

BY BRIAN E. VINCHESI

IRRIGATING SPORTS FIELDS

Today irrigation of sports playing fields is becoming more and more prevalent and necessary because of competition, turfgrass quality, and liability issues. And sports field irrigation systems are as varied as the sports being played on them.

How fast the field can be watered is an important consideration with any athletic field and is even more important on a lighted, heavily used field. The amount of non-use time defines the water window, but watering turf when the sun is high should be avoided of course, as it makes the irrigation system less efficient. Having to water the field every day means mowing a wet field and does not promote proper turf management principles.



A typical water window might be 8 PM to 5 AM on a non-lighted field, but as little as 1 AM to 5 AM on a lighted field, as little as four days per week on either. The smaller the water window, the larger the water supply will need to be and the more sprinklers will need to be operated at the same time. The water supply also needs to have proper backflow protection if on a portable supply or injecting chemicals.

No matter where the water supply for the irrigation system originates, there should be some sort of emergency shut off for the system on the field side of the facility. This allows for a fast shut off if something breaks or fails. The shut off can consist of a gate or ball valve shut off in an easily accessible location that does not require a special key for access.

Sports fields are unique landscapes and as such should be irrigated with equipment that is specifically manufactured for sports fields. This includes sprinklers that have rubber covers, heavy duty retract sprinklers, multiple nozzles, options for stainless steel risers among many others. Most sportsturf professionals have their own way of

watering and require that the system be designed and installed to meet their individual tastes. This results in some unconventional layouts, especially with sprinkler zoning, but very good turf conditions.

Sports field sprinklers need higher pressures and use more water to operate than conventional landscape irrigation system sprinklers. In most cases an athletic field sprinkler will require 50 to 70 psi operating pressure at the sprinkler base and use 12 to 24 gallons per minute depending on the spacing of the sprinkler and what type of field is being watered. It is best to minimize the number of sprinklers on the field. Eliminating sprinklers down the middle of the field (wear points) is a requirement, so three and five row systems do not work well.

The sprinkler system should be zoned for the available water supply and any sun/shade issues. In large stadiums, sun and shade, as well as wind issues, can be major factors in the irrigation system design as some areas of the field will not like as much water as others, and the irrigation system needs to be zoned and scheduled accordingly.

The location of valves and valve boxes also need to be considered with any sports field system. The valve boxes need to be located well off the field or buried beneath the turf at least 6 inches. In some cases, the valves may be located in a manifold configuration in the water supply room and piped out individually to the sprinklers. Although this is an expensive option, it insures that no below-the-field piping is under constant pressure.

Today's sports field irrigation systems have modern controls that allow turf manager flexibility in controlling the system. Some managers prefer the simple mechanical type control while others opt for computerized central control systems that allow for integration of an on site weather station, remote control and GPS mapping systems to allow for the ultimate in on field use. However, many sports field systems are operated semi-automatically to closely control the water application.

Irrigation is no longer just limited to natural turf fields. It is now common for many nylon and synthetic fields to be irrigated. Irrigation is especially common on field hockey fields and many major colleges water their non-turf fields. This is not much different than on a natural turf field, although not as much water needs to be applied, as the purpose is for cooling or wetting, not sustaining plant life. Sometimes no sprinklers or piping is installed under the synthetic fields.

Sports fields also have some areas that allow for specialty irrigation. This includes warning tracks, dugout areas, infields, and bullpens. These may or may not be watered, but will require some specialized sprinklers and zoning if they are. Sports fields also require a means of being hand watered for maintenance and dust control. Quick coupling/snap valves are used for these connections and should be placed where needed throughout the field.

Brian Vinchesi owns Irrigation Consulting Inc., in Pepperell, MA. He is the president of the Irrigation Association.

TALE OF ONE CITY

GARDEN CITY (KS) GOES TO GAMEDAY

Driving 5 hours to play a football game can be exhausting. But having to do so because neither team has a playable field due to heavy rain is especially frustrating. That happened to the Bronc Busters of Garden City Community College (GCCC), Garden City, KS for their season opener last year.

That's when Garden City made the decision to avoid future aggravation and decided to install GameDay Grass XP synthetic infill brand from GeneralSports in Memorial Stadium after season's end.

Memorial Stadium sees extremely heavy use. It is home to the GCCC team but also the site for all the practice and home games played by Garden City High and Junior High, plus Garden City's YMCA football program and each of the teams' marching bands. In addition, the high school will use the field for soccer next spring and the college will begin soccer practice and competition on it in 2005.

"With a multi-use field expected to get a lot of activity from the community, we really wanted to make sure we got a product that could stand up to the extreme conditions," said Bob Larson, GCCC's head football coach.

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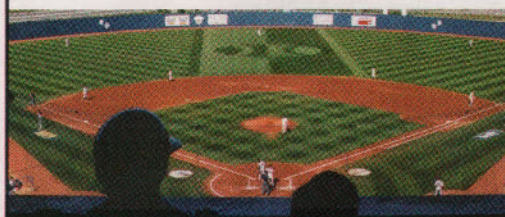


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SAGE ADVICE ON SOFTBALL INFIELDS

We asked two turf managers who have been recognized for their work on softball fields to share how they care for their infields:

Rick Newville, 2002 High School Softball Field of the Year winner says, "Our infield clay has a 60-15-25 sand, silt, clay consistency. We initially dragged in 3 tons of calcined clay in to a depth of 2 inches 3 years ago, and added 2 tons of vitrified as a topdressing once the skinned area had been rolled with a 1 1/2-ton asphalt roller. We try to incorporate at least 1 ton of each amendment each year.

