Hygroscopic & humectant technology use for water management challenges

Editor’s note: This article was written by Sarah Irwin, a marketing representative for Ecologel Solutions, LLC.

With rising costs, watering restrictions and recurrent drought, maintaining healthy turf with less water is a perpetually increasing challenge for many sports turf managers. Several new technologies have been developed to provide solutions for conservation without sacrificing quality. One such technology, Hydretain, is a liquid application designed to reduce overall watering requirements, and protect plants from drought stress in between periods of rainfall or irrigation.

When plants do not receive sufficient moisture from rainfall or irrigation, the ensuing drought stress can do more damage than all other environmental factors combined. By supplying roots with microscopic droplets in between periods of rainfall or irrigation, Hydretain can help minimize or even eliminate the effects of drought stress.

“After applying this product to an initial 3 acres of golf course turf during the summer’s severe drought and heat, I saw positive results in less than a week. The previously drought stressed, brown grass at the sites of my initial application was green and vigorous within one week of application of Hydretain. Subsequently, I proceeded to apply Hydretain to 100 acres of golf course turf. Within the first month of application, I noticed not only healthier turf under severe drought conditions,” said Rich Cope, golf course superintendent for the University of Texas Golf Club, “but my irrigation demand was decreased by 33% without sacrificing turf quality. Even though I irrigate with effluent water at no cost for the water, this irrigation reduction is significant because my pumping costs, including electricity and component wear, were reduced by 1/3 and my turf quality was significantly improved under the worst climatic conditions I have experience in 20 years of golf course management.”

Formulated from food grade materials, and containing no hazardous chemicals, Hydretain is environmentally friendly and safe to use around children and pets. Since Hydretain does not have the ability to store significant quantities of water, it will not encourage fungus or disease development. Although best results will be obtained by using Hydretain proactively and as part of a regular maintenance program, the product can be used for seasonal applications and for the individual treatment of localized dry spots.

Hydretain should not be mistaken for a surfactant or superabsorbent polymer. The Hydretain technology is unique in its ability to convert subsurface humidity into plant usable water droplets. As a liquid, Hydretain can be applied at any point in a plant’s life. In addition to reducing overall watering requirements and helping to minimize the effects of drought stress, Hydretain is also beneficial for seeding and sod establishment. Applied immediately after seeding, Hydretain increases germination rates by keeping seeds from drying out. Furthermore, Hydretain aids in establishment and root growth by keeping more water available for the developing roots of seedlings, sprigs and sod.

The Hydretain technology is sold by John Deere Landscapes under the name of LESCO Moisture Manager®; by BioPro Technologies, LLC as H3O Plus; and by Ecologel Solutions, LLC as Hydretain ES, Hydretain ES Plus and Hydretain ES Plus II.