

Measuring evapotranspiration (ET) is an essential part of responsible irrigation management: the ETgage™

The ETgage is an atmometer that provides a direct estimate of reference evapotranspiration (ET). It consists of a ceramic evaporator covered by a green material (Gore-Tex) which allows moisture to evaporate but prevents rainfall from entering the instrument. The 'artificial' crop surface responds to the climatic variables that influence ET, namely, sunshine, temperature, humidity and wind. Atmometers have been used as a research tool for many years, but only recently developed for commercial use. The ETgage is manufactured in Colorado and is currently being used in many agricultural and sports-turf applications by irrigation managers, consultants, farmers, agronomists and green-keepers in 37 US states and 23 countries.

The ETgage is supplied with a rain gauge, enabling the drivers of irrigation (rainfall and ET) to be measured directly on a daily basis, quickly and simply. This avoids the need for expensive electronic equipment, processing and analysis, required with more sophisticated instruments such as automatic weather stations. It is robust and designed for seasonal outdoor installation. It is an ideal tool for those interested understanding irrigation water requirements, justifying 'reasonable' irrigation needs and demonstrating efficient use of water.

Cost

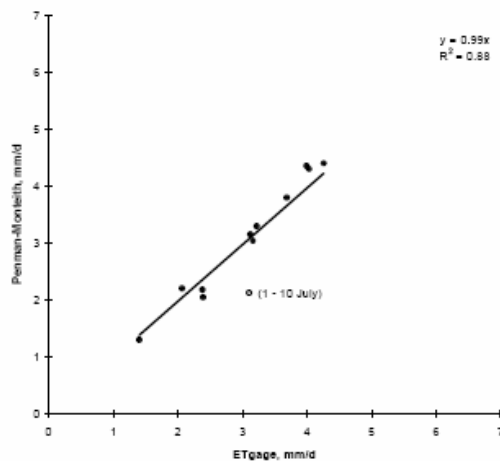
The ETgage costs £290 (no VAT). This includes delivery and a set of guidance notes for both sports-turf and agricultural irrigators. The notes provide advice on where to install the ETgage, and how to manipulate and use the data as part of an irrigation management strategy.

Accuracy

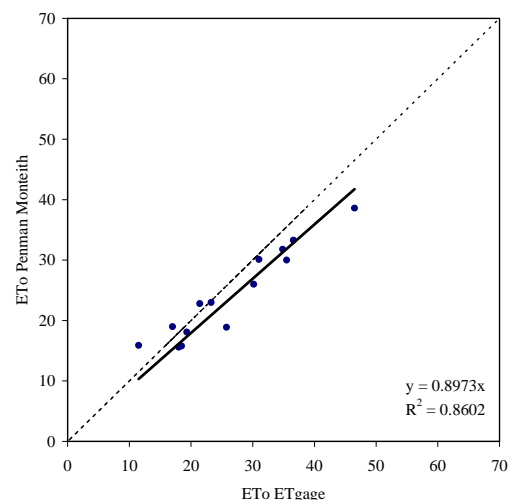
The ETgage has been tested at a range of agroclimatic locations since 1988, including Colorado, Israel and recently in the UK. The results generally show a very good agreement with other more expensive ways of measuring ET. For example, the ET measurements obtained from an ETgage with ET derived from an automatic weather station at Silsoe in Bedfordshire (UK) during the summer in 1996 (a) and in 2006 (b) are shown in Figure 1.



(a) 1996



(b) 2006



For more information on the ETgage™ contact Jerry Knox by email jerry@irrigation-efficiency.com