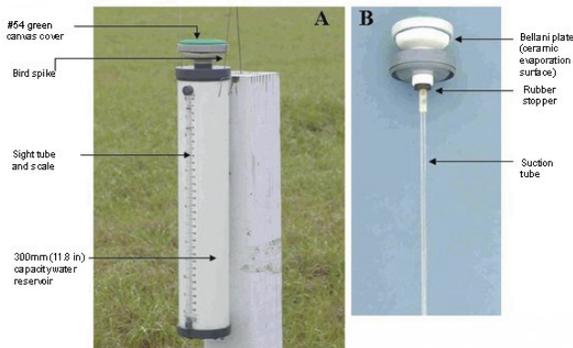


Atmometer Data Collection Protocol

This document was created in partnership with the Ventura County Resource Conservation District and the University of California Agriculture and Natural Resources division. This document is intended to provide guidance with data collection protocols for atmometers.

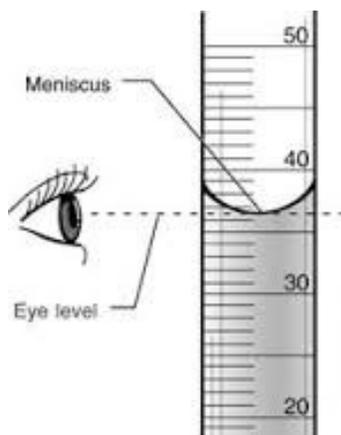
What is an Atmometer?

An atmometer is a scientific instrument used for measuring the rate of water evaporation from a wet surface to the atmosphere. Atmometers are mainly used by farmers and growers to approximate evapotranspiration (ET) rates of crops at any field location. Evapotranspiration can be thought of as a measure of all the water that evaporates from land surfaces plus the water that transpires from plant surfaces. Based on the amount of water that does evaporate and transpire, the user can water crops correspondingly, which results in less water use and possibly increased crop yields.



Atmometer Placement

An atmometer is relatively easy to install and use. It is usually mounted on a wooden post at least 36 inches above the ground in an area representative of the weather and field conditions. The top plate of the atmometer should be placed above the mounting pole, and in direct sunlight, so the evaporation rates are not affected. The unit should not be placed near tall trees or buildings, as they can affect the amount of exposure that the atmometer has to environmental factors, which affect evapotranspiration rates. Water loss can be seen directly from the mounted site tube.



Data Collection

Dependent on the atmometer type, digital or analog, data collection can vary slightly. When reading the site tubes ensure that your eyes are at the same level as the meniscus and that you take the reading from the bottom of the meniscus. Readings can be delivered in either centimeters or inches, both are listed on most atmometers. When collecting recorded data from digital atmometers, assuming a standard HOBO sensor is used, read the site tube and download the HOBO data using the appropriate shuttle device. Be wary of the atmometer water level, ensuring you refill the reservoir appropriately, so it does not dry out.