



» **SOCCER CITY** in Johannesburg, South Africa

Building Soccer City for the World Cup

Interview with Fanus Cloete CEO Evergreen Turf of Johannesburg, South Africa

ONE OF THE WORLDS MOST TAXING EVENTS for sports turf, this year's FIFA World Cup was even more strenuous due to one of South Africa's coldest winters on record. If you religiously watched the 2010 World Cup or just the final match at Soccer City in Johannesburg then you have probably seen a field built, maintained or supplied by Evergreen Turf, the largest supplier of sod in the southern hemisphere.

Fanus Cloete, the CEO of Evergreen Turf in Johannesburg, South Africa, discussed in a recent interview many of the challenges and successes that his company found while constructing and maintaining several fields for the international event,

including: Soccer City, Ellis Park, Vodacom Park, Moses Mabhida Stadium, four partial stadium training venues and five base camps.

FIFA's website calls Soccer City, home of the final match between Netherlands and Spain, "One of the most artistic and awe-inspiring football venues on the African continent." Soccer City was an ideal location for the final match of the inclusive World Cup given the country's political history. A symbol of a unified South Africa, the stadium hosted Nelson Mandela's

first mass rally after his release from prison. Built in the mid 1980s, Soccer City, and several of the other stadium fields were due for some serious upgrades to meet FIFA's modern standards.

In November 2008, Evergreen Turf began construction on Soccer City's new premier pitch. According to Evergreen Turf's website, "The specification required a 'premier' playing field to be constructed incorporating technology to produce high drainage, non-compacting sand growing medium over a gravel layer with subsoil drains." Many

of these soccer fields, especially Soccer City, were designed to withstand the high impact of the World Cup, while balancing potential weather disturbances. Specifically, the Soccer City field was designed to drain 3.9 inches of rain per hour, while maintaining proper grass growth. While this system's capabilities have not been tested during the World Cup, the field did receive 4 inches of rain and remained playable during the Confederations Cup in June 2009.

Of course the high rate of water evacuation can be attributed to the field's fast-draining sand and drainage system, but Cloete believes that the incorporation of Fiber Reinforced Natural Turf, is what makes the entire field playable. The key to how the system works lies in the construction of the field.

Evergreen Turf began by excavating the first 9.8 inches of existing soil. The drainage and irrigation lines were then installed, followed by a laser graded gravel layer. A USGA approved silica sand, amended with 3% organic matter and 3% topsoil, was then brought in and leveled. StaLok Fiber, the fiber blended into the rootzone to reinforce the natural turf, was then spread at a rate of 6.6 lbs. per ton of sand, by use of a spreader, but in most cases spread by hand as the government encouraged the use

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of local labor for the World Cup. This was then tilled to a 3-inch depth with a Rotadairon. Again the field was leveled by laser grader to a specified 1% crown. Finally, the sand base was saturated and Kikuyu stolons were sprigged.

Most World Cup fields were sprigged with Kikuyu, some were sodded with TifSport and almost every field was overseeded with Rye, although Cloete said that “in some areas the Rye will transition very quickly because of the tropical climate.” While Kikuyu does well in shady conditions and recovers quickly from wear, from a maintenance standpoint Cloete was not completely sold on the idea. “I do not believe that Kikuyu was the right grass to use. The thing about Kikuyu is that the rhizomes are really thick, requiring us to verticut quite often. This made things difficult as the specifications required us to start overseeding in early March.”

TifSport was used in Moses Mabhida Stadium because of the unique challenges that construction presented Evergreen Turf. Roof construction on the stadium limited Cloete’s team to a very short time frame for the field installation. Not having enough time to establish sprigs, let alone effectively establish sod, Cloete says he relied heavily on new technology emerging from the US and Australia, the StaLok Instant Play system, most notably used at the University of Phoenix Stadium, home of the Arizona Cardinals and site of the U.S. vs. Mexico Soccer friendly 3 years ago. Growing the TifSport in the new system, allowed him to deliver a playing surface that performed like an established field in a much shorter time frame.

