



Sports Field Tips:

Secrets to a Successful Infield

While it's probably the green turf and mowing stripes that capture your fans' attention at the ballpark, the **infield skin** is by far the most important surface of a baseball game since seven out of ten players use this part of the field every minute of play (even *more* when there are runners on base). Properly constructed, an infield skin will be comprised of carefully specified soil layers that serve important functions, and will be graded to speed the flow of runoff into neighboring turf. A poorly built infield skin, or one in disrepair, will often be the determining factor in a rainout or the cause of a bad bounce or player injury that decides the game...or season.

It's all about layers

The soil profile of an infield skin is unlike the rootzone of your field's turf, which is designed to nurture vegetation. An infield skin should be composed of two layers: a bottom layer of 3-6 inches of **base soil**; and a top layer of 1/4-1/2 inch of **topdressing** (a noncompacted layer similar to a mulch layer).

What type of soils?

A good base soil ideally will be composed of:

- 50-60 percent sand (higher amounts will contribute to soil mobility). Sand composed of rounded or spherical particles should be avoided since they tend to be unstable.
- 15-30 percent clay. This is the glue that binds the soil.
- 15-20 percent silt (higher amounts will make the field slick when wet and dusty when dry).

The base mix should be screened to 1/4-inch to remove all rocks, roots and other trash. The mix should compact *tightly* but fractionate easily with moderate agitation. The surface grade of the base mix is *the most critical factor* in your infield skin. The grade should be properly designed for your field and installed using laser-guided equipment.

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Infield topdressings can be composed of calcined clay, vitrified clay or crushed aggregates. Depending on your base soil, it may be desirable to use one or a combination of these materials. A soil texture analysis and/or particle size analysis can aid in determining the proper topdressing material, but it will also be necessary to do some experimenting to perfect the topdressing layer for your field.

The goals of a good infield skin

- **Traction:** The player's cleat should leave a clean print with little soil disturbance. Good traction is a function of the base layer.
- **Playability:** The playability of your infield is a function of base soil, topdressing and maintenance practices combined. If the playing surface is too soft, it will absorb the ball's energy, causing it to stay down and skid under the fielders' glove. On the other hand, too hard an infield charges the ball's energy and results in bad hops and possible player injury.
- **Resiliency:** Proper topdressing mix and maintenance practices, including moisture management and nail dragging, will help your skin absorb the shock of a diving infielder and reduce friction and drag for a better sliding surface.
- **Drainage:** If properly constructed, the base soil should not migrate, maintaining surface grade and keeping lip buildup under control. The base soil should be tight, with percolation rates of less than 0.05 inches per hour. The majority of the water should run off the surface to percolate in nearby turf. Subsurface drains under a skin are not necessary on a properly built infield.
- **Consistency:** Maintenance practices determine the consistency of play of infields. If the infield surface is not consistent, players are forced to keep one eye on the field's quirks and will not be able to devote their full attention to the game. Diligent maintenance will create a field that allows players to be their best. After all, you want your infielders to keep their heads down for all the right reasons.