Update on synthetic turf research

Dr. Andy McNitt of Penn State, who has been studying artificial and synthetic turf systems for nearly a decade, opined at length on the subject at a crowded breakout session during January’s STMA Conference.

McNitt said there is more synthetic turf being installed today for reasons as varied as professional stadiums’ being built with less room between the spectators and the field, which means more shade on those playing surfaces, to improper natural field construction, to having such a new field being such a status symbol among competing programs.

He added that there historically has been little financial support of field maintenance efforts, a dearth of quality topsoil, and a lot of low-bid construction that have contributed to the increase.

Part of McNitt’s charm is his free-wheeling speaking style; he entertains questions at any time during his talks and answers frankly no matter what subject is raised. For example: “I have done a 180 on underlying pads for synthetic turf installations; now I say you do not need them, unless you plan on never maintaining it and the pad is your only way to keep it soft,” he said.

On getting the static out: “Fabric softener should be part of synthetic turf management. It acts as a cationic surfactant and takes the electrical charge out of the surface after it’s been cleaned. It also helps when the crumb rubber infill begins to become hydrophobic,” McNitt said. “Use 8 gallons of Downey fabric softener mixed with water in a 250-gallon tank for a typical football field layout.”

McNitt recommends purchasing a Clegg impact hammer, which measures Gmax, the only field hardness measure for most turf managers’ needs. “Demand that your synthetic company pay for independent Gmax testing yearly for the length of the warranty,” McNitt said. “I would negotiate for a lower number than 200; 175 is now being recommended (measure of field hardness).”

McNitt studied whether MRSA (methicillin-resistant Staphylococcus aureus) infections might be caused by synthetic turf and his emphatic findings were “no.” He did find staph germs all over the place in athletic environments—blocking pads, weight equipment, stretching tables, used towels and razors for shaving ankles. But his study concluded that “These infilled systems are not a hospitable environment for microbial activity. They tend to be dry and exposed to outdoor temperatures, which fluctuate rapidly. Plus, the infill media itself contains zinc and sulfur, both of which are known to inhibit microbial growth.”

At the STMA presentation, McNitt concluded his remarks on MRSA by saying “If you are in a ‘CYA’ mode, spray Tide or SportsClean or a similar product but only on your indoor facilities.” He added that more of today’s young athletes could help prevent spreading infections quite easily: “Take a shower!” he emphasized.

Re high temperatures on synthetic fields, McNitt said irrigating can lower temperatures but not that much and not for a long period of time. “The fibers cause as much heat as the infill,” he said, “There is no solution to high temperatures yet.”