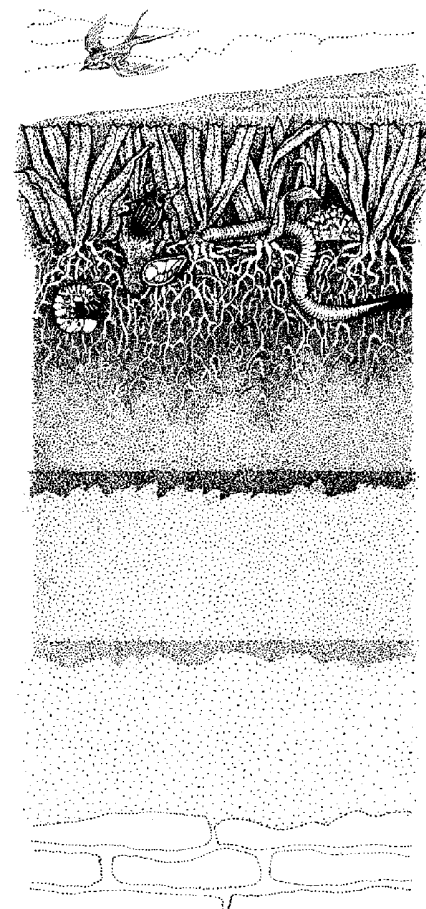


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Water Conservation Techniques in Turfgrass

Turfgrass is considered by some as a major water consuming landscape feature. For example, Kentucky bluegrass is often singled out as a grass requiring high irrigation in arid and semi-arid regions of the U.S. In recent years there has been a shift towards less water demanding landscapes by utilizing such techniques as low water requiring turfgrass species and/or cultivars and alternative landscape features like xeriscapes. Although these techniques are useful in new landscape installations and some retrofitting of existing sites, it remains that many landscapes in cool-season turfgrass regions are mainly composed of traditional turfgrasses such as Kentucky bluegrass, perennial ryegrass, and fine and tall fescue. Thus, it is important to develop and use simple turfgrass management strategies that will conserve water on existing sites with traditional turfgrasses by reducing plant water use. ■

Two of the most common maintenance practices used in turfgrass management are mowing and fertilization. Mowing has a pronounced influence on the physiology and growth habit of the turfgrass plant. Mowing influences such properties as leaf area, root system depth and distribution, and shoot density which can influence plant water use. Fertilization, especially with nitrogen, can also influence plant water use by altering the physiology and morphology of the plant. The impact of variation in seasonal mowing heights and fertilization (nitrogen and potassium) on the water use, growth, visual quality,

and water use efficiency of Kentucky bluegrass was studied in several experiments.

Mowing

One of the basics of mowing is selecting the height at which to mow. Conventional wisdom suggests mowing as high as possible in order to produce a more stress tolerant plant by encouraging a deeper root system. High cut turf will have a greater leaf area and lower resistance to water leaving the canopy (referred to as canopy

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