



## **PRESS RELEASE**

### **Using Vegetation Indices with a Field Spectroradiometer**

#### **SPECTRAL EVOLUTION's DARWin SP software includes 19 popular vegetation indices, including NDVI.**

*Lawrence, MA – July 29, 2014* – Vegetation Indices are an important tool in remote sensing applications. Different types of surfaces reflect light differently. Vegetation that is photosynthetically active absorbs more red light and reflects most of the near infrared light. A vegetation index, like the popular Normalized Difference Vegetation Index (NDVI) works as an indicator that describes the greenness or density and health of vegetation based on the measurement of absorption and reflectance. NDVI for example, is calculated as the normalized difference between the red and near infrared bands of a spectral measurement according to the formula:  $NDVI = (NIR-RED)/(NIR+RED)$ . The bigger the difference/higher the measurement, the heavier (and usually healthier) the vegetation.

SPECTRAL EVOLUTION'S field portable spectroradiometers and spectrometers include DARWin SP Data Acquisition software that provides pull-down menu access to 19 vegetation indices, including NDVI. These instruments are rugged field portable, high resolution spectroradiometers and spectrometers that can be used to measure, monitor, and assess:

- Vegetation dynamics
- Plant phenological changes over time
- Biomass production
- Non-destructive measurement of canopy greening, senescence, and stress
- Soil moisture
- Pasture condition and performance
- Changes in range land
- Estimating crop yields
- Land cover classification
- Carbon influx or sequestration
- Plant photosynthesis activity
- Leaf area index (LAI) measurement

- Vegetation identification

In addition to NDVI, DARWin also provides access to:

GRVI (Green Ratio Vegetation Index)	IPVI (Infrared Percentage Vegetation Index)
SR (Simple Ratio Vegetation Index)	Sum Green (Summed Green Vegetation Index)
DVI (Difference Vegetation Index)	PRI (Photochemical Reflectance Index)
SAVI (Soil Adjusted Vegetation Index)	NDVI 705 (Red Edge Normalized Vegetation Index)
Red/Green (Red Green Ratio)	WBI (Water Band Index) <span style="float: right;">N</span>
ARVI (Atmospherically Resistant Vegetation Index)	DWI (Normalized Difference Water Index)
Green NDVI (Green Normalized Difference Vegetation Index)	PAR (Photosynthetically Active Radiation)
EVI (Enhanced Vegetation Index)	
MSAVI2 (Modified Soil Adjusted Vegetation Index Type II)	

These vegetation indices can be used with our field units to confirm or correct hyperspectral imagery with ground truthing or as part of a grid approach to mapping and measuring an area, for example, a crop field.

For more information: [http://www.spectralevolution.com/software\\_application.html](http://www.spectralevolution.com/software_application.html)

Or, to speak with a Technical Specialist: [www.sales@spectralevolution.com](mailto:www.sales@spectralevolution.com)

#### **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.

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