SAFE Foundation endorses infill research project

During the 2002 STMA meeting in Las Vegas, the SAFE Foundation listed research projects on infilled synthetic turf systems as one of its research goals. We currently are conducting research at Penn State to meet those goals by evaluating the playing surface characteristics of various infilled systems over time and over several simulated wear intensities.

There is limited research on infilled systems available. Much of the data that is available has been generated by accelerated testing methods where the surface is exposed to several hours of very intensive wear that is supposed to simulate 5+ years of use. Our study is different. The plots will stay in place and be exposed to the elements and to typical levels of simulated use. We plan to conduct this study for up to 8 years.

Surface evaluation will occur at numerous designated dates throughout each playing season and will include evaluation during moisture and temperature extremes. Evaluation will include, but not be limited to, the following:

- Surface hardness using both the ASTM F 355 method and the Clegg impact tester (2.25 kg missile).
- Traction using PENNFOOT at varying loading weights (90 to 300 lbs.) and using different shoe types.
- Relative abrasiveness of the surface using ASTM F 1015 method.
- Turf system ball bounce and ball rebound as well as rolling resistance (speed) using ASTM 1551 suffix 31.

The objective of the study is not to somehow announce a “winner.” It is possible that the study will identify the conditions that affect the various systems (e.g., product X might have higher traction on a cold day, under no wear, using a Nike Destroyer and a 280 lb loading weight, when first installed; while Product Z ends up having a higher traction on a warm day under high wear, using an Adidas turf shoe and a 170 lb loading weight after 2 years of medium wear).

This project will likely generate an enormous amount of data on the performance of the various infilled systems and will be available via the internet to provide consumers non-biased data on which to base their decisions. Since the study is just getting underway, initial results will be available to the public this fall.

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