



Above: Infill materials come in various colours, shapes and materials.

IN THE

As FIFA's Preferred Producer program has now been running for just over a year, feature-writer Guy Oldenkotte evaluates its performance.

Synthetic turf systems were first introduced as a 'maintenance-free' solution for areas where climatic conditions either did not favour or could not ensure good natural grass, or where financial challenges demanded a solution that would either generate extra revenue or provide cost savings. But soon after the first installations were completed, stories about compaction and the need for loosening the infill started to surface, in an industry where information sharing and quality standards were still regarded as less relevant.

In 2001, FIFA introduced a mechanism for the guidance and control of the quality of artificial grass fields with the introduction of their FIFA Quality Concept. The FIFA RECOMMENDED 1-Star and 2-Star quality standards soon followed, as soccer's world governing body's measure to distinguish quality. The quality standard received further support by the introduction of the FIFA Preferred Producer programme in 2009, which is aimed at providing consumers with a guarantee that turf produced and

installed by FIFA Preferred Producers is of the highest standard and meets consumer requirements. At present, Act Global Sports, Edel Grass, Limonta Sport, Desso and Greenfields have been approved as FIFA Preferred Producers for Football Turf. (Please see "Quality Assurance" on p142 for further details.)

Maintenance is Key

The FIFA Preferred Producer initiative has seen the supply of maintenance equipment and the training of maintenance crews become mandatory.

The need for proper maintenance of synthetic turf should not be underestimated or, as a FIFA representative advised: "Maintenance is essential for the durability, performance and safety of the pitch. Maintenance needs to take place on a regular basis (normally weekly). If the Football Turf pitch is not maintained, it will deteriorate rapidly. Maintenance is therefore key to the performance of the field in both the short and long term."

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Football Turf fields used for the highest level competitions have to be tested annually to retain the required FIFA RECOMMENDED 2-Star status — during testing, the maintenance regime is also considered.

But test institutes have noticed that the importance of maintenance is still underestimated. “Our experience is that maintenance is not considered very seriously by field owners. The result is that fields are usually in a condition that doesn’t allow them to pass the re-tests,” advised Eric Fair d’Archie of Labosport. A year on from FIFA’s decision to make the supply of maintenance equipment and the training of maintenance crew mandatory, the first results are slowly coming through.

“There are many simple mistakes still being made in the maintenance of third-generation Football Turf pitches. One that has a major impact on the performance and longevity of the playing surface is the lack of top dressing of the rubber granulate infill. It has been shown that these playing surfaces can lose a substantial amount of rubber infill on an annual basis. Typical figures range from 2.5 to 5 tonnes of rubber in a one year period. Therefore the regular replacement of rubber infill is essential,” commented Eric O’Donnell of testing institute Sports Labs.



O’Donnell added: “Maintenance of Football Turf pitches has been, and still is, a major issue for the industry. Given that this type of pitch has been around since the mid 1990’s, it is a damning indictment that this debate is still ongoing. We, as an industry, have at least moved away from the position which was once sold to clients where there was a suggestion that no maintenance was required for these types of surfaces. Gradually the technology and methodologies for grooming and maintaining Football Turf pitches have improved such



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The poor maintenance of Football Turf fields can make them dangerously hard — this is something the FIFA Preferred Producer initiative is seeking to eradicate.

that the information provided to clients on completion of the project is thankfully very comprehensive."

But FIFA's expectation of Preferred Producers to supply maintenance equipment and train the maintenance crew has created a new problem, as O'Donnell pointed out: "The lack of follow up by those constructing third-generation Football Turf pitches is one area to address. Also the inability of a client to implement sound maintenance programs is now the stumbling block for the industry."

He added: "Good maintenance equipment is expensive but is worth the investment, as adding just one year to the life of a surface — which is entirely possible with proper maintenance — can generate savings equivalent to between 1/8 to 1/10 of the cost of the carpet." (Based on a lifecycle of 8 to 10 years for the playing surface.)

