EVALUATION OF SOYBEAN SEED TREATMENT IN THE MID-SOUTH

A high percentage of Mid-South growers choose to use soybean seed treatments. Wet, poorly drained soils, common during spring planting and crop emergence, favor the development of the fungal pathogens that cause soybean seedling diseases, which may slow germination and plant growth. Early season insect pests may also damage soybean seeds and seedlings, causing adverse effects on plant growth. Seed treatments can help protect seed and seedlings from pests, resulting in more uniform plant stands, better yield potential and ultimately increase return on investment.

Study Guidelines

Testing was conducted at the Monsanto Learning Center in Scott, Mississippi to evaluate the effects of soybean seed treatment on soybean yield. Three soybean products (AG4005 Brand, AG4632 Brand and AG5332 Brand) were planted on April 20, 2012. Each product was planted at a rate of 140,000 seeds per acre. Half of each product was treated with an Acceleron® Seed Treatment Products for soybeans, containing both fungicides, an insecticide and a nematode protection agent, PONCHO®/VOTIVO®. The combination included Acceleron DX-309 Fungicide Seed Treatment, Acceleron DX-109 Fungicide Seed Treatment and Acceleron IX-409 Insecticide Seed Treatment. The other half was left untreated. Standard agronomic practices for the area were implemented. Each product was harvested for yield.

Results and Conclusions

The seed treatment was a positive contributor to yield for all products in this trial in 2012, with treated products producing nearly 11 bu/acre higher yield than untreated plots (Figure 1). Acceleron Seed Treatment Products improved stands and plant health in all varieties. AG4005 Brand produced an average yield of 81.88 bu/acre in treated plots and 74.84 bu/acre in untreated plots (an increase of 7.04 bu/acre for the treated soybeans). AG4632 Brand produced and average yield of 66.15 bu/acre in treated plots and 53.24 bu/acre in untreated plots (an increase of 12.91 bu/acre for the treated soybeans). AG5332 Brand produced an average yield of 69.60 bu/acre in treated plots and 57.18 bu/acre in untreated plots (an increase of 12.42 bu/acre for the treated soybeans). Averaged across all three varieties, the treated plots produced yields of 72.54 bu/acre compared to 61.75 bu/acre in untreated plots (an increase of 10.79 bu/acre for the treated soybeans). (Figure 2).

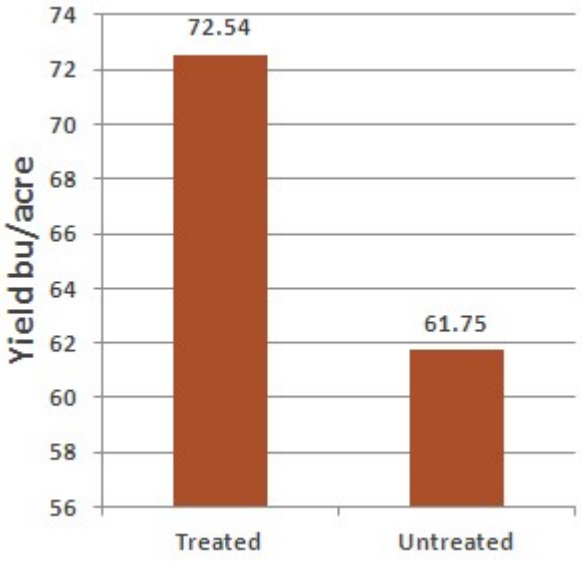

Figure 1. Average yield effect of Acceleron® Seed Treatment Products for soybeans

Acceleron Seed Treatment Products

Acceleron Seed Treatment Products have been selected to compliment Genuity® Roundup Ready 2 Yield® and Roundup Ready® soybeans by helping to protect soybean seeds and seedlings from disease and insect damage. Acceleron Insecticide/Fungicide Seed Treatment Products for soybeans also improve plant health. In the past, most seed treatments consisted of one or two active ingredients which primarily controlled seedling diseases. Acceleron Seed Treatment Products contain advancements in seed treatment technology, including multiple modes of action, broad spectrum control of insects and diseases with increased length of protection.

Acceleron Seed Treatment Products offer control of key diseases: Pythium, Phytophthora, Fusarium and Rhizoctonia, and protection from key insects, such as bean leaf beetle, soybean aphid, seedcorn maggot, wireworm and white grub. This broad spectrum of control comes from an exclusive fungicide combination of pyraclostrobin and metalaxyl as well as the insecticide imidacloprid, which provides both above and below ground insect

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Seed Treatment Products

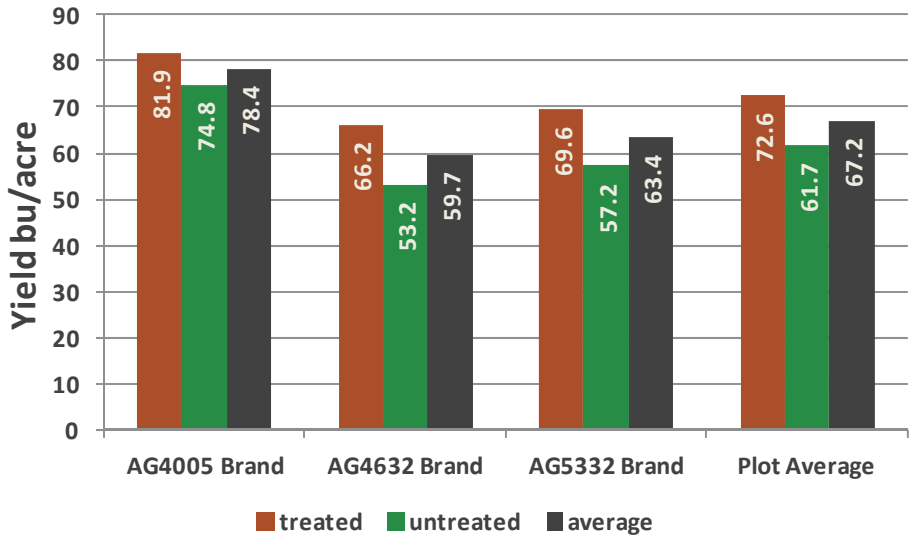
can last for up to 30 days. For 2013, Acceleron Insecticide/Fungicide Seed Treatment Products for soybeans will contain the fungicides pyraclostrobin for Fusarium and Rhizoctonia control, metalaxys for Pythium and Phytophthora control and Fluxapyroxad for control of Fusarium and Rhizoctonia, as well as the insecticide imidacloprid.

History of Performance

A three-year summary (2008-2010) of field data from Monsanto small plot and strip plot trials, with varying levels of disease and insect pressure, indicated soybeans treated with Acceleron Fungicide/Insecticide Seed Treatment Products had an average performance gain wins 73 percent of the time compared to untreated soybeans. In addition, data from the same trials indicated that Acceleron Seed Treatment Products improved soybean stand and vigor.

The information discussed in this report is from a single site, non-replicated, