Advice from STMA Conference sessions on managing infield skins

AS ALWAYS, the Sports Turf Managers Association's Conference Education Subcommittee makes sure there are experts presenting on maintaining infield skin areas at its Conference. This past January in Daytona Beach was no different; STMA gathered Grant McKnight of Natural Sand; Bill Deacon, director of landscape and field operations for the New York Mets; Luke Yoder, director of field and landscape maintenance for the San Diego Padres; John Turnour, head groundskeeper for the Washington Nationals; and Eric Blanton, manager for turf and grounds for the Reno Aces to conduct a panel discussion. Here are some highlights from that session:

Grant McKnight stressed to the audience the importance of knowing where you are starting from with regard to improving your infield mix. How much sand, silt and clay do you have now? Use that information and knowledge of how soils components go together to get the desired end product. McKnight also said turf managers need to understand what is possible on their infields based on the level of play and the level of maintenance on any given field.

It was McKnight and former MLB groundskeeper and now executive at Beacon Athletics, Paul Zwaska, who first came up with the "silt to clay ratio" that is quickly becoming state of the art in determining the right combination across the particle spectrum for infield mixes. McKnight said small changes in your mix can make huge differences in playability.

An attendee asked, "What is the minimum depth you want to till a skin when you are adding soil?" The panel's response was if you are amending your soil, go only into the top 3 inches, but if you are trying to build more permanent structure, you can't just scratch in material. For a new construction situation, 4 inches is preferred, but the panel added that if you are using better materials you can get away with 3 inches.

Another question: "How can you judge compaction?" Answer: A real scientific method—after putting good moisture on your skin, can you easily put a key into and out of your mix? If so you are good.

Yoder recommended pulling a sample when you have infield sand or other material delivered and send it off for testing. "You have to be willing to send it back," he said. "The tests are cheap. Get a 2 millimeter sieve and take the sample when it's still on the truck. You can trust your supplier and still test."

Deacon answered a question about what depths the materials underneath the top 3 inches should be. "We just pulled ours out at Citi Field and it was like concrete; it wasn't originally made up of materials that I had recommended. We replaced it with sand and gravel which can release water better," he said. "We first put down 4 inches of 3/8-inch gravel, then 6 inches of sand, and then 6 inches of infield mix."

Yoder added that he doesn't recommend using any type of weed barrier when building an infield. "They are not necessary and it only messes with your moisture management," he said.

Dr. Norm Hummel, a noted luminary in the world of soil science and president of his own soil testing company, added from the audience that if you have a good native soil base you can get away with simply adding 3 inches of a good mix on top.

Adding material to your infield

Yoder recommended using a Harley rake drum attachment with metal studs to incorporate material into your existing

>> **LARRY DIVITO,** head groundskeeper for the Minnesota Twins, demonstrates how to add conditioner to a field during a previously held seminar.

With just ½% grade you can get rainwater to run off without players even being able to tell it's graded.

mix. "At the high school level, for example, put your new material on top and then use the Harley rake for about an hour to till it in," he said. "If you are just adding material, you can even nail-drag it in.

"Tilling and grading is the ideal situation," Yoder said, "but if you till it in then you really should follow up with a laser-grading."

Question from the audience: "Should you add sand via injection on your skin?" Answer, from McKnight: "No, you have to incorporate sand into the mix. Adding straight sand is not recommended because eventually it just floats back up to the top."

McKnight continued: "A good infield absorbs water; it doesn't drain water. It should hold moisture and a good profile will hold water longer. If your infield is draining, it will eventually fall apart."

Yoder: "At the high school level, a hard and firm surface is better than having whatever material is on top blowing off. If possible, you should soak your infield for 30 minutes after a game, then nail drag it the next morning followed by using a drag mat."

McKnight: "At lower levels of competition, in the heat of summer, you are going to have more compaction so it is best to open up the infield skin after it rains but when the top ½ inch gets dry. Then drag it for a more consistent surface. At these levels you need to use calcined or vitrified clay for sliding purposes."

Rolling

Blanton: "I never roll my infield though we do use a hand roller on the edges. We let nature take its course. We roll after edging because we want to pack it down; it's more about playability than aesthetics."

Yoder: "We roll (1 ½-ton) before homestands, just one or two decent rolls to tighten things up."

Turnour: "The day before a homestand we roll once to tighten it up, unless it is too dry; it's a fine line in determining when to roll. We roll our edges, with the roller half on the dirt, half on the grass."

McKnight: "If you use a roller, you must then use a nail board. And if you find you are using a roller once a week or so, you need to amend your infield mix; something's not right."

A question on using vitrified clay elicited these responses:

Deacon: "I have used it for sliding surfaces or to add color."

Yoder: "I don't use it; I think of it more as a warning track material."

Turnour: "I don't have much experience with vitrified and I'm comfortable with straight calcined."

Paul Zwaska, another expert in attendance, added that he thought that in a region like Washington, DC, vitrified clay might help moisture management.

McKnight: "If you are incorporating a conditioner into your soil structure, and you have better soil, you can use a product for its color or added durability or as a topdressing for extra absorbency."

McKnight answered another question on infields with high sand contents: "No, adding a pallet of calcined clay conditioner will not improve that mix." ■