



Putting Biology on Your Planter

4/7/2014

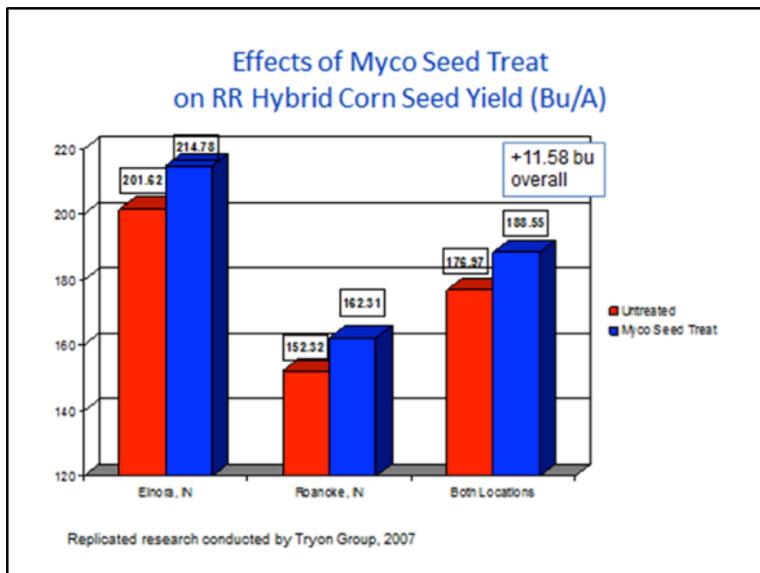
Last week's **GroundWork** talked about the **benefits of banding liquids**, particularly at planting time. In addition to NPK and micronutrient advantages, banding is an excellent way to place live microbial populations in the growing zone. Let's take a closer look at why that's important, and the results we've seen.

The ideal planting attack is two pronged:

- **Myco Seed Treat™** on the seed, and
- **SP-1™** or **Bio Aid WS** in the soil around the root zone

Myco Seed Treat™ is a powder that blends with seed, either by pretreating, conveying into a bulk system, or stirring into the planter box. It contains mycorrhizal fungi and a diversity of plant-beneficial organisms. Combining Myco Seed Treat™ with rhizobium on legume crops further increases the microbial activity that cycles nutrients immediately around the seed as it germinates, sprouts, and develops a root system.

Typical yield responses to this simple application of **Myco Seed Treat™** are shown in the following tables:



Soybeans

Control – no MST	62.30 <u>bu/a</u>
With MST	66.85 <u>bu/a</u>
Benefit: 4.55 <u>bu/a</u>	

2013, Stephenson County, IL

The second prong is to apply **SP-1™** on the planter with a starter package. SP-1™ supplies a broad diversity of beneficial bacteria and fungi that spread throughout the soil profile. Concentrating these in the row at planting time further “ramps up” the microbial activity around the young seedling to cycle nutrients, fix nitrogen, solubilize phosphorus, and perform numerous functions that benefit your crop.

SP-1™ can be applied in whatever liquid system you have – in the row, banded, or broadcast pre-plant. Another option, if liquid is not practical, is to apply **Bio Aid WS** (a concentrated soluble powder) blended with dry fertilizer mixes.

This past year we continued to see the benefits of **SP-1™** in farm trials. Following are just two examples:

Field Corn, Replacing Starter

3.4g 7-27-7 Starter 185.2 bu/a

1.5g SP-1 w/ MST 190.6 bu/a
(no starter)

Benefit: 5.4 bu/a

2013 DeKalb County, IL

Field Corn, added to Starter

8.4 gal Starter 169.4 bu/a

10g Starter + 3g SP-1 185.1 bu/a

18.4g Starter 180.2 bu/a

Benefit: up to 15.7 bu/a

2013 Ogle County, IL

AgriEnergy Resources is very excited about some new ways to measure the benefits of applied microbial products; especially the Haney soil test developed by Dr. Richard Haney, soil scientist with USDA-ARS in Texas. The Haney test incorporates the Solvita test developed by Dr. Will Brinton of Woods End Labs, along with several other tests to (1) calculate the overall health of your soil and (2) predict the nutrient availability in your soil. The Haney test will even calculate your current per-acre nutrient value.

AgriEnergy ran the Haney test on several **SP-1™** and **Residue™** plots last summer. The biologically treated soils consistently showed more available

nutrients and higher soil health numbers than the untreated plots.

Finally, we may be able to quantify what we've observed for years: Biological Farming improves soil health and increases nutrient availability. (We have already quantified the increased yields and improved bottom lines.)

P.S. We were honored to have Dr. Will Brinton speak at our Winter Seminars in Georgia and Florida. In the weeks ahead we will be sharing some of Dr. Brinton's insights on measuring soil microbial activity with the Solvita test. We will also share more details on the Haney test and the related soil health calculation.