



## **PRESS RELEASE**

### **Detecting plant stress by measuring leaf water stress using a field portable spectroradiometer**

*Lawrence, MA – September 11, 2017* – Water stress has an impact on a plant's photosynthetic performance and the severity decides whether or not a plant can recover from damage inflicted with additional irrigation.

The PSR+ is a high resolution/high sensitivity field spectroradiometer covering the full UV/VIS/NIR range from 350-2500nm. It is a rugged, field portable instrument with all solid state photodiode arrays and no moving parts for reliable operation. The PSR+ provides auto-shutter, auto-exposure and auto-dark correction for one-touch operation. It can be equipped with both direct attach lenses and fiber mount FOV lenses. It is available with a range of accessories including contact probe, Miniprobe, pistol grip, benchtop probe and leaf clip. For measuring leaf water stress the unique leaf clip is an invaluable resource. The leaf clip has a pushbutton trigger and a separate tungsten halogen illuminator that rail mounts to the PSR+ - keeping heat away from your sample during measurement to prevent burnout. An integral swing-away reflectance panel provides for convenient reference measurements.

A researcher can use the leaf clip to measure leaf water stress *in situ*. The resulting spectra can show the primary water absorption feature wavelengths for analysis of water stress: 760,970,1200,1450 and 1950 nanometers. Changes in the red edge that indicate water stress (moving to shorter wavelengths) can also be noted as an indication of less chlorophyll production. All spectra are saved as ASCII files for use with third party software including ENVI, R2 and chemometrics software. In addition, the DARWin SP Data Acquisition software which controls the instrument includes pull-down menus for 19 vegetation indices including WBI (Water Band Index) and NDWI (Normalized Difference Water Index).

For more information, visit:

[http://www.spectralevolution.com/applications\\_leaf\\_water\\_stress.html](http://www.spectralevolution.com/applications_leaf_water_stress.html)

#### **About SPECTRAL EVOLUTION**

Established in 2004, SPECTRAL EVOLUTION is a leading manufacturer of laboratory and handheld portable spectrometers, spectroradiometers and spectrophotometers. SPECTRAL EVOLUTION spectrometers are used worldwide for many mission-critical lab and field applications in mining, remote

sensing, vegetative studies, ground truthing, environmental and climate studies, developing satellite calibrations, and more, due to their reliable, robust, rugged design and user-friendly one-touch features.

SPECTRAL EVOLUTION maintains a facility in Lawrence, Massachusetts which houses design, prototyping, manufacturing and service facilities for the instruments that it markets and sells worldwide, either through direct sales, OEM sales or through distributor agents.

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