MANAGING MAINTENANCE

Cloete oversaw the maintenance on 22 fields through the end of July. He keeps three men on most of the Stadiums and high use practice fields and uses a roaming crew of 7 men to help repair divots.

In an open-air stadium like Soccer City, Cloete noted that the cold made for a different schedule for his crew: “We started with a 4/3/4 fertilizer during overseeding, moved to a 5/1/5, then to a Green Sulfate and finally we used a MAP (Mono-Ammonium Phosphate) to stimulate root growth during cold on fields without the Fiber Reinforced Natural Turf.”

Cloete explained his crews’ schedules have to work around the main events, having to complete all maintenance after each game. Post-game work included repairing divots, mowing in two directions to FIFA’s required pattern, and then covering the fields with crop blankets. Such a meticulous schedule can be quite physically demanding on the crew, Cloete noted, “Sometimes the guys would not get out of there until 3 a.m., and it was difficult working in such overnight cold.”

Part of maintaining many fields for such a high traffic event is avoiding over-manicuring during the actual tournament play. Cloete explained his methods, “We did not topdress during the tournament. During the growing season we would mow the fields very low and topdress with a sand and fiber mix.” Equally essential to fostering the future maintenance of these fields is Cloete’s planned post-World Cup field management: Cloete planned to hollow tine aerate the fields after

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the World Cup, and topdress with the sand and fiber mix.

Because Cloete and his crew are maintaining the fields during South Africa's winter season ("the coldest winter ever on record," Cloete said), certain concessions had to be made. Cloete noted, "We are currently mowing at a height of 3/4 inch on the stadiums. Because of the cold, we have to leave the practice fields at the mowing height of a true inch."

The crew was able to recover after a potentially devastating incident right before the World Cup: "The fields were specified to be overseeded at a very high rate, 300-lbs per acre," Cloete reported. "This overseeding practice used quite a bit of water that caused Pythium on one field in particular. This wiped out 1/3 of the field 2 weeks before the World Cup started. Because of budget, the entire field could not be removed, so we resodded certain areas with the reinforced sod. These resodded areas performed better than the rest of the existing field."

This year, the World Cup fields have had to deal with a particularly blustery winter. How do these temperatures affect the soccer matches? Cloete responded, "The grass was not growing as much as we anticipated. It never reaches below 25 degrees in Johannesburg, but it has several times this winter." Yet, with peculiar weather patterns came anomalies that can be devastating to grass: "It is not a wet cold, just a dry cold that creates a black frost." Despite these challenges, Cloete is satisfied with the results. "We are very happy with how well the fields are holding up during this cold."

Still, managing to elicit great performances from fields under such conditions involves some ingenuity: "There is one area at Soccer City that is completely shaded," Cloete explained. "In this area we bring in grow lights overnight. Because this area was left untarped, it was hit with some black frost that produced slight discoloration. Other than that the field is looking very well." Looking well is an understatement for a field that has seen quite a bit of activity, the Super 14, Confederations Cup, British Lions Tour, Tri Nations Tournament, normal soccer matches, and World Cup games in recent months. Even with such activity, Cloete noted there have been no compaction issues on any fields that have the Fiber Reinforced Natural Turf, but some of the other fields required VertiDraining before the World Cup.

Cold, disease, long hours, and heavy traffic, despite all of these challenges, the results of Cloete's expert management are noticeable by FIFA standards. FIFA grades the fields by the amount of slips per game, with five or fewer slips considered a perfect field. Soccer City averaged only two slips per game. Cloete believes careful construction and meticulous management aside, there is one substantial reason for the performance on these fields of the World Cup: "You really saw better performance on the base camp fields that get 3 to 4 hours of intense practice a day. When we resodded the wear areas with the reinforced sod grown it withstood traffic as well, if not better than the established sod."

Not only are the benefits of Cloete's hard work evident on the field, but the off-field rewards are noticeable in countless ways: "We are all a bit more relaxed now," Cloete admitted. "Guys are having fun all over and there is enough beer to keep them warm. It has been really a great experience for South Africa as we have seen more than double the amount of tourists than were expected." ■

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