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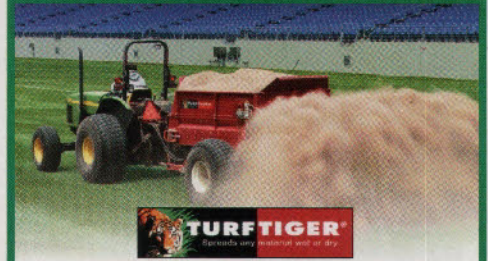
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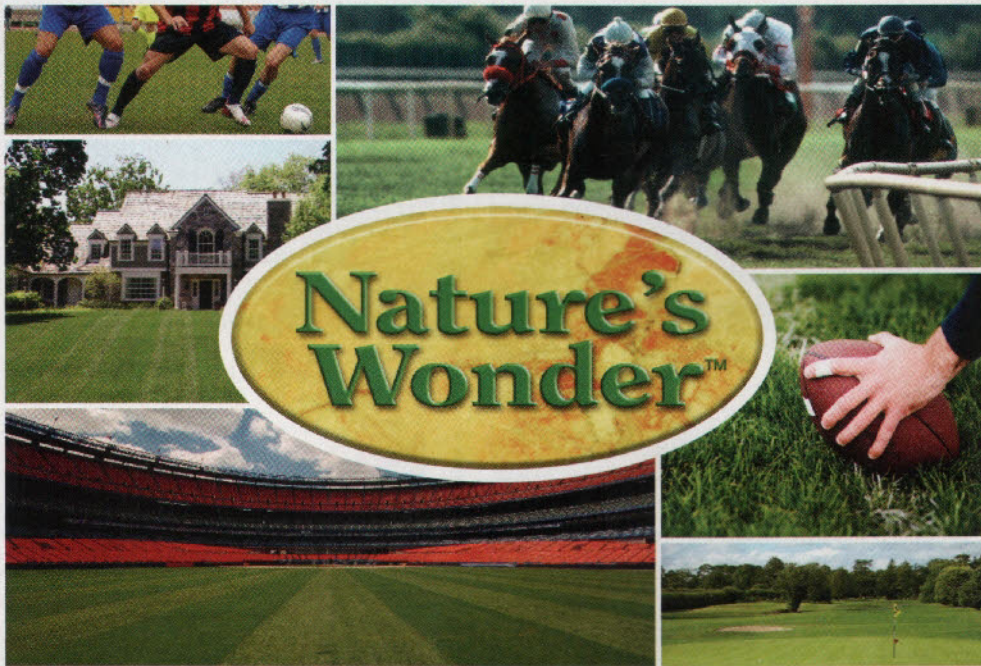
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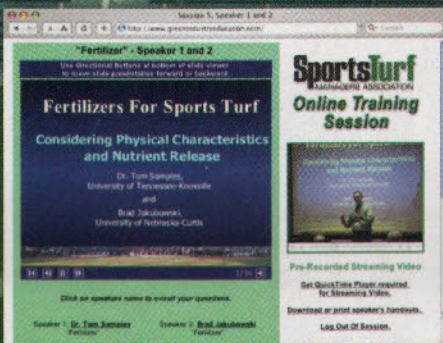
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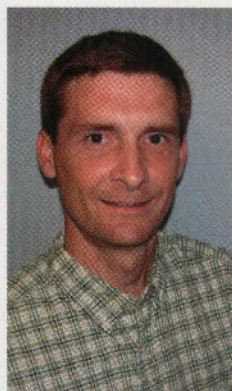
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Due to the drought and imposed water restrictions, we are not allowed to water our fields. What should we do?
North Carolina

This is a question that I heard repeatedly this summer and fall from field managers in North Carolina and several surrounding states. Unfortunately it presently looks like we may be in this situation at least through the winter. We figure that weather forecasters are normally wrong, but so far their forecast for a dry winter has been accurate.

