

## New wetting agent research

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A common question regarding soil wetting agents is “which product is best?” There are many products commercially available with their own unique chemistries and set of marketing claims, but not enough empirical research to answer this simple question. Wetting agent efficacy is likely influenced by many variables including course and field conditions. Research indicates that these products may perform differently by location and even by year at the same location. These inconsistencies add complexity in determining how a product might perform. Turfgrass professionals are using wetting agents for different purposes and end goals, whether it be to prevent localized dry spots, or improve drainage. However, they must identify their intentions for wetting agent use, the prices of products, where they will apply, application frequency, local research, and if the wetting agent behaves as predicted at their location. Consequently, the answer to the question above is “it depends.”

As the use of wetting agents continue to popularize, the concern for phytotoxicity (toxic effects on turfgrass growth) has also risen. Since the 1950s, wetting agents have generally become less phytotoxic, but the risk is still present and may occur at any time of the growing season immediately following applications. There may be various reasons for the phytotoxic effects such as turfgrass chlorosis that are caused by wetting agents. To prevent these negative effects, the most important rule during the

application process is to follow label directions. Following the suggested rates includes proper sprayer calibration and using the correct amount of carrier water. Another significant component listed on labels is watering-in the product, which serves to move the surfactants out of the canopy and into the thatch or soil. Success of this process is determined by irrigation efficiency through irrigation audits. Because these



products are attracted to both hydrophobic and hydrophilic functional groups, the amount of organic matter or thatch and water via irrigation or rainfall may cause differences in their efficacy. The overall goal in using wetting agents is to apply the recommended amount and place it where desired in the profile. A demonstration will be presented involving wetting agent-induced phytotoxicity.