



## Update on irrigating synthetic turf

**Editor's note:** We asked several NFL and Football Bowl Subdivision program turf managers about their maintenance routines with regard to irrigation on synthetic turf fields; specifically, Do you irrigate your synthetic infilled field(s)? Why or why not? And, if you do, what's your normal routine for irrigating on days when there is activity on the field? Here are their responses:

**DARIAN DAILY,**  
Head Groundskeeper,  
Paul Brown Stadium, Cincinnati

We have tried watering our fields in the past to lower the heat, but have not found the proper method to keep it cool.

We do water our field early in the football season. Our goal is to get water down in the rubber/sand to allow the rootzone to “not grab” as much. Our players often comment that after playing in a dome, the indoor field has “too much grab” and they felt sorer than after a game on an outdoor synthetic field.

The comments I hear from our players are the wet/damp synthetic fields seem to allow for their shoes to get good traction, but will allow the cleat to release when a great force is applied, thus dissipating a lot of energy and allowing less force into their joints. I have not seen any research to this effect, but if our players say they like a wet field, I try to give them a wet field.

Our normal watering schedule for August through October is to irrigate the field Wednesday, Thursday, and Friday before a game. We apply about 1 inch of water over those 3 days. We do not water on Saturday or Sunday because the TV people are setting up and I don't want to hurt or destroy cameras. Once November arrives, we usually get enough rain

water to keep the field “wet” and typically don't have to irrigate the field.

**SEAN KAUFFMAN,**  
Field and Grounds Supervisor,  
Baltimore Ravens

We do irrigate our Sportex surface; we use the Nelson SR Big Guns. Since the majority of our events take place in the spring and fall, we don't typically irrigate to

► **FIELD HOCKEY FIELD** at University of Iowa gets some water. Photo by Steve Bush, CSFM.

cool the surface, but more so to knock the crumb rubber down and give the field a “clean” look as well as to wash off the surface. And then, as a rule of thumb, we spray the synthetic with a microbial disinfectant mixed with fabric softener, which also aids in cleaning the surface as well as keeping the crumb rubber from pulling back up to the surface.

**ABBY MCNEAL, CSFM,**  
Director of Turf Management,  
Wake Forest University Athletics

We irrigate our football stadium field to assist with knocking the rubber particles that are on the surface to be dragged back into the field surface as well as to assist with cooling the surface temperature on warm game days.

On a game day after the marching band has practiced for 2 1/2 hours we will perform a quick drag to “stripe” the field surface, smoothing out the displaced rubber from the band feet and then follow with about 5-10 minutes of water to further “knock in” the rubber particles and give a clean appearance before the teams take the field to warm up. The watering to “cool” the surface is done only as needed and based on current environmental/weather conditions at the time. Both of these practices are assessed and preformed

**IN FEBRUARY** Dr. Andy McNitt of Penn State spoke at the Keystone Athletic Field Managers Organization's annual conference. During his presentation, McNitt, director of the Center for Sports Surface Research at PSU, touched on the issue of heat and synthetic turf fields. Saying that blacktop is cooler than crumb rubber infilled surfaces, McNitt said it was the fibers of the fields, not the crumb rubber that creates the heat. McNitt said irrigating the surface does cool down fields for about 40 minutes, and then only by about 10 degrees. He noted that that different colored crumb rubber doesn't make a difference in field temperatures.

as the conditions of the each event occur; in other words we don't always water the field before a game.

We can apply water to our new synthetic baseball surface, and I tend to think of it as a tool to assist in achieving a clean field surface from the players that spit (whatever they have in their mouth at the time) like most baseball players do. I have a philosophy that you will rarely find a baseball player that doesn't spit something. This is just one tool that we use to help keep the surface clean from that biohazard.

I am certain that there will be requests to use the system to help in "cooling" the field surface temperature during camp sessions this summer. I am anticipating some education on how we can achieve a lower surface temperature with the use of our irrigation system knowing that it has its limits to accomplish the cooling effect.

Irrigating synthetic fields is a learning curve to all; to the coaching staff and users along with the turf manager it's a tool that some have and then it's up the turf manager to assess the situation and determine the best use (or not use) of the system. Just like with most tools, all have their time to be useful in certain situations.

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### **BRIAN GIMBEL,** **Athletic Grounds Supervisor,** **The Ohio State University**

We do not water our synthetic fields to reduce heat. We have tried it and it does work for a little while, but not long enough to be useful. There is no in-ground irrigation system, so we use a Kifco water reel to irrigate the fields. These units do a great job of covering the area, but it takes a long time to accomplish it. By the time the irrigation has been completed, the temperatures where we started are typically rising again. At this point all we have done is add moisture to the air, which increases the relative humidity.

We do irrigate the field as part of our maintenance program, however. The mono-filament systems are especially prone to displacement of the infill. This decreases over time, but when

they are new, this is a big concern. To ensure our athletes are competing on a smooth surface, we will groom these fields regularly to redistribute the rubber and sand evenly. This leaves the field a little fluffy afterwards so we will irrigate it once or twice to help settle the infill down. This helps us to provide the team with a consistent playing surface that feels the same every time they are out on it. The irrigation also removes some of the static electric charge that is generated during the grooming process and also helps keep the field clean. This process has worked very well for us and has generated good feedback from the team.

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### **KYLE CALHOON,** **Groundskeeper, New Meadows Stadium Company**

I do not irrigate our Field Turf for a couple of reasons. The majority of our big ticket events played directly on the FieldTurf are played later in the year when temperatures are mild. I understand people like to irrigate to lower temperatures in the heat of summer with temperatures rising above 160 degrees F; but for the most part we have been lucky come September when international soccer and concerts make up the majority of our events; soccer is played on natural grass while concerts are on top of protective flooring.

We do not have a quick method to get the coverage and amount of water we need. There are two 2-inch hose lines at field level. From those lines it would require hundreds of feet hose to reach two water cannons placed on the field. These water cannons can only cover 1/8 of the field. With the water coming out and the amount of moves we would need to make to get proper coverage, it would be an effort in futility.

The only time I irrigate the field is after international soccer events when we put place natural grass on top of the FieldTurf. The FieldTurf sits on top of geo-textile filter fabric, but does not catch everything. We end up with a lot of dust that needs to be washed away. ■



### **Toro Reelmaster 5210**

The Toro Reelmaster 5210 features Dual Precision Adjustment cutting units to deliver an exceptional quality of cut and aftercut appearance. Powered by a 28-hp, 3-cylinder Kubota diesel engine, this unit offers a nimble and maneuverable design for mowing in a wide range of conditions. The Reelmaster 5210 is lightweight and productive with a 100-inch width of cut. It is available in standard 2 wheel drive or add on the CrossTrax® all-wheel drive system.

**The Toro Company**

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### **Versatile Turf Tidy from Redexim**

The Turf Tidy from Redexim North America is one of the most versatile machines built today. It incorporates



verti-cutting, flail mowing, core collection and debris clean up applications into one machine. The Turf Tidy's fully floating cutting head follows the ground's contours, ensuring accurate cutting and pick-up. The unique turbo fan makes a clean sweep of leaves, pine needles, paper, aeration cores and grass clippings. The

large hopper means less time emptying and its high lift allows greater clearance when tipping; it will easily dump into a utility vehicle or dumpster. The large turf tires mean less ground pressure even with a full hopper.

**Redexim North America**

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### **Terra Clean by Wiedenmann**



The Terra Clean M by Wiedenmann is a self-contained artificial turf sweeper that efficiently collects debris on the surface and can also be adjusted to reach the top

layer of infill. The infill is then separated from the debris with a vibrating sifter and is redistributed back onto the field. The debris is collected in an easily removable hopper. The Terra Clean M is powered by a Honda GX 240 gasoline engine and can be pulled by most vehicles.

**Wiedenmann North America**