



**FOR IMMEDIATE RELEASE:** August 11, 2015

## **Woods End Releases Solvita® Field Test for Checking Soil Biology**

(Mt. Vernon, ME) [Woods End Laboratories](#), manufacturer of laboratory based soil respiration and amino-nitrogen [soil tests](#), has announced the release of the [Solvita® Field Test](#), which enables growers and crop consultants to conduct on-site evaluations of soil biology without the added expense of sending samples to a laboratory.

### **Introducing the Solvita® Field Test for Soil Biology**

As growers have become more interested in biological soil fertility – more popularly known as “soil health” – measuring soil CO<sub>2</sub> respiration in the field has become important as a way to gauge the quality of the soil’s biology. This measurement is also [significant](#) for a reason that has been overlooked until recently: It provides a way to track how much CO<sub>2</sub> the plants are receiving.

### **Why This is Important**

Plants have a large appetite for CO<sub>2</sub>, particularly mid-summer. They extract CO<sub>2</sub> from surrounding air to form basic sugars through photosynthesis. During the most rapid growth, however, CO<sub>2</sub> can be a limiting nutrient. This means yields are saturated at lower than potential levels.

“It would take 12 to 38 cubic acres of air to provide enough CO<sub>2</sub> for an acre of wheat and corn,” Will Brinton, Ph.D., the inventor of Solvita, explained. “We commonly assume plants just somehow get all this from the air but the fact is much is coming directly from soil due to microbial respiration.”

Brinton has presented multiple lectures and National Resources Conservation Service [webinars](#) where he discusses early Swedish studies that demonstrate plants can get all their CO<sub>2</sub> from biologically fertile soils, but not when the soil is biologically depleted. His findings show that the microbe respiration rate measured in the field can indicate when the soil is providing sufficient levels of CO<sub>2</sub> for healthy high-yield growth.

“Basal respiration expresses the total activity of bacteria and fungi living in the soil,” Brinton explained, “and this reflects the system’s balance of soil organic matter, the primary source of CO<sub>2</sub> which diffuses out of soil. With the Solvita® Field Test, growers can accurately monitor this rate and make observations that can affect future organic matter applications and yield.” Test results may be compared to tables provided in the Solvita® manual and to [online resources](#) for calculating CO<sub>2</sub> rates and biomass, which indicate the significance of crop CO<sub>2</sub> demand.

### **How the Field Test is Different from One Performed in a Lab**

This test was developed so that growers or crop consultants in the field can obtain results with a few simple steps. The Solvita® Field Test enables the user to put a moist soil sample in a jar, insert a probe, let it set for 24 hours and then check the probe’s color against a color chart or with a digital color reader (handheld spectrometer). The results indicate a CO<sub>2</sub> value that shows how many pounds of CO<sub>2</sub> per acre the soil microbes are releasing (directly related to crop growth). From this one can estimate how much organic nitrogen and phosphorous are likely to be released from the organic matter in the soil due to microbes “feeding” on it.

### **The Solvita® Field Test includes:**

- Field Version Digital Color Reader (Spectrometer)
- 25 Solvita® Probes

- Miniature Digital Balance (to weigh soils)
- Incubation Jars
- Interpretation Guide

### **Complete Soil Health Lab Testing**

Growers still wishing to get a complete, professionally integrated view of soil biology as it influences nutrients may obtain Soil Health Test results by sending soil samples to Woods End Laboratories or one of the many soil test labs across the country using Solvita® products. Use the [Soil Solvita map](#) to find the lab nearest you. For instructions on sending samples to Woods End, email [lab@woodsend.org](mailto:lab@woodsend.org) and check "[The Soil Health Test](#)" link ([woodsend.org](http://woodsend.org)).

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*For more information or to set up an interview,  
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