

Can you save 'green' by being green?

Improving the bottom line through the usage of some easy-to-implement sustainable solutions

Sustainability is a hot topic in Golf Course Management these days. Resource restrictions such as land and water use are becoming more prevalent while regulations are making new development more prohibitive. In order to thrive it is necessary to not only accept this new working environment but embrace the challenge of seeking out new methods to use resources more efficiently.

The GCSAA+ has identified four key sustainability focus areas, three of which (Water Use, Energy Use, Pollution Prevention) can be significantly improved through the usage of two additive technologies without the need for significant capital investment – namely wetting agents and turf colorants.

Getting Water On Target Using Wetting Agents

In the U.S. the average golf course uses about 130 thousand gallons of water every day for irrigation. The costs associated with this water can exceed \$100,000 per year in some regions. Unfortunately a large part of this water never gets to the root-zone and is wasted as run-off due to a hydrophobic soil layer; whereas in other areas this water will pool resulting in overwatering which in turn can result in disease formation and additional fungicide usage.

“Quite often the surface tension of water simply isn't low enough

to penetrate the soil profile” says Randy Petrea, a scientist specializing in soil surfactants at Milliken & Company “the key is to develop a uniform wetting front to deliver moisture to the rootzone; such improvements can reduce water usage significantly”

One of the most exciting recent developments according to Mr. Petrea is the introduction of multi-branched wetting agents, “Over the past 5 years the versatility of multi-branched wetting agents have provided the ability to tailor a surfactant that can hold water or depending on the configuration a surfactant that can move water uniformly throughout the soil profile”.

Reduced water usage also has other cost benefits such as less energy and labor. Water pumping consumes more energy than any other equipment on a golf course and can account for 50% of a golf course facility's energy usage. Moreover, the use of hand watering is a labor intensive activity that can be eliminated through effective watering.

Getting More From Less With Turf Colorants

Consumption of fertilizers, pesticides, herbicides, and fungicides can quite often total multiple tons a year for a typical golf course. If overused these additives have detrimental effects, both to the turf and

to the bottom line.

Uniform coverage is essential in these applications and usage of a colorant as a spray pattern indicator (SPI) is a simple method of identifying spray areas. Many types of SPIs are available but staining is best avoided by using a 100% non-ionic, polymeric colorant such as the industry leading Blazon® product.

Another growing application of turf colorants is for turf enhancement through coverage of missing chlorophyll color or dormant or discolored grasses for either spot treatment or improving appearance of a course later into winter.

The result is reduced maintenance cost for winter relative to over-seeding, and a rapid rebound from dormancy as there is no competition from temporary winter grasses. From a sustainability perspective this is a preferred solution to over-seeding as less water, fertilizer, and pesticides are needed for treatment.

Final Thoughts

Every golf course faces it's own unique set of challenges. A number of wetting agent and colorant variations are available and it is important to work with suppliers to identify those products that are ideally suited to your application needs.