"During the playing season, the skin is watered three times a day: morning, afternoon, and just before a practice or game," Newville says. "Skin is rolled with roller at least twice a year. And the skin is tooth-dragged after each game or practice and dress-dragged the following morning and then watered."

Editor's note: Rick Newville has been selected as the Head Grounds Superintendent for the Helliniko Olympic Softball Complex in Athens, Greece for the 2004 Olympic Games. He left for Greece January 24 and doesn't return to the States until August 31. Best of luck, Rick, and congratulations!

Robert Trevino is landscape supervisor for Texas Women's University. He's also a 2002 FOY winner. Here's what he had to say:

"To sustain our softball field's prime condition, year round maintenance is necessary. Our staff of 23 spends the majority of the time maintaining our 270 acres. The softball field has two employees who devote their time to maintaining the complex.

"During the growing season, the field is mowed three times each week; during the winter, at least two times each week, depending on the weather. The grass is overseeded with Gulf Coast rye in early September and as needed through winter and early spring," says Trevino.

"Of course the infield is a major part of our maintenance. During the growing season, we drag the infield and water it down daily. A few years ago we installed irrigation in the infield to save on manpower and it has worked well," says Trevino. On an as-needed basis, we spike the infield to loosen up and aerate the soil. During the winter, we drag and water down the infield at least twice a week, depending on the weather.

"When the field first opened, the infield was a continuous major problem for us. Despite limited funding we began working with a rep from Diamond Pro, who recommended some products but also had some helpful suggestions.

"Of course, our biggest advantage is our dedicated employees," Trevino says. **ST**

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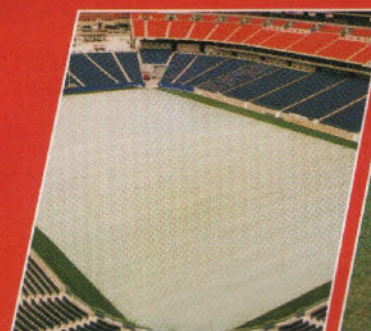
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Beacon Ballfields	800-747-5985
Diamond Pro	800-228-2987
Eagle-Picher	800-366-7607
Fielder's Choice	713-466-9200
Grounds Maintenance Services	800-227-9381
Harrell's Fertilizer	800-282-8007
Haydite	614-939-0717
Klawog-Klacon by Wessco	330-745-9322
Luck Stone	434-295-3611
MarCo Clay	519-694-7591
Partac Peat/Beam Clay	800-247-2326
Pro's Choice/Oil Dri	847-710-2502
PROFILE Products	800-207-6457
ProSource One	877-350-3999
Southern Athletic Fields	800-837-8062
Stabilizer Solutions	602-225-5900
Tri State Athletic Field Services	201-760-9700
True Pitch	515-967-2303
United Hort Supply	303-487-9000
Valley Quarries	717-530-1559



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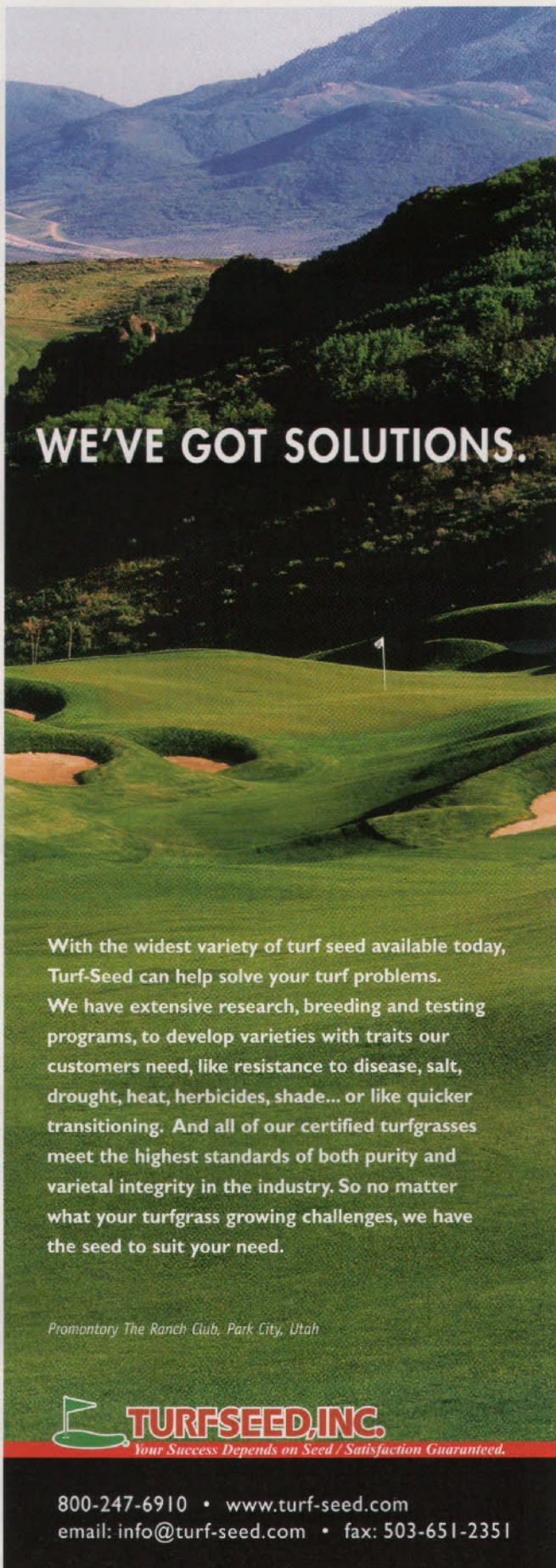


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