

AQUA·AID

PBS150 shown through field trials

Between 2016 – 2019, Aqua Aid Europe has been performing various field trials to see the water saving benefits in of multi-branched surfactants in turf grass, especially **PBS150**. Penn State University has proven considerable reduction in different conditions in 2 projects. Following these trials, Secret Valley Golf Resort on Cyprus, has used **PBS150** to combat a lack of water caused by climate change.

Cyprus is one of the hottest countries in Europe and has average temperatures nearing 30 °C from June to September. During this time the average rainfall is 0mm with a small reprieve in September when it rises to 3mm. Recently, rain during the winter months has reduced, leading to reductions in water around the island. This has caused Golf Course Superintendent, Derek Smith, to focus on methods of reducing hydrophobic conditions on the course.



Derek's employment history has seen him work in warm climates before when at Palmares Golf Resort, Portugal, Alcanda Golf Course, Majorca and The Wave Golf Course, Oman, but a lack of water to manage heat, similar to what was experienced in the summer of 2018, was a challenge he had to address quickly. Derek explained: "Due to climate changes the winters have changed in Cyprus with less and less rainfall. The dams are running at under 30% and they are our only source of water, so reductions from the water authorities have left us struggling for water. I have always been very water efficient as I truly understand how this is affecting the turf industry. Because we could not spend the value of water in our budget due to the cuts, we decided to use some of that money to help the plant in other ways. One by using a high-quality wetting agent and another by using growth retardants."

PBS150
POLYFUNCTIONAL
BRANCHED SURFACTANT

"We had already started using OARS HS and from my experience using them, I trust Aqua Aid products and their longevity. After meeting a representative from Aqua Aid Europe and explaining our issues it was decided that we'd try **PBS150**. We applied it once in the middle of May and during the summer months, we saw a water reduction of around 30% and I've seen a much better sward density and far, far less isolated hydrophobic areas. For us, saving water is beneficial enough, but by not having to spot water we have reduced labour costs.

I also hope that by using **PBS150** we can work on our very poor river silt soil and turn it into a healthier environment."

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As on Cyprus, Penn State University registered similar results in their trials on water saving capabilities of **PBS150**. In 2017 a study was performed on L-93 Creeping Bent Grass in a 70/30 sand peat rootzone. The trial was performed in 20 cm diameter pots. The untreated control was kept at a 22% moisture level, while the treated pots received a dry down cycle to a moisture level of 15%. When the moisture level reached 15%, the pot was rewetted until it was 22% again.



The amount of water added to the UTC and the treated pots was measured. The pots treated with **PBS150** were treated twice with a 30 day interval. A week after the last application the Dry Down / Rewet cycle started, the longevity of the trial was 8 weeks. No **PBS150** was applied in this period.

After 8 weeks, the amount of added water was measured for the UTC and the treated pots.

The difference was highly significant, 2 applications of **PBS150** saved 37,20 % of added water. In the same re-

search, they also did a trial with 3 applications of **PBS150** prior to the Dry Down/Rewet cycle, the results from this trial were even better; 46,09 % water saved.

PBS150, is a long-term surfactant, utilizing a unique multi-branched molecular structure to address the source of performance loss - biodegradation of the surfactant molecule by soil microbes. It is designed to reduce hydrophobic conditions on a sustainable basis for five months or more, encouraging a pattern of hydration and re-hydration that improves the amount of available water in the soil profile to meet the metabolic demands of the plant. The 3D multi-branched technology helps to even-out moisture difference in multiple directions, allowing for uniform movement of water into and through the soil. As a result, the plants stress tolerance improves, along with the turf quality and colour.

PBS150 is available in both a liquid form as well as a granular form for smaller and harder-to-reach areas.

For more information on all our Aqua Aid products, please visit www.aquaaid.eu

