

Drought conditions and player safety

Editor's note: This article was produced by Aquatrols, a provider of soil surfactants and other technologies used to optimize soil-water-plant interactions.

THE ISSUE OF PLAYER SAFETY has taken center stage in recent years. Advancements in our understanding of sports injuries and their long-term effects on the human body have made us more aware of the tremendous risks athletes take every time they step onto the playing field.

Officials in every sport and at every level are now working to ensure that the health and safety of players is never again taken for granted. Many leagues are changing rules and upgrading equipment in an attempt to make the games safer.

However, ensuring player safety often begins with something much more basic than the rulebook: the playing surface itself. A consistent playing surface lays the foundation for safety, allowing athletes to do what they do best without having to think twice about making a sharp cut or leaving their feet to make a play.

Playing conditions are often compromised during inclement weather. Despite turf managers' best efforts, rain and snow events can quickly make conditions dangerous and unplayable. The 2013 baseball season has already seen its fair share of rain (and snow) delays. While we normally associate interruptions in play with this type of stormy weather, a lack of precipitation can be equally damaging.

In 2012, drought conditions across large sections of the United States left turf managers struggling to keep their turf alive and playable. Some counties and school districts were forced to shut down their playing fields because of turf damage brought on by prolonged drought conditions. The extremely dry weather made field conditions simply too dangerous for student-athletes.

As we head into the summer months, it's important to think about how drought can impact playing conditions and ultimately the health and safety of players. Turf managers must take steps to ensure that a lack

of rain will not interfere with their most important task: keeping players safe.

DROUGHT'S EFFECT ON TURFGRASS

It's no secret that water is vital to the growth of healthy turfgrass. Water keeps plants hydrated and plays an important role in photosynthesis. It also serves as the natu-

ral delivery mechanism for most other applied inputs on a sports field. A lack of water can cause turf to wilt, go dormant, or die altogether in a short period of time. Drought stress also leaves plants more susceptible to regular summer stresses, such as increased traffic, heat stress and disease pressure from pathogens and insects.

These added obstacles can create a nasty ripple effect for turf managers. Troy Smith, who served as the Turf Manager at the Denver Broncos practice facility for more than a decade, has seen the effects of drought firsthand.

"Without the correct amount of water, the plant will be compromised and cannot complete its life cycle. Drought makes it difficult to predict how much water is needed for the fields and interrupts subsequent maintenance practices, such as aerification and fertilization," he said.

Without adequate water and these important cultural practices, field conditions can quickly deteriorate and become unfit for play.

"Field hardness is a real concern, especially for turf managers who don't have the ability to water adequately," Smith said.

Field harness can make grass surfaces feel more like concrete. This can result in increased rates of injury in both contact and non-contact sports.

Over time, soils can naturally become water repellent, meaning they can no longer properly absorb water. If a soil has become water repellent, when rain finally does come, it will not be able to penetrate the soil surface properly. Most of it will simply run off the surface.

