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Managing Turf for Minimum Water Use

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Available water is rapidly becoming one of the least reliable resources needed to maintain high quality turf. Municipal water supplies frequently become over taxed during periods of drought and landscape uses often are assigned a low priority. Even in suburban and rural areas, water supplies used to irrigate turf are limited and are in competition for use by agriculture, recreation, industrial and commercial enterprises. It is clearly in the best interest of the turf manager to conserve water whenever possible and to design irrigation programs which provide quality turf with minimum water use.

The conservation of water while maintaining quality turf is something of a contradiction. Grass uses water and healthy vigorous turf uses more water than a thin sickly turf. So, how can the turf manager conserve water aside from avoiding waste through runoff or leaching? Research conducted over

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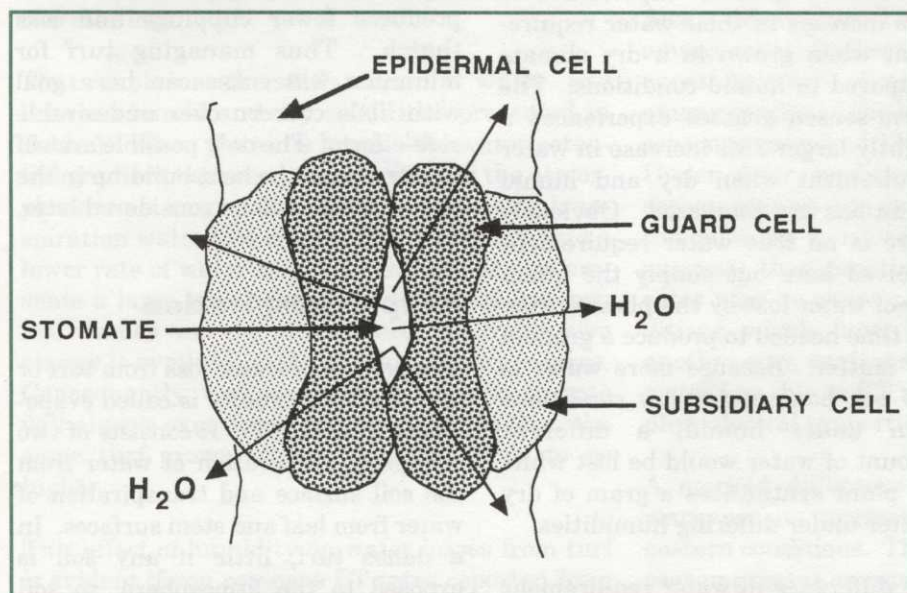


Figure 1. Stomate in a grass leaf surface showing water vapor flux from open stomate. Turgor of guard cell controls size of stomatal opening.