## **TURF TWISTERS**

## **KEEP THE ROCKS OUT**

Question: Please clarify the question I have about bunker drainage. That is, are geotextile fabric liners recommended over the entire bunker, or should they be placed under the drain lines? (California)

Answer: Geotextile fabrics can work in an excellent manner to keep rocks and other contamination out of bunker sand. The fabric, however, should always go under the drain lines. By covering an entire bunker with the geotextile, the chances are increased that drainage will reduce over time.

## **BUT THE COARSE SAND LAYER IS DEFINITELY IN!**

**Question:** Our course was built approximately 15 years ago, and the greens were constructed out of on-site materials generated from the lakes developed throughout the golf course. As a result, there is a great deal of variation among the soil profiles of the greens, ranging from a very fine sand to a heavy organic (muck) type soil. In investigating our future options, strong consideration is being given to following the Green Section's specifications for putting green construction. However, there seems to be a great deal of controversy regarding the necessity of the intermediate or choker layer in this method of construction. The contractor who has been retained for this project says it is an unnecessary additional expense. What is the Green Section's position on the elimination of the intermediate sand layer? (Florida)

Answer: The Green Section is aware of the controversy over the need for the intermediate coarse sand layer called for in the specifications. The following is taken from the specifications, which will be republished soon. "The Green Section has researched this particular specification requirement carefully over the years and now definitely concludes and *positively recommends* the intermediate sand layer be included in all USGA Green Section greens. It is an integral part of the "perched water table" concept. Its function is undeniable, and serious functional consequences may result if it is eliminated. Failure to adhere to this requirement means you are not building a USGA Green Section green." This statement should adequately cover the Green Section's position on the importance of the intermediate coarse sand layer.

As for the question of cost, in relative terms, the additional material and labor required to install the intermediate layer is insignificant, compared to the total cost of building or rebuilding a modern putting green.

## HOW'S THAT AGAIN?

**Question:** Our most recent water analysis expressed the results in "decisiemens per meter (dS/m)." Our previous test used "millimhos per centimeter (m mhos/cm)." What is the difference? (Colorado)

Answer: Actually, there is no difference. The two values are the same and are means of expressing electrical conductivity as it relates to water salinity. Test results are expressed occasionally in micromhos per centimeter (u mhos/cm) as well, which can add to the confusion. Remember, 1 dS/m = 1 m mho/cm = 1000 u mhos/cm.