



Count on it.

A Conversation About Water Conservation

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It's no secret in our industry that reducing water use without sacrificing turf and landscape quality is a top priority. Living organisms including turf and other plants are composed of as much as 70 or 80% water. It's one resource we can't live without. Water conservation is without question a critical issue in turf and landscape management.

There are a number of ways to approach the problem of water use efficiency in our industry. These include simply reducing the amount of area that is irrigated, using a plant species that require less water, applying "reclaimed" effluent water to reduce the demand on municipal supplies and improve our ability to apply water only where it's needed. We need to improve our ability to schedule irrigation based on agronomic demands. Irrigation systems today are quite sophisticated in applying water uniformly according to precisely controlled schedules. Yet the basic decisions of where, when and how much water to apply are usually educated guesses. While our irrigation systems are technologically advanced, our agronomic decision making is too often done by the seat-of-the-pants.

We at Toro are keenly interested in the agronomics of irrigation. The precise application of water requires knowledge of how plants use water and of site conditions that affect water dynamics. Soil characteristics have a major influence on watering practices. Soil texture, organic matter content and compaction all affect the amount of water that a soil can store and the rate at which it can absorb water from rainfall or irrigation. The problem is that soil conditions can vary significantly across a site. Because of this, we are researching a variety of technologies including in-ground soil moisture sensing, mobile soil moisture mapping, and mobile plant stress mapping to assess turf moisture status quickly and easily for better irrigation scheduling.

Microclimatic variation also has a major effect on the amount of water lost by the plant-soil system through what's known as evapotranspiration (ET).

Assessing site variability and improving ET estimates are two areas that we feel have potential for improving irrigation control to increase water use efficiency. The Intelli-Sense™ ET-enabled controller was developed specifically to schedule water application based on these variables.

Water conservation is a challenge that Toro takes very seriously and we're working very hard to ensure this most precious resource is managed carefully.