

#### 4. Wind



Figure 5. Cup anemometers (left) and sonic anemometers (right) are used to measure wind speed (Photos courtesy of Decagon Devices).

Wind can affect evapotranspiration, and thus plant water use, by moving humid air away from the plant canopy or soil/substrate. Wind reduces boundary layer resistance for water movement from the soil/substrate or crop to the air. More air movement results in greater evaporation.

Anemometers measure wind speed via cups, propellers, hot wires, or ultrasonic signals. The number of rotations over a given period is measured by cup and propeller anemometers. Hot wire anemometers use the change in temperature of a heated wire caused by wind speed. Sonic anemometers measure the time it takes for an ultrasonic pulse to move from one transducer to another.

Some anemometers also measure wind direction, but this information is typically not critical for growers.