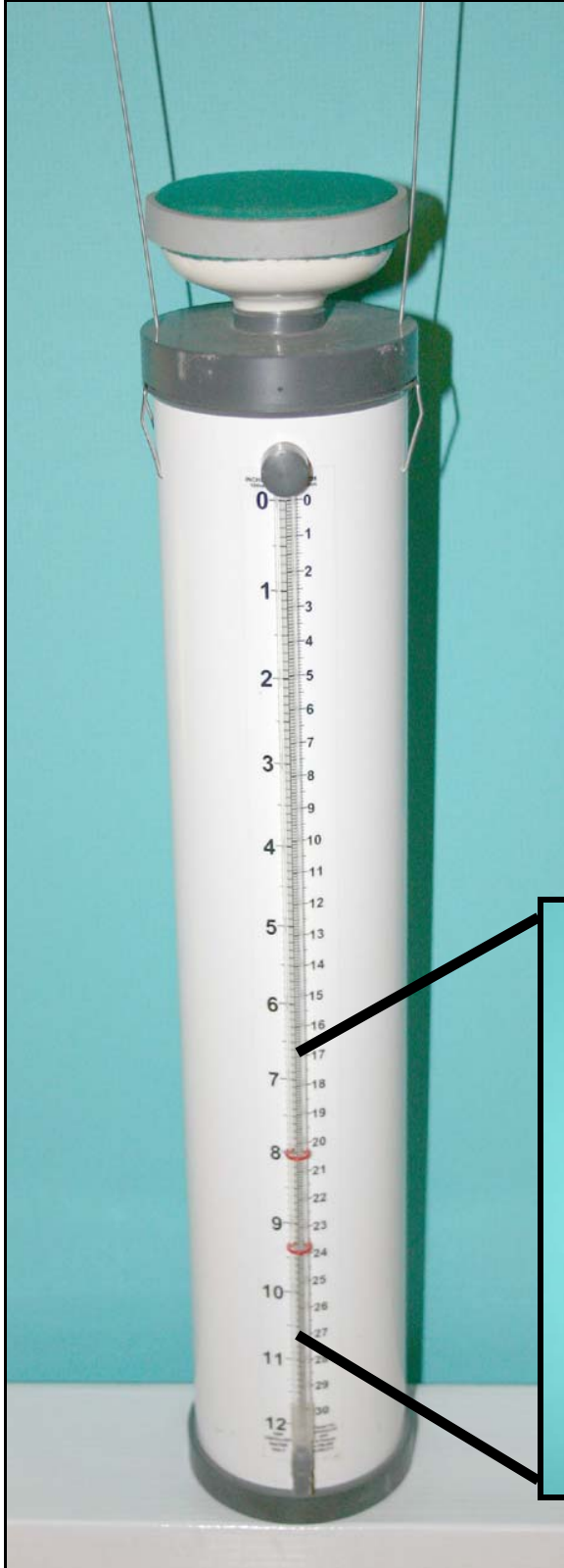


WATER-TIP
COOPERATORS

Cooperator tools for WATER-TIP

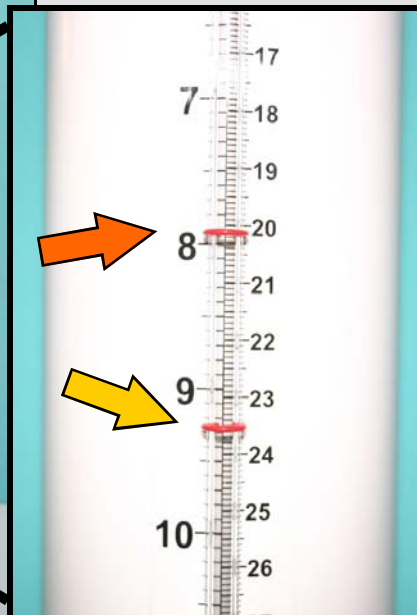
EQUIPMENT

WATER-TIP EQUIPMENT



Pictured above, Dan Leininger, NRD Water Conservationist, takes a reading from an atmometer, which simulates the evapo-transpiration of a corn leaf.

Here's how the atmometer works: An atmometer, or ET gauge, is a canvas-covered ceramic evaporation plate mounted on a water reservoir that has a capacity of 11.8 inches. The canvas covering controls the evaporation rate simulating the rate of evaporation from a healthy leaf in a well-watered situation. The green canvas that covers the plate mimics the solar radiation absorption characteristics of a plant leaf. Water is provided to the ceramic plate by suction through a plastic supply tube and the amount of water drawn to the plate depends on wind speed, sunlight, and relative humidity.

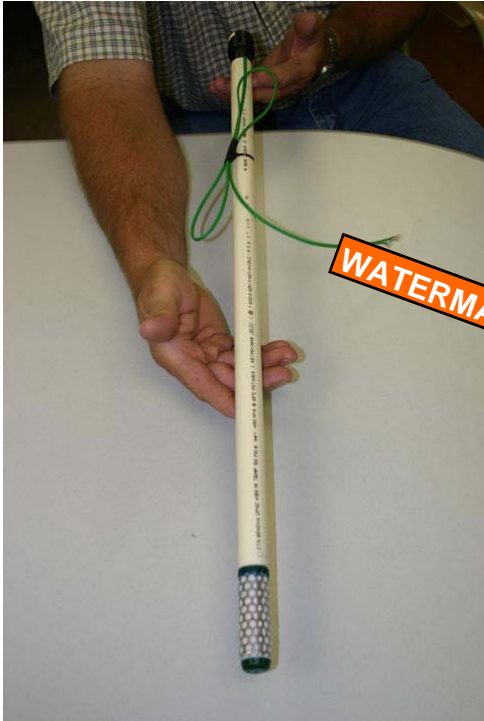


(Close-up of the scale)

As water evaporates from the ET gauge, the water level in the reservoir and sight tube on the outside of the reservoir decreases.

The ET gauge has two movable red rubber bands on the sight tube that can be used to mark the level of water in the tube at different times. The top rubber band could be used to mark the initial water level and the other could be used to indicate the water level when the next irrigation is necessary.

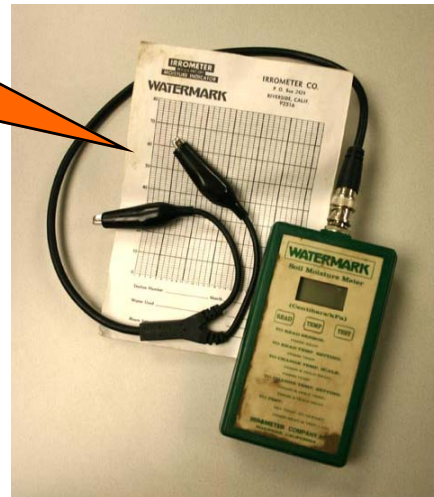
Cooperator tools for WATER-TIP EQUIPMENT



Watermark® sensors were used to track soil moisture at CROP-TIP. The Watermark® sensor operates on the electrical resistance principle (pictured to the left) and is attached to 1/2" inside diameter PVC pipe.

Pictured below is the Irrrometer® Moisture Indicator to calculate soil moisture from the sensors.

WATERMARK® SENSORS



DATA LOGGER

We also used a Data Logger to obtain soil moisture readings from the Watermark® sensors (pictured above).

Pictured to the right: Dan Leininger, NRD Water Conservationist, downloads soil moisture readings onto a laptop computer to graph the data.