



## Welcome to Ground Work

### *Looking Forward*

12/27/2011

*As we mentioned in last week's Ground Work, the agricultural community as a whole is experiencing the most profitable cycle in decades. **That means NOW is the perfect time to make some long-term fertility investments on your farm!** We would again urge you to use information gleaned from today's new tools and technologies to make decisions that will impact the future productivity and sustainability of your farm.*

We're not suggesting merely swapping dollars 1:1 (such as adding another \$20 per acre of nitrogen and getting \$20 of crop back). We're talking a significant change! **What can you do to boost the biology to a higher plane of productivity?** Make a change on half of a field and discover what is possible on your farm.

What do we want to accomplish with this change?

- Grow the most microbes per acre
- Increase stable organic matter
- Increase soluble carbon to **dramatically** improve tilth. Tilth is the real treasure of rural America!

What kind of change, or changes are we talking about?

- **Biostimulants** – Provided your soil is healthy, add these products (sugars, humics) to stimulate the organisms you already have.

- **Inoculants** – Add microbes (**SP-1™** and **Residue™**) to add and build upon diversity. We want lots of organisms, and many different kinds.
- **Nitrogen fixers** – Manage residue and band added nitrogen to create a need for N-fixers.
- **Phosphate solubilizers** – Use Mycorrhizae (**Myco Seed Treat™**) to access phosphorous.
- **Foliar feed** – Boost crop yield and quality, but also boost root exudate production to build soil.
- **Spoon feed added nutrients** – Band needed fall fertilizers as well as starters and sidedresses.
- **Manure** – Consider purchasing manure if you don't have livestock.
- **Cover crops** – Green manure (but always have some mature residues as well).
- **Tillage** – No-till, mulch-till, or full tillage. Whichever will grow the most microbes on your farm!

Here are a couple real-life scenarios incorporating some of the above changes:

**Corn/soybean rotation.** Think about the changes in the last 10 years. How much have the yields improved? How much has crop residue increased? Bigger yields from healthier bigger plants that are put into the soil nearly intact and can feed microbes. We no longer see corn plants break down pre-harvest. Put together bigger roots, more root exudates, more crop residue, a cover crop that scavenges for left over nutrients (that by the way puts more root mass and root exudates and crop residue into the soil) and we have an opportunity to build soil.

**Have you observed a field after a well managed cover crop?** At AgriEnergy our best soybeans, 70+ bu/acre, followed cereal rye as a cover. One of the easiest cover crops before corn was a wheat crop over-seeded with red clover. We mowed the clover in August, let it regrow and plowed it down in the spring. Clover changes soil. We have some of the best soil in the world but the clover darkened our black soil, as was obvious behind our tillage. We had two different varieties of corn following the wheat/clover; one making 206 bu/acre, the other 211 bu/acre with no added fertility! This year the same field was corn-on-corn and was the best on the farm. Fertilizer was used this year but it is obvious that the season of wheat/clover made a significant improvement in an already great soil.

One last bit of advice: Surround yourself with good friends and mentors that can add pieces to your puzzle. **We will be farming differently in the future!**

*At AgriEnergy Resources, **OUR MISSION** is to lead the transition to biological farming by providing training and products to innovative American farmers. We believe **biological farming** is the future of economical, high-quality food production and the foundation for healthy **soil**, healthy **plants**, healthy **livestock**, healthful **food**, and healthy **people**.*