



## Welcome to Ground Work

### *Using Biologicals in the Spring*

3/22/12

*As your soils start warming up and Spring planting approaches, you have several options to increase biological activity and get things humming in your soil.*

#### Residue™

If you still have crop residues out on your fields, a Spring **Residue™** application will speed up decomposition and help recycle those nutrients back into the soil. The fungi in **Residue™** are great at breaking down the carbon, cellulose, and lignin in crop residues. There are many microbes in **Residue™** and you want to make sure you have those bacteria and fungi out there building soil tilth, cycling nutrients, and preparing a good seed bed for this year's crop.

#### Myco Seed Treat™

When it comes time for planting, you can help stimulate seedling vigor and long term plant health by using **Myco Seed Treat™ (MST)**. **MST** contains seven

different species of mycorrhizae, along with beneficial bacteria, food sources, and some nutrients.

Mycorrhizae, a type of beneficial fungi, form a symbiotic relationship with the roots of plants. They provide more surface area in the vicinity of the root, which increases the amount of water and nutrients that are absorbed by the plant. Mycorrhizae also have a positive effect on the numbers and diversity of microbes present in the rhizosphere.

The beneficial microbes in **MST** help colonize the rhizosphere of each seed you plant while the food sources/nutrients help the microbes get established and also attract other beneficial microbes to the area. Increased microbial activity close to the seedling boosts growth because the constant microbial cycling of nutrients frees up nutrients that are then utilized by the young plants.

### **SP-1™**

Last but not least is **SP-1™**. Whether you are broadcasting, banding, or foliar feeding, Spring **SP-1™** applications are important for soil and plant health. **SP-1™** is loaded with a diverse mix of beneficial microbes. Most of these microbes prefer aerobic conditions so they thrive in the upper portion of the soil, especially near plant roots.

Having beneficial microbes living near the roots of your crops is ideal for many reasons:

- they fix nitrogen, solubilize phosphorus, and cycle nutrients, many of which become available to plants
- they build soil tilth and improve soil structure
- they immobilize nutrients and retain them in the rhizosphere
- they improve water infiltration and water holding capacity

Some of the microbes in **SP-1™** are also able to inhabit the phyllosphere (above-ground surfaces of a plant).

Bottom line, **SP-1™** should be applied at regular intervals to ensure you have robust, diverse, and balanced microbial populations living in your soil.

***As you get things ready this spring and prepare for planting, consider practices that encourage biological activity in your soil because it will pay off at harvest. Biologically active and balanced soils grow healthy plants which increase your chances for a bumper crop!***