

# Q & A

By Dr. David Minner

## What Are Some Characteristics of a Good Sports Field?

1. **A good field has no major influence on the outcome of a game.** When the last whistle sounds, you usually know if there was a special play that changed momentum or

determined the game's final outcome. Ask yourself if these plays or other events involved any unusual play-to-field contact. For example, was there an awkward slip that resulted in injury or affected the players' ability to perform?

2. **A good field receives a routine safety check.** In addition to the smoothness, cushion and footing of a playing surface, managers should pay attention to other ancillary objects such as fencing, bases, mound, irrigation heads, goal post, corner markers, sideline covers and stakes that may result in injury.

3. **A good field has sufficient traction and firmness to maximize player ability without increasing risk of injury.** Canaway et. al., 1990, proposed hardness and traction limits based on a survey of soccer players and field conditions. Preferred limits for hardness, based on Clegg Impact Measurements using a 0.5 kg hammer dropped from 300 mm, are 20 to 80 g. The preferred minimum for traction using a cleated torque device was 20 Newton meters. Moisture conditions in the surface two inches determine the degree of footing (see last issue for more details).

4. **A good field is one that is not frozen.** Frozen fields may be a problem in places like Iowa during late-season games. Muddy, exposed soils that freeze can make a very hard, slippery, uneven surface. Unfortunately, most football associations can't afford a heating system or tarp to keep the field from freezing. Good surface drainage will help reduce the chance of frozen conditions. Research at Iowa State University has shown that periodic topdressing with crumb rubber to build a 3/4-inch layer of rubber near the surface can delay freezing and reduce surface hardness.

5. **A good field has a sufficient cushion of grass, mat and thatch that separates the player from the soil or sand.** To accomplish this, a plan for controlling traffic and resting the field must be in place. A good field results in some tearing of the surface. It is the forgiving nature of natural grass that makes it so popular among players. Keeping the field in good playing condition is a continuous process of reestablishing grass. This will require adequate irrigation, cultivation, topdressing, fertility, annual overseeding, routine seeding of divots and occasional sodding. □

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