I really downplayed this question through most of the summer because like many other people I figured it would eventually start raining. Once rains come, city commissioners or other regulatory types typically relax restrictions because they want their tax-paying constituents happy.

But the rain has not come and now North Carolina is suffering though the worst drought in the state's recorded history. As of December 1, 2007 14 water systems serving 470,000 residents have regular water supplies of less than 100 days. The state has agreed to fund \$3.5 million to purchase livestock food for the state's cattle farmers because the summer pasture grasses succumbed to drought and there has been no rainfall to establish winter grasses. Atlanta is down to a few months of drinking water and the governor of the state is drawing up plans of how to use the National Guard to distribute water needed by people for drinking, cooking, bathing, and flushing the toilet.

Given these grim conditions it has become increasingly difficult to justify irrigation of turfgrasses. At this point, advice does not come easy. I think actions taken months ago could have improved the chances to make it through a moderate drought. But given the level of restrictions that much of North Carolina is presently mandated to follow, we have run out of most options. The demand for water to be used in the homes and industry will always win over the needs to irrigate turfgrass.

Going back a few months, a few things could have been done knowing that water restrictions were imminent. The line of communication should be well-established between you and the "management of the facility." One or both of you need to keep the "users of the field" informed as to what is being done and why. If the water restrictions do not allow any irrigation, then users should be told the potential consequences. In the absence of rainfall and irrigation, fields will become more firm, show more signs of wear, and a reduced ability to recover from use. People need to know what to expect and it will be the turf manager's job to keep them informed.

In terms of turfgrass management, raise the mowing height to the upper limit of use tolerance. This will help to

insulate the crowns from damage and enhance rooting so that the plant has a larger reservoir from which to obtain water. Keep your mower blades sharp to reduce tissue damage. Try to limit use of the field as much as possible as drought-stricken fields have poor recuperative capacity.

Water restrictions may force field managers to reduce irrigation run times or eliminate irrigation cycles altogether. During the early phase restrictions a few field managers were able to appeal to city managers to allow them to continue a moderate schedule on a "stadium field" with the agreement that other on-site fields would not be watered. So, in some circumstances there may be the possibility of negotiation. The argument of maintaining safe fields was the primary justification for additional irrigation water. Several field managers asked me how much harder a non-irrigated field was compared to a typical well-irrigated field. While there are no hard and fast numbers, I have measured (using a Clegg hammer) fields in mid-summer after an irrigation system failure that were two and a half times harder without irrigation as they were a few months earlier with irrigation.

A good practice leading into a drought that can help is using wetting agents to better disperse water in the soil profile, reducing localized dry spots. Other turf management factors that can help the grass survive drought include using a low to moderate rate of nitrogen while maintaining adequate soil levels of phosphorus and potassium. Applying fertilizer to drought stressed turfgrass may worsen the problem. Avoid the use of pesticides, especially herbicides, on drought stressed turf.

This is also a good time to draft a contingency plan for your facility. Know your minimum water needs to maintain specific areas and the replacement cost for turf. In some cases, restrictions will allow you to reduce your total water consumption. If that is the case, have a reduction plan ready so you can demonstrate increasing levels of conservation.

Determine if alternative water sources are available for your facility. This could be effluent water, well water, or stored surface water. During this current drought, some field managers that previously relied on municipal water were able to truck water from on-site reservoirs and pump the water from the holding truck into their irrigation system to sustain fields.

Draft a field closure plan. Field closure may prevent total turf loss and can reduce the liability associated with play on an unusually hard field and/or a surface void of turfgrass. Work with facility management to determine approximate loss of revenues and loss of goods and services to the community if the fields are closed.

One final suggestion provided by the governor of Georgia—bow your head and pray for rain. ■

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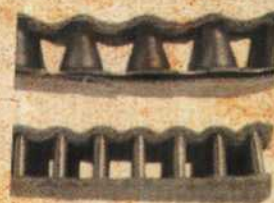
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