



## Selecting the right wetting agent for sportsturf

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**K**EEPING SPORTS TURF HEALTHY under stressful conditions is no easy task. Among the many challenges sports turf managers face, soil moisture management is a primary concern. Water repellent soils are common in sand-based athletic fields and can result in irregular patches of wilted and drought-stressed turfgrass, often referred to as localized dry spot (LDS).

Soil wetting agents reduce the surface tension of water, allowing it to penetrate and wet the soil more easily. Irrigation and infiltration surfactants are designed to help increase water infiltration and irrigation uniformity. Before deciding on a wetting agent product, you should check university or reputable third-party trial data to support product claims.

No one product is best for every sports turf management program. When selecting a product, consider efficacy, management intensity, intended use, product longevity and price.

### LONG-TERM

Many turf managers prefer the convenience of making only one application in the spring without follow-up applications. Long-term wetting agents generally persist for at least 3 months in the soil.

An important note to keep in mind is that long-term wetting agents have greater potential for development of phytotoxicity and discoloration if the applicator is not cau-

tious. In addition, long-term wetting agents are more limited when it comes to tank-mix compatibility with other products (i.e. fertilizers, pesticides, plant growth regulators, etc.), in comparison to short-term wetting agents.

Long-term wetting agents are an excellent option for season-long prevention of LDS development on water repellent, sand-based fields in the Northern US. Using long-term products will minimize the number of applications needed during the growing season.

### SHORT-TERM

Short-term wetting agents are typically applied at 2 to 4-week intervals and allow you to make applications only when environmental conditions demand treatment. Moreover, there is potential to incorporate the monthly application into existing turf management programs. Short-term wetting agents have greater flexibility with tank-mix options when compared to long-term wetting agents.

Because short-term wetting agents generally persist for only 28-30 days in the soil, more frequent applications are necessary, requiring more time and labor investment. However, short-term wetting agents typically reduce the risk of leaf discoloration and phytotoxicity during hot, dry weather, especially when compared to long-term wetting agents.

Short-term wetting agents are best selected for water repellent sand-based greens, especially in transition and warm season zones, although they are becoming more popular in cool season zones. An additional use for short-term wetting agents includes late season "rescue treatments" to correct symptoms of LDS.

Irrigation surfactants may be a low-cost alternative to conventional wetting agents to treat difficult-to-wet areas caused by thatch or low soil surface hydrophobicity. The cost is further reduced when the agent is injected into the irrigation system.

In general, irrigation surfactants

are not as effective as a stand-alone wetting agent product to manage LDS or alleviate moderate to severe soil hydrophobicity. However, these agents are useful in difficult-to-wet native soil areas.

Wetting agents cannot alleviate soil water repellency from the turf canopy, but need to be watered into the soil to be most effective. Water long-term wetting agents into the soil immediately following application. Most short-term wetting agents need to be watered in within 24 hours of application. Always check the label and follow directions.

It is proven that wetting agents can help increase the water infiltration rate into the soil profile in hydrophobic soils. However, in areas with excessive thatch (greater than 1/2 inch) or soil organic matter (greater than 3.5%) the soil surface may retain moisture. Core-aerating and top-dressing with sand to reduce thatch and organic matter content will help prevent moisture retention at the soil surface.

Moisture retention at the soil surface is exacerbated when wetting agents are not watered into the soil profile. If wetting agents are not watered in with a sufficient volume of water to penetrate the hydrophobic layer, a temporary "perched water table" may form above the hydrophobic layer that maintains excessive moisture at the surface.

If you know that you are dealing with hydrophobic soils or LDS, a wetting agent can help alleviate the symptoms and bring your turf back to a healthy-looking condition. Do some research to find out which products will work best for your situation. ■

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