

FIFA U-17 Championship PERU 2005



Introduction

The very first international football tournament to be played entirely on football turf took place in Peru in September/October 2005. The biennial FIFA U-17 World Championship was hosted at five different venues with four of the stadia converting their old grass pitches to football turf and the fifth being installed in a completely new stadium.

The beginning of artificial turf in FIFA Competitions

The first major tournament test for football turf came in 2003 when the Töölö stadium in Helsinki, one of four venues for the FIFA U-17 World Championship in Finland, was laid with a new artificial pitch. The problem in Finland is the long, dark winters where the ground can freeze to 16 degrees of frost and where hardly any sun reaches parts of the pitch for much of the winter and the result is hard bare earth. The artificial field has been a great success and is now used regularly by premier league side HJK.

Climate Conditions

Peru's climate is not at all like that of Finland. It is very temperate on the western seaboard where four of the cities that were designated for the tournament are situated

and the average annual temperature is a pleasant 20° C. But there is so little rainfall in Chiclayo, Piura, Trujillo and Lima that they can be classed as being in the desert. The climate in the fifth venue, Iquitos, is different again because the city lies in the Amazonian jungle where temperatures and humidity are high and the rainfall is over three metres a year.

Two of the quarter-finals were allocated to the brand new stadium in Iquitos. The city is in the Amazon jungle so the rainfall is around 300 centimetres a year as compared to the four other host cities where it varies from half a centimetre in Trujillo to a whole six centimetres in Piura! But one of the many advantages of artificial turf is that it drains extremely well, even in a thunderstorm. This means that, unlike natural grass fields, pools of water do not form and the tufts cannot be torn out of sodden turf by player action such as hard tackles and slides. Thus, when Peru's Local Organising Committee for the World U-17 Championship 2005 came to discuss venues, an idea was mooted that perhaps this was the time to consider converting to artificial turf. FIFA readily agreed provided that FIFA Quality Concept standards were met.

Financial Savings

The Peruvian Local Organising Committee hosted the Copa América in 2004 (the biennial South American nations' competition) and had to bear the enormous costs of watering and maintaining the venue stadium pitches during the tournament - estimated at \$8,000 US per month per stadium. So, in order not to go through the same process

again in 2005, they began to think seriously about installing artificial turf pitches and put the idea to FIFA in the early part 2005.

"They did the maths," explains Iñaki Alvaro, Event Director for the FIFA World-17 Championship and also FIFA's Head of Youth and Development Events.

"A football turf field should last ten to twelve years" and they worked out that it would only take three years to get a payback between the cost of installing new pitches, including maintenance, and the upkeep of the grass fields.



Playing conditions

Sixteen teams from all over the world took part in the FIFA U-17 World Championship. All were quite comfortable on the artificial turf even if they had not played on it before, like the Peruvians. Central defender, Christian Branches, said: "I had no problems getting accustomed to the surface. The fields were quite hard but they run well and the sliding properties are the same as on grass." Sadly for the home side, they were knocked out of the tournament at the group stage.

But many were well used to the surface. In fact no less than eight of the 20-man Costa Rica squad play for Deportivo Saprissa in the capital San José. Saprissa converted to a FIFA RECOMMENDED artificial turf pitch in 2004 because, like Peru's Amazonian region, Costa Rica suffers from tropical downpours that can leave a grass pitch unplayable within minutes and matches were constantly having to be rescheduled.



Very Positive Medical Research on artificial turf

Football Medicine and F-MARC

The importance of careful medical attention to athletes in all sports is beyond question, and football is no exception. Indeed, the nature of our sport puts it among those in which thorough medical preparation and treatment of injuries are very important issues. FIFA's Sports Medical Committee has risen to this modern challenge and conducted research into such questions as the effects of high altitude on footballers



and the growing incidence of anterior cruciate ligament injuries. At the same time, improvements

have been made to on-field treatment of injured players and to the special needs of the growing number of women footballers. Much of this research is undertaken by FIFA's Medical Assessment and Research Centre (F-MARC), which was initiated by FIFA President Joseph S. Blatter after the 1994 FIFA World Cup. F-MARC conduct research at the many FIFA tournaments and one such study involved a comparison of the injuries sustained at the FIFA U-17 tournament in Peru, which was played entirely on football turf, with the injuries sustained at previous FIFA U-17 tournaments, which were played mainly on grass. As you will see from the results on the side, the research showed that there was **very little difference in the incidence, nature and causes of injuries observed during games played on artificial turf compared with those played on grass.**



Tournaments using grass:

- 1999 New Zealand (32 games)
- 2001 Trinidad & Tobago (32 games)
- 2003 Finland* (22 games)

Tournaments using Football Turf:

- 2003 Finland* (10 games)
- 2005 Peru (32 games)
- (* Both surfaces used during this tournament)

Natural grass match exposure

Games: 86
Hours: 2,822 player-hours
All injuries: 218
Time-loss injuries: 79

Football Turf match exposure

Games: 42
Hours: 1,386 player-hours
All injuries: 109
Time-loss injuries: 36

FIFA U-17: Incidence and severity of injuries

Playing surface	Incidence of injury (No. of injuries / 1,000 player-hours)	
	All	Time-loss
Natural grass	77	28
Football Turf	79	26



FIFA U-17 CHAMPIONSHIP PERU 2005



FIFA U-17: Injury location

Natural grass (All injuries)

Head/neck:	15%
Upper extremity:	6%
Trunk:	8%
Lower extremity (All):	71%
Hip/groin	2%
Thigh	13%
Knee	11%
Lower leg	18%
Ankle/foot	27%

Football Turf (All injuries)

Head/neck:	10%
Upper extremity:	9%
Trunk:	9%
Lower extremity (All):	72%
Hip/groin	2%
Thigh	13%
Knee	13%
Lower leg	18%
Ankle/foot	26%

FIFA U-17: Injury type

Natural grass (All injuries)

Concussion:	3%
Fracture/dislocation:	0%
Sprain:	13%
Strain:	10%
Contusion:	67%
Laceration/abrasion:	4%
Other:	4%

Football Turf (All injuries)

Concussion:	2%
Fracture/dislocation:	1%
Sprain:	14%
Strain:	9%
Contusion:	60%
Laceration/abrasion:	6%
Other:	8%

Legacy

So what is the legacy for Peru on the other side of the world? "There's no doubt that tournaments like these lead to long-term improvements in our infrastructure," says Arturo Woodman, Chairman of the tournament's Local Organising Committee. Therefore the opportunity of playing with football turf gave the opportunity for the Peruvian nation to host their first ever FIFA tournament and provided a solid stadia infrastructure to enable the next generation of Peruvians to participate in football at the highest level.

FIFA U-17: Cause of injury

Playing surface	All injuries		Time-loss injuries*	
	Contact	Non-contact	Contact	Non-contact
Natural grass	86%	14%	85%	15%
Football Turf	78%	22%	74%	26%

* Injuries that result in a player missing one or more days of training or competition.

