

The Impact of Aquatrols Surfactants on Soil Microbiology – What the Research Tells Us

In 1954 Aquatrols pioneered the world's first commercially available soil wetting agents for amenity turf, and since then the programmatic use of surfactants to enhance water penetration and distribution has become standard turfgrass management practice. While the positive relationship between surfactant application and rootzone moisture is well understood, little is known about the effects of these chemistries on microorganisms that populate the rhizosphere.

Working with the STRI, Cranfield University and Pennsylvania State University, Aquatrols evaluated the effects of their key wetting agent formulations on rhizosphere microorganisms. These trials were conducted in response to concerns raised within the turfgrass industry about the impact of surfactant applications on soil microbiology, primarily soil bacteria, fungi and other organisms such as beneficial entomopathogenic nematodes.

The first trial, conducted in collaboration with the STRI and Cranfield University, demonstrated that rootzone bacterial populations were not affected by Aquatrols soil surfactants. In a second trial, completed at Penn State University, data confirmed that Aquatrols soil surfactants did not adversely affect the health of beneficial entomopathogenic nematodes.

The results from these two research trials suggest that Aquatrols surfactant products can be used safely as part of turf management programmes. This is particularly important for those using biostimulant products to improve plant health and stress tolerance, or biological pest control products for leatherjacket and chafer grub control.

Turf managers can apply Aquatrols surfactants to optimise soil-water-plant interactions, improve irrigation efficiency and reduce water and energy use, trusting that independent university research has confirmed their safety to the rootzone microbiome of turfgrass.

