

AP4 Porometer



What can the Porometer detect?

Detection of drought stress before wilting symptoms are visible.

How do you use the Porometer?

Start with the **calibration** of the sensor. Put a leaf of your crop between the **leaf clip**, preferably on the youngest fully grown leaf. The **time to take a measurement depend on the stomatal aperture** (more closed = takes longer to get stable measurement). Take regularly at least **5 scattered measurements** to reach a conclusion.

Scientific background & interpretation results

The porometer measures how quickly water get transpired through the stomata. The stomatal conductance or stomatal resistance can be determined on the basis of the calibration curve.

If plant experiences drought stress:

- ➔ Stomata will close more to save water
- ➔ Stomatal conductance ↓ and stomatal resistance ↑

Pros & Cons

- + non-destructive, accurate measurements, direct readout of stomatal conductance/resistance
- Expensive, time-consuming calibration, many parameters have to be taken into account during the measurement, stomatal aperture depends on different parameters in addition to drought stress e.g. light, temperature, time in the day,...

Price range: € 7000 - 10000

Company: Delta-T Devices

More information? <https://delta-t.co.uk/product/ap4/#overview>