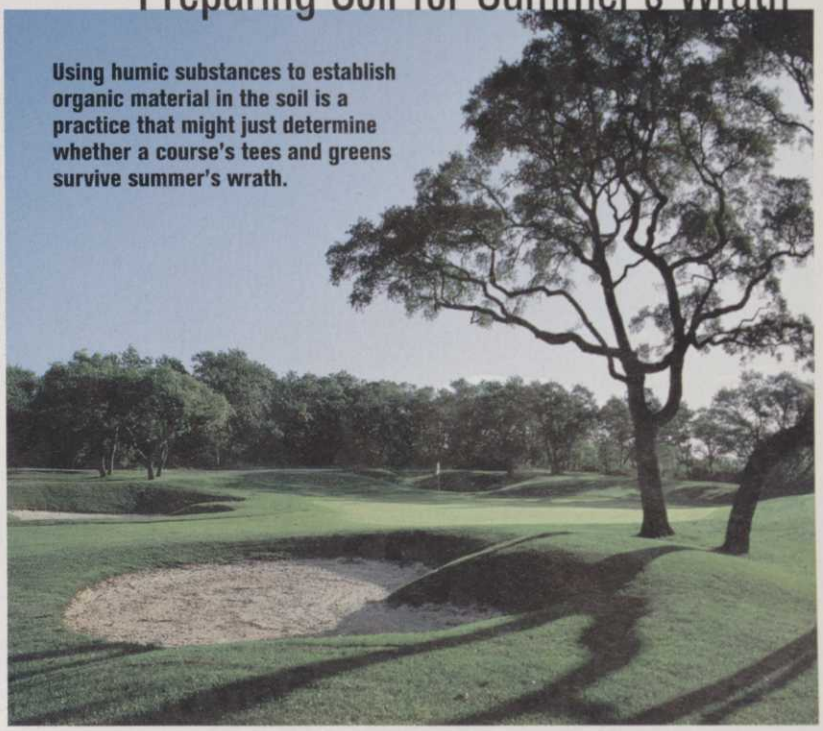
# Tips

## Preparing Soil for Summer's Wrath



**Using humic substances to establish organic material in the soil is a practice that might just determine whether a course's tees and greens survive summer's wrath.**

### Humic substances improve root system

BY KEVIN HATTORI

*"Readiness is all." (William Shakespeare, poet and playwright)*

*"Be prepared." (Lord Baden-Powell, founder of the worldwide Scouting movement)*

Shakespeare and Baden-Powell might have made good superintendents. After all, most superintendents would agree that being ready and prepared is better than reacting to crises.

Summer's stresses will make their annual appearance at some point this year, and superintendents who are prepared for their onset will fare better than ones who are not. With many areas of the country already facing drought, many superintendents are casting a wary eye towards June, July, August and beyond.

Fortunately, there are ways to get turfgrass ready for what is on the horizon. Since the foundation you lay for your turf determines how it responds later, it is critical to take the right steps now to build a strong one.

The goal of any nutrition program should be to create the healthiest possible environment for turf. Using humic substances to establish organic material in the soil is a practice that might just determine whether a course's tees and greens survive summer's wrath.

Using moderately heavy rates of a

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Spot.


Check.

Curalan® EG chases away Dollar Spot.

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good organic soil amendment and a biostimulant will provide a suitable, clean soil structure in which turf can grow. Humic substances improve older, push-up greens and tees by increasing the soil's water holding capacity and its ability to resist compaction during a drought. Humus actually alters and rearranges soil platelets to increase air and water penetration.

In addition to re-establishing always-important organic materials in the soil, humus increases cation and anion exchange characteristics, processes that flush out excess chemical salts in the soil. This is especially important since these salts, which come from multiple sources (poor quality water, pesticides and synthetic fertilizers), can cause phytotoxicity, especially during hot summer months.

**Adding organic materials to poor soils will improve both soil health and plant quality.**

On the other end of the spectrum, sand tees and greens are notorious for their inability to hold water, especially near the surface, where the rate of evaporation is high. Humic substances are valuable for combating this phenomenon, since they encourage deeper rooting and increased root-mass development. This is especially important when the summer months arrive, as existing root masses actually decrease during times of heat and drought stress. In short, the root system your turf develops prior to the summer will greatly determine its ability to survive. A healthier root system also provides better development and improved overall plant vitality.

Applications of organic substances will also help the existing beneficial microbes in the soil. Good organic materials supplement the soil, in turn providing a food source for beneficial microbes and supplying them with the nutrients they need to survive and flourish. Clusters of organic material actually encourage the growth of beneficial microorganism colonies, which compete with fungal diseases. Increased microbial activity also hastens the breakdown of thatch constituents, demineralization and frees previously bound nutrients, which can reduce the amount of synthetic fertilizer the turf will require.

Organics also increase the plant's ability to absorb nutrients through the roots. They have also been shown to influence critical metabolic processes like turfgrass root-tip development, respiration and photosynthesis.

Adding organic materials to poor soils will improve both soil health and plant quality. Using good sources of humus will provide your tees and greens with soil much closer to what nature first intended them to have. That combination will give your turfgrass a much better chance to survive the brutal summer months. ■

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