

# Sustainable football irrigation for a changing climate

**A** lush green playing surface is an absolute prerequisite for professional football in the 21st century – and a glance at footage from the 1990s proves this wasn't always the case.

But a lot of behind-the-scenes work goes into ensuring a smooth surface for the players to strut their stuff on a Saturday afternoon.

And despite the advent of synthetic pitches, there's no doubt that it's time to step

backwards. With water stress on the rise around the world, football pitches are an extra water threat to agricultural fields and urban landscapes.

When football fans think of a grass stadium, a traditional image of a flat-topped hillside with a house and a windmill can only come to mind. But the truth is that irrigating football pitches has become as precise as a free kick – not as precise as a corner or an indirect free, but certainly an interesting VAR decision.

It's often a fine balance, as grass is sensitive to too little or indeed too much water. "Overwatering saturates the soil creating an anaerobic environment which the plant cannot thrive in," reports Scott Brooks, Head Groundsman at Ligue 1's OSC Nice, after previous roles at Arsenal and Tottenham.

Having come from London to the south of France, Scott was faced with very different geographies and the biggest challenges for a groundsman. His included high summer temperatures, hydrophobic soils, and issues establishing thriving grass which could support the rigours of high-level football.

No change to innovative thinking, Scott decided to

address diminished water availability by turning to state-of-the-art solutions.

"The lack of consistent rainfall meant two things: heavy reliance on the irrigation system and a demand to get the water exactly where it needs to be. I saw an opportunity to incorporate AQUA4D® into an improved irrigation system which would finally get the water into the root zone more efficiently but also help to reduce the watering workload."

Currently, the limited capacity of the irrigation system meant it had taken five and a half hours to water one pitch – an undeniably long time. The improvements made to their irrigation system with AQUA4D meant a pitch can now be watered in under 25 minutes.

In the fast-paced world of top-level football, this was truly a game changer.

"As soon as the AQUA4D was operational I reduced the timings of the stadium by 200-300%," reported Scott. "We witnessed no detriment to the health of the turf – quite the opposite, in fact. Soil electrical conductivity rates have consistently been in a good range which suggests that the breakdown of the water molecules has increased the

nutrient uptake/availability in the soil. The consistent colour and turf vigour displayed this season would support that."

Alongside organic fertilisers, permeable drainage systems and using headwells for under-soil heating, Brooks and his team at Nice are incorporating sustainability and efficiency at every turn.

The success of implementing AQUA4D and other technologies has inspired Scott and his team to further sustainable initiatives.

"The pitch maintenance

provider has commissioned a study of my request to measure our carbon footprint with the aim of finding ways to become a 'carbon neutral' grounds team. So far there is a commitment to plant 361 trees, ranging from 59 oak trees to 174 pine trees."

As the football season draws to a close, take a moment to appreciate those unseen heroes maintaining playing surfaces – and knowing that to ensure the sport can continue to be enjoyed in the face of an uncertain climate future.



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