But, according to Fair d'Archie of Labosport, making the installing companies responsible for supplying maintenance equipment is arguable. "Manufacturers are highly knowledgeable about their products, but usually have very little experience about their maintenance. In these conditions, it is probably debatable to ask them to write maintenance guidelines."

According to Fair d'Archie, maintenance crews still have to be familiarise themselves with the products: "As in every field, the users don't really adapt to the material. For instance, training tends to be done on the same part of the field (close to field entrance/locker room). Wear is therefore not uniform...and this is a more important issue on synthetic turf than on natural grass."

More important issues

There are numerous installers and suppliers of third-generation systems; with only those systems approved by FIFA that can be referred to as 'Football Turf'. But of the numerous suppliers with FIFA RECOMMENDED systems, only five currently appear on the FIFA Preferred Producer list.

While Polytan can claim to have one of the highest numbers of FIFA RECOMMENDED 1-Star and 2-Star installations globally, the company has decided that, in the short term at least, it will not become a FIFA Preferred Producer. Bernd Wutzer of Polytan confirmed that he supports FIFA's intentions, but he still has his doubts about the feasibility of ensuring the proper maintenance of a Football Turf field. Wutzer commented: "Long pile systems (say 60-65mm) with a huge amount of rubber infill demand more and more maintenance, and very often the clients are not able to handle this."

Approximately 85% of Football Turf systems are made with a pile length between 60mm and 65mm, which requires between 15 and 21kg of infill material. Polytan, on the other hand, has always strived to install fields with an e-layer. This reduces the need for more infill and thus reduces the importance of maintenance. The company believes other issues are more urgent than maintenance and maintenance equipment. "As long as these items have not been realistically realised and identified, it makes no sense to sell huge and expensive maintenance machines to the clients," advised Wutzer.

According to Wutzer, inferior and thin fibres should be more of a cause for concern: "Many clubs face the same two challenges; a huge amount of rubber infill that has been used in the installation and weak or flattening, thin artificial grass fibres. Thin artificial grass fibres that are below 300 micron tend to be weak and fall flat within one or two years. This has an impact on the look of the field and the game characteristics. No amount of brushing will help put these fibres back in their upright positions and even the very best high-tech maintenance machines cannot compensate for the lack of a stronger, more resistant and more flexible artificial turf fibre."

The flat fibres also negatively increase the wear of the grass and shorten its life expectancy, as Wutzer continued: "Flat fibres will stop the players from playing 'inside' the system, rather they will start playing 'on top' of it. This is again a step backwards and away from the general idea of Football Turf offering similar playing conditions as a well maintained natural grass field. Polytan aims to overcome the flattening of grass by having introduced a 360 micron fibre during the 2009/2010 season. With even better resilience properties, these Polytan RS+ Football Turf systems actively support the maintenance efforts of the technical managers on site."

As infill moves around in a Football Turf field, it is essential to keep an even spread through regular and proper maintenance.

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Focus on Quality Materials

Another leader in the Football Turf industry that has also decided against becoming a FIFA Preferred Producer is FieldTurf.

FieldTurf was the first company to introduce a Football Turf system that made use of longer piles and sand and rubber infill between the grass blades. Despite not being a FIFA Preferred Supplier, Darren Gill, Vice President of Global Marketing at FieldTurf advised: "FieldTurf is fully supportive of this initiative as we believe in the importance of a proper maintenance offering."

Gill also added that FieldTurf has been offering a comprehensive after-sales service package for several years, which includes a customised line of maintenance equipment, training, maintenance video, and FieldCare service program.

"We feel as though we have been a leader with respect to FIFA's objective to improve the quality of turf maintenance," stated Gill.

Gill also reflected Wutzer's belief that good installations are only achieved by selecting the right materials: "FieldTurf's focus has always been to deliver a quality playing surface. This process starts with raw material selection for our turf and infill materials, and carries through to the installation process and maintenance training. Our suppliers, producers, and customers all understand that at no point will we sacrifice product quality."

To maintain that quality, FieldTurf has developed its own range of maintenance equipment in recent years, as Gill outlined: "FieldTurf has spent a significant amount of time developing maintenance equipment specific for our patented turf systems. We believe that in doing so we have created the optimal equipment for our system. We are continuing the development of some ancillary maintenance pieces, but we believe that our current offering covers the key maintenance procedures such as Brushing, Aerating, Raking, and Sweeping."

A Safe Playing Surface

And according to Gill: "Field users around the world share a common objective; a safe playing surface that delivers

optimal performance. No matter the sport, the playing surface must deliver a consistent playing surface to the athlete. As a result, the maintenance practices worldwide are fairly similar."

Mike Davis of GreensGroomer agrees with Gill: "When a dispute arises over the safety of a field and attorneys step in, the first question they will ask is; when was the last time that the shock absorption got tested?"

According to Davis, maintenance should focus on alleviating compaction, combing the infill ensuring the grass fibres stand upright, and removing debris. "FIFA is moving in the right direction by forcing companies to work together," Davis said, while emphasising the role infill plays with regards to shock absorption and energy restitution.

But, according to Davis, a real improvement will be made when FIFA focuses more on distributing information. "I would like to see FIFA getting more involved in informing the end-user. They are, in the end, the confused party."

Davis also argued that maintenance equipment is not the real problem: "There is a lot of good equipment out there. But we always struggle when somebody knows somebody who could supply something for a more affordable price."

He also pointed out that FIFA is not the first organisation to try to regulate the maintenance equipment and maintenance program for Football Turf fields. "The American Synthetic Turf Council tried to introduce the maintenance aspects several years ago. But it is a sensitive issue and they stepped on many toes," Davis warned.

Room for Improvement

FIFA's ambition clearly has a long way to go. However, consensus is that there is still room for improvement, and particularly improvement that affects durability and player safety.



“The infill is a vital component as to how the overall system performs, particularly over time. As such, maintenance crews must understand the characteristics of the infill used and have the correct equipment on hand to manage the pitch,” reflected Adam Coleman of infill supplier USGreentech. “FIFA’s focus on quality assurance from project inception has helped emphasise the importance of using the very best materials and techniques available. This strengthens the position of suppliers who adhere to best practices.”

Coleman added that USGreentech has witnessed a rapid growth in the popularity of soccer in North America and reflects that for FIFA there is still much to achieve: “The impact of the FIFA Quality Concept in the US will be to move our sports’ governing bodies and field specifiers to better define and then demand adherence to similar standards applicable to our games.”

It is this demand for adherence to the applicable standards that is something Frenk Stoop of elastic layer supplier SekisuiAlveo believes is essential to make the FIFA Preferred Producer program a success. “The concept is positive but when you don’t follow it up then it will become a burden,” he said.

“Despite FIFA claims that maintenance log books have to be shown every year and installers have to prove that they have provided training, the reality is that few

clubs will have their FIFA 2-Star certificates renewed. Only clubs playing in the top leagues will have to do so to be allowed to continue playing matches on the field. But the majority of the installations are done on an amateur level and as long as the field complies just after the installation, everything is fine. After that the monitoring is gone.”

Like other suppliers, Stoop would rather prefer it if FIFA focused on distributing information. “Most clubs and municipalities still select a supplier for a new Football Turf field based on the cheapest quote. But with so many systems available on the market it has become almost impossible for many clubs and municipalities to decide what they should select. Only the bigger clubs and municipalities that have done several installations before have the knowledge to distinguish the good from the poor quality products. Few municipalities are aware of the durability of an installation. It, therefore, should be more important to increase the responsibility of consultants and engineers, and inform the society.”

For many, the regular testing and certifying of pitches would seem to be considered as more of a priority than the quality and level of maintenance, but whatever initiatives can assist those purchasing Football Turf systems are always going to be welcomed. ★

Most artificial grass fields are used for the amateur game.

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