

Managing Water Use by Warm-Season Turfgrasses in a Drying Climate

Timothy D. Colmer¹ and Louise Barton

Keynote Address

Paper summary: Turfgrass managers in many regions of the world are under increasing pressure to restrict water use. As one example, south-western Australia is experiencing declining rainfall due to a changing climate. Turfgrass areas are important for mental and physical health, but fit-for-purpose surfaces with minimal environmental impacts are expected. Industry best practices based on scientific evidence will contribute to efficient use of water resources. This keynote address will present outcomes from research by us, and others, on factors influencing turfgrass water use and irrigation requirements. The focus will be on warm-season turfgrasses during hot and dry summers and will consider: variation in water use amongst species, soil water repellence and use of soil wetting agents, the influence on water use of nitrogen nutrition and of mowing height. Turfgrass growth and color, as related to water and other factors, will also be discussed.



Speaker Biography: Tim Colmer is a plant physiologist (BSc. Agric. 1A Hons, UWA; PhD in Plant Biology, UC Davis). His research is on abiotic stress tolerance (salinity, flooding, drought) in grain crops, forages, turfgrass and halophytes. Jointly with Louise Barton, he has led several projects on turfgrass water and nutrient management on sandy soils in a Mediterranean-type climate, in partnership with industry groups. Research outcomes have contributed to industry best practices, and have been communicated via scientific publications, conferences, industry articles and field days (<http://www.plants.uwa.edu.au/research/turf-research-program>). He has supervised 23 PhD (3 on turfgrass), 2 MSc and 34 Honours research students. He has served as Faculty Associate Dean for Teaching & Learning (2005-2007), Head of School (2013-15), President of the Australian Society of Plant Scientists (2013-14), Australasian Editor for *Annals of Botany* (2001-present), and Handling Editor for *Journal of Experimental Botany* (2011-present).

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