value. I foresee this product being of particular value in arid regions where infield soils can become sodic as a result of frequent shallow watering and often with poor quality water. Sodic soils particularly ones with high silt and clay can have poor water infiltration. Providing calcined clay that is impregnated with a wetting agent can only help in these situations, and produce faster infiltration of applied water or rainfall enhancing the infield skin for safer play.

The most important point is to pick the right infield mix based on your needs. Calcined clay and or vitrified clay are still one of the best tools in a groundskeeper's arsenal. Use them! When renovating infield skins always make sure you till in any new mix that may be added to void soil layering. Also try making your water more effective by using wetting agents.-David Dzwilewski, Gail Materials ■

Keeping your infield playable

By Grant C. McKnight

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The question on the table is, "What advice can you offer to turf managers who have no access, or very limited access to water, but are tasked with keeping infield skins playable?"

With the record breaking heat throughout most of the United States during the summer of 2012, this general question from turf managers was a recurring one. "How do I keep my infield from getting so hard?"

Any discussion I had concerning this issue always revolved around first educating the turf manager as to why this was happening not only with the a DuraEdge surface, but any other high clay content surface during a normal compaction cycle. (I define a high clay content surface as any one over 15% clay content and possessing an SCR [silt to clay ratio] of less than 1.5.) Infield surfaces that fall into this category are inevitably going to firm up with normal use. The infield surface continually compacts with normal foot traffic and tire roll during dragging between games. This mechanical force coupled with the natural evaporation of the moisture from the top one inch of material will create greater and greater surface soil tension until the surface becomes nearly unable to penetrate with normal maintenance practices. The difficult question now becomes how does a manager relieve this condition with limited time in between tournaments or games without destroying the integrity of the grade on the infield surface.

Be flexible

The obvious answer is just to add moisture; however if you don't have irrigation and it has not rained in a month then a mechanical approach must be employed. I refer to this process as "Light Renovation." It is aimed at relieving excess compaction mid-season without tilling and re-grading, all in less than 4 hours total labor per field.

The first step is to understand that in order to perform this process a little moisture in the profile goes a long way; and that just adding water will only show positive results for a short time. If you have limited access to water, plan your schedule accordingly, and perform the Light Renovation after you add sufficient moisture.

For those that have no access to water they must adapt their schedule to working with what Mother Nature gives. When you get a shower, then you need to get out as soon as you can and use to your advantage the valuable moisture that is sitting in the profile currently. Too many times I see managers miss the opportunity to relieve soil compaction by letting a little bit of moisture that could just soften the surface enough to work it harmlessly evaporate because it came at a time that the manager was not normally working the surface. Whether you have access to water or not, be as flexible as possible in using what Mother Nature gives you.

Think sub-surface

Now that you have a little moisture in the profile, take advantage. Throughout last year I used an Infield Rascal equipped with a Profile Blade (ABI, Inc., Osceola, IN) to attack an over-compacted infield. The Profile Blade was adapted from the equine industry, where the tool which looks like a knife blade is pulled through the infield surface profile at a depth of 2-3 inches. This mechanical action, acting somewhat like a tidal wave motion, lifts the soil the thickness of the Profile Blade and shatters the soil tension. This action leaves the infield surface loose without causing a need for re-grading. A significant advantage for the Profile Blade over traditional tilling and grading techniques to relieve over-compaction is the reduced equipment costs. Many small budgets do not have access to tractors with high enough horsepower to till and the subsequent need for re-grading afterward can be far out of budget for a typical manager to even consider in-season. A Profile Blade can be pulled with any traditional vehicles that are readily available at most facilities. The need for outside labor is minimal as this process can easily be performed in-house.

Following the Profile Blade, I switch to a VibraFlex ¼ inch nail drag (also by ABI) to float out the loosened infield mix. Acting like a traditional nail board this unit is designed to break up the small pieces and allow a manager to use a mat drag to put a nice finish on the field. The end result is a surface that will accept water more readily and play softer throughout the cycle until another Light Renovation is required.

Use all the tools available

Once a manager performs a Light Renovation, the next step is understanding the cycle that all infields go through, and maintaining them properly until the next Light Renovation situation inevitably occurs. Now that the surface is de-compacted it will remain that way until weather and normal uses firm the surface again. I recommend limiting the wheeled traffic as much as possible following a Light Renovation, unless you get rain. Take advantage of the softer infield surface when it is drier. It will not firm up until significant amounts of water and traffic are applied. Therefore if you are not expecting rain, your surface will remain fairly consistent the less traffic it gets. Simply light drag in between games and keep the surface consistent.

Once you have a rain or begin to add water voluntarily it is important that you break the surface soil tension that occurs as the clay particles begin to join back together. If you manage this issue in the top ½ inch at least once per week then your surface will play much more consistently throughout the cycle. In order to manage surface soil tension I recommend using a combination of topdressing of your choice and the VibraFlex nail drag with 1/8 inch nails on a 2- inch spacing. The action of the VibraFlex drag will break down the compaction and work the topdressing into the top ½ inch of the mix for a recreational facility and make the sliding surface more consistent without compromising the integrity of the base soil.

Significant compaction only occurs when optimum moisture is achieved inside the profile and a mechanical means is applied to compress the surface. It is an inevitable process, so don't worry about why it happens, make a plan, be flexible, use what Mother Nature gives you, select an appropriate topdressing, and have the right equipment on hand to maintain your surface throughout its multiple season cycles and your high clay content infield skin will perform like a big league manager's daily. ■