# 2012 AgroVantage Plot Results

## Location: Plain City, OH

**Soybean Test Plot**

**Magnify LST & LAI Seed Treatments**

| | Check | Magnify LST | Magnify LAI |
|---|---|---|---|
| Yield, bpa | 35.51 bpa | 38.99 bpa | 41.32 bpa |
| Test weight, lbs. | 56.9 lbs. | 58.7 lbs. | 58.8 lbs. |
| Moisture % | 11.8% | 11.8% | 12.2% |
| Difference vs Check | | 3.48 bpa | 5.81 bpa |

Magnify is a brand name designation given the AgroVantage System's seed inoculant products. Magnify LST is a source of bradyrhizobium japonicum, a species of rhizobium specific to soybeans. LST is designed as a high potency inoculant, providing over 1 million bacteria per seed, resulting in enhanced nitrogen nutrition and higher yields. Magnify LAI is a source of Azospirillum bacteria, which are known to produce beneficial plant growth regulators leading to more vigorous growth and improved yield. Azospirillum also provide fixation of atmospheric nitrogen in grass plants.

In this study both inoculants produced significant yield improvement when used individually and in combination. LST produced $55.00 added income for an investment of about $3.00. LAI produced $90.00 for an investment of about $3.00.

**Feast Starter Fertilizer**

| | Check | Feast 3-18-18 – 2 gpa | Feast 3-18-18 - 2 gpa + Side-Kick - 0.5 gpa |
|---|---|---|---|
| Yield, bpa | 38.99 bpa | 38.7 bpa | 43.35 bpa |
| Test weight, lbs. | 58.7 lbs. | 58.7 lbs. | 58.0 lbs. |
| Moisture % | 11.8% | 11.9% | 11.7% |
| Difference vs Check | | -0.29 bpa | 4.36 bpa |

Do soybeans respond to starter fertilizers? In this study they did, but only when the fertilizer solution included sulfur. This is a good demonstration of the important role soil testing plays in developing a solid plant nutrition program. The treatment without Feast Side-Kick (0-0-25-17S) cost $15.00, returning nothing. Adding $3.30 worth of Side-Kick to the same treatment produce nearly $70.00 additional income!

**Experimental Biological Material**

| | Check | Experimental Biological Material | Advantage |
|---|---|---|---|
| Yield, bpa | 37.26 bpa | 39.90 | 2.64 bpa |
| Test weight, lbs. | 58.9 lbs. | 57.9 lbs. | -1.0 lbs |
| Moisture % | 11.9% | 11.9 | -- |

Regional plots play an important role in developing new AgroVantage System products. Regional plots are scattered across the country, allowing experimental materials to prove themselves or fail in many environments and in this case several crops. In this study an experimental material produced a significant yield improvement. This information will be evaluated along with other plot results and numerous other criteria in the process of developing an experimental material into an AgroVantage System product.

## Corn Test Plot

**Amplify-D Seed Treatment**

| | Check | Amplify-D | Advantage |
|---|---|---|---|
| Yield, bpa | 164.5 bpa | 166.4 bpa | 1.9 bpa |
| Test weight, lbs. | 56.3 lbs. | 56.1 lbs. | -0.2lbs. |
| Moisture % | 22.2% | 21.6% | -0.6 pts. |

Amplify-D is a seed germination aid based upon the concept of providing an extra source of adenosine mono-phosphate as a seed treatment. Research has shown that maintaining adequate levels of this critical bio-chemical in the germinating seed enhances the rates of germination and emergence. The end result, better plant stands and fewer low vigor plants that fail to produce grain. In this study, yields were good and the Amplify-D treatment produced an almost 2 bushel yield advantage versus the check! The extra yield translated into $14.00 of extra income on a $3.00 investment. The Amplify technology is a consistent performer in all growing conditions.

**Soil X-CYTO**

| | Check | Soil X-CYTO | Advantage |
|---|---|---|---|
| Yield, bpa | 166.6 bpa | 176.9 bpa | 10.3 bpa |
| Test weight, lbs. | 56.4 lbs. | 56.0 lbs. | -0.4 lbs. |
| Moisture % | 20.3% | 20.2% | -0.1 pts. |

Soil X-CYTO is an EPA registered plant growth regulator (PGR) that is a source of Cytokinins. Cytokinins are known to accelerate plant cell enlargement and cell division promting vigorous and healthy plants. This product is typically applied in combination with Feast starter fertilizers in-row at planting. It is often referred to as a “top shelf” management tool as it performs best when all of the plant food requirements/building blocks for a crop are in place. In this trial adding Soil X-CYTO to a complete starter program increased yield by 10.3 BPA, producing extra revenue of about $70.00 on an investment of $7.00.

Plain City, OH Plot Data Continued

**Experimental Biological Material**

| | Check | Experimental Biological Product | Advantage |
|---|---|---|---|
| Yield, bpa | 176.9 bpa | 186 bpa | 9.1 bpa |
| Test weight, lbs. | 56.0 lbs. | 56.8 lbs | 0.8 lbs. |
| Moisture % | 20.2% | 20.6% | 0.4 pts. |

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