix its characteristics. The higher the clay, the firmer the mix, the higher the sand, the more it will drain. ... The problem for most amateur fields around the country is that they can’t afford high-end mixes, and some municipalities or little leagues have no say in what they use. The best way to amend what you have is by using conditioners. It’s much more cost effective and realistic to amend the clay by using conditioners than to replace an existing field’s total skin area if you don’t like how it performs.”

Pro’s Choice Red infield conditioner is its most common mix for amateur fields, according to Cygan. Other mixes available vary in particle size and color. The company also offers Rapid Dry, a drying agent, as well as pitcher’s mound and batter’s box clay.

Jeff Langner, brand manager at Turface Athletics, says that no matter what mix you choose, it must drain well in order to provide ideal playing conditions — but there’s more to it than that.

“Drainage is nice, but one thing we preach is grading of an infield,” Langner said. “As much as we say that an infield mix has to drain, it’s also important that it’s graded correctly so you can get water to shed laterally off of the field. To get that water to shed properly, you also have to have a mix that’s firm.

Choosing the right soil mix and maintaining the proper amount of moisture on your infield are crucial to preventing bad hops and protecting athletes. There’s a variety of products on the market to help field care pros maintain the ideal infield.



Pro Choice's Rapid Dry



Pro Choice's Red Conditioner

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SAND, SILT AND CLAY RATIO – Do You Have It Right?

All soils consist of sand, silt and clay. The infield mix is the combination of these components plus any conditioners or additives. All three components are necessary to attain a safe and playable field that is easy to maintain. Water management is also critical to providing a safe and playable field, no matter the soil mix. Knowing the makeup or composition of your infield mix will help determine a baseline from which maintenance practices can be developed. A sand, silt, clay analysis can be performed by you in a few simple steps:

- 1 Fill a straight-sided jar half full of your infield mix.
- 2 Fill it with water and shake vigorously until the soil is suspended in the water.
- 3 Set the jar aside and let it stand until the mix has fully settled. This will take from one hour to overnight. The sand will settle out first and will be at the bottom, the silt next, and the clay last as the top layer.
- 4 Measure each layer and divide it by the depth of the total mix in the jar. This will give you the percentage of each component.

Visit www.turface.com/howto/if-your-infield-mix-too-hard for additional info.



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When you're looking at an infield mix, you have to have the right balance."

Langner also stresses the importance of testing what you currently have on your infield before looking into a full replacement or switching to a new mix. For example, if you have high clay content, you'll have to adjust for that in your management practice and amend your field to get a higher sand content as well as keeping your silts in tact and having a balanced silt-to-clay ratio.

This is especially true in the spring, as rains can cause infields with too much clay to become slick and slimy, Langner explains. Subsequently, water won't be able to properly penetrate through.

Turface offers its MVP conditioner, which has a larger particle size, and Pro League, which has a smaller particle size and is available in four colors. The company also offers drying agents and pitcher's mound and batter's box clay.

Wet conditions in the spring are a constant challenge for field managers, especially in areas that experience winter freezing.

Fields without proper conditioners have nothing to absorb the moisture, Cygan points out. They freeze and thaw, constantly changing the condition of the skin. Thus it's crucial to get on the field in early spring to ensure you have more stable conditions once the rains come.

"Using [the right conditioner] will not only assure you playing games on a rainy day, but will keep your infield from drying out and getting too hard when properly installed," Cygan adds.

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Turface's Pro League Conditioner comes in four color choices: Natural, Red, Heritage Red and Champion Brown.



Turface's MVP conditioner.



Pro Choice's Pro Red Conditioner



Pro Choice's Select Conditioner



Pro Choice's Pro Mound

Langner says that if a field manager with limited resources has no ability to amend his infield mix, certain things can be done from a maintenance standpoint to manage the weather and other adverse factors. "Having that firm mix, trying to roll it and keeping it tight ahead of a rain event and making sure it's graded to allow for that water movement ... using a calcined clay conditioner really helps to give you that surface moisture management because it's going to separate a cleat from the clay," Langner explains. "As that clay starts to get slick, the conditioner is going to draw that moisture out, and it's going to hold that moisture inside the particle to make for a safer playing surface. Getting that conditioner on the field ought to be the first step every year. It's critical to get out ahead of rain."

Proper application procedure of infield mixes and conditioners is also critical for optimal playability. Companies like Turface and Pro's Choice use a "good, better, best" program for proper application procedures. Ideally, according to Cygan, a 90-foot-square baseball field should incorporate about 12 tons into an infield.

"This will create an ideal playing surface if tilled into the entire surface's top 2 to 3 inches of mix, to be followed by grading and rolling the infield before beginning play," Cygan says. "If 12 tons isn't in the budget, we recommend trying to purchase and incorporate 6 to 8 tons of material in the same order of [the] process."

Langner advises clients to get a topdressing layer of conditioner (about 0.25 or 0.125 inch), to provide a buffer between an athlete's cleat and clay, and provide essential moisture control. This is most basic level of application.

"What we really encourage guys to do is put a little bit more material down on the surface," Langner says. "Then, take a nail drag and nail drag material into the top inch or two of the infield mix. Now what you're introducing into



INFIELD SOIL MIXES — Just How Much Sand Do I Need?

The University of Missouri Turfgrass Research Center provides a guide detailing proper amounts and percentages to make sure your infield mix has the correct amount of sand: www.turf.missouri.edu/stat/reports/pdf/infieldmix.pdf

that mix is that ceramic particle, with a lot of pore space. That's going to help with that drainage, and that's going to help hold water. Moisture is not a bad thing ... you want to kind of create that moisture reservoir so that you have a good, consistent, playable mix."

Proper mixes, conditioners, ratios, moisture levels, application and maintenance all add up to a safe, successful infield. Need a reminder as to how important the infield is? Eighty-five percent of a baseball or softball game is played on the dirt.

"No game has ever been called because the grass isn't green enough," Cygan says. "Poorly maintained dirt can mean anything from canceled games from rainy conditions to injuries from bad hops hitting a player in the eye. It's the most integral part of a baseball field, and is the area that should deserve the most attention of any good groundskeeper. If you let it get away from you because you only do the occasional dragging and nothing else ... it will cause you more headaches than you can imagine. A good groundskeeper is only as good as his dirt."

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