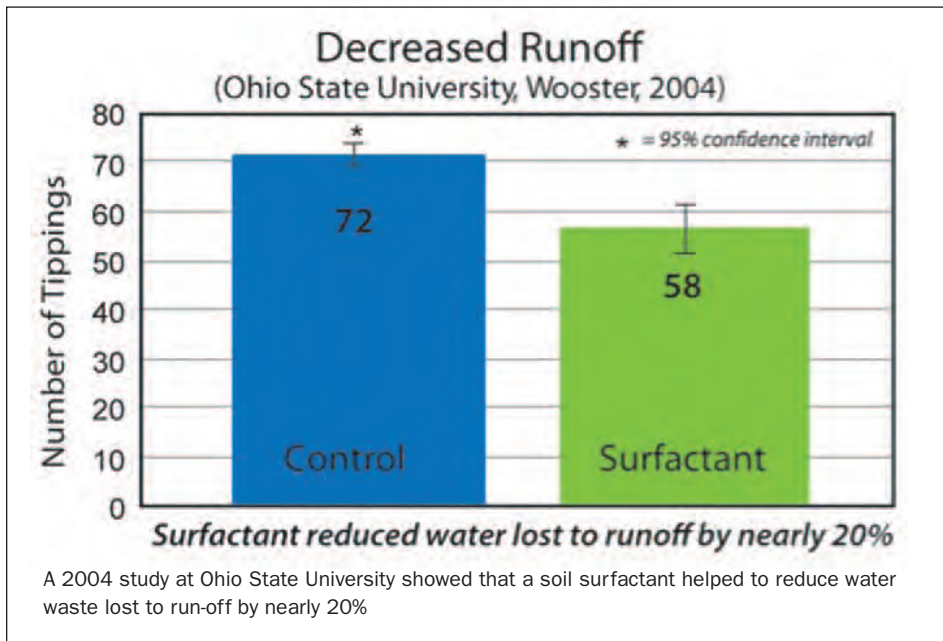
SEEKING SOLUTIONS

"Drought opens your eyes to how important water is to your fields on a consistent basis. Once you go through drought conditions, you are always on the look out for products that will help you manage your turf more efficiently during dry periods," said Smith.

Smith turned to soil surfactants to help offset the stress brought on by drought conditions. He explained that soil surfactants help to overcome issues with water repellency, ensuring even distribution of water throughout the soil profile. This helps to cre-



▲ **TROY SMITH, CSFM**, Denver Broncos, is a former president of the Sports Turf Managers Association.



ate more uniformity at and below the surface. “It is important to evenly distribute water through the soil profile to provide adequate hydration for the plants,” he said.

When it comes to creating safe playing conditions, uniformity is key. Patchy or uneven turf growth can create a hazard for athletes. By helping to balance air and water in the rootzone, soil surfactants encourage more uniform root growth and more consistency on the surface.

Soil surfactants can also help to reduce the amount of water lost to run-off, which is critical for turf managers who are dealing with water-use restrictions. By cutting back on waste and making more efficient use of applied water, soil surfactants can produce monetary savings and potentially stretch the time between irrigation events.

Because most soil surfactants can be tank mixed with a wide variety of other inputs, there is no added labor cost involved. Turf managers can simply add the soil surfactant to their regular spray program. Smith cited this ease of use another bonus of his surfactant program. “Being on a two-week spray schedule made it very easy to apply surfactant on a regular basis,” he said.

GETTING A HEAD START

The key to any successful surfactant program is to start early. Although soil

surfactants can help turf recover from existing drought damage, instituting a proven surfactant program before drought

conditions develop can provide a number of benefits.

By increasing soil moisture uniformity, soil surfactants help to create a healthier and more consistent growing environment. If the growing environment is managed to its peak potential early in the season, turf will be healthier and better able to defend itself when drought stress kicks in. In addition, water and monetary savings produced early in the season can be banked for the late summer months when the need for frequent irrigation becomes greater.

Seasons like 2012 remind us that we are often at the whim of unpredictable weather conditions. While a repeat of last year’s historic drought isn’t guaranteed, turf managers should be prepared for another difficult season in 2013. By maximizing water use efficiency, soil surfactants can help turf managers offset the physical and financial strain of a drought year and ensure safer playing conditions for all athletes. The key is to *start early*. ■

Make your sideline look as good as the end zone.

NEW TuffPrint™ CUSTOMIZATION

2012 ACC Championship Game used FieldSaver® Sideline Tarps from CoverSports®!



Blanket Style



ArmorMesh Style

FieldSaver® Features:

- Durable—stands up to cleated football shoes
- Breathable—allows water and air passage
- Grommets at 3' intervals on all sides for stake down

For price quotes, colors, sizes and fabric specs, visit www.CoverSports.com
 sales@coversports.com • 800-445-6680

We make covers for all athletic surfaces: Rain Covers, Growth Covers, EnviroSafe™ Stadium Padding



Humphrys CoverSports
Industrial and Athletic Fabric Products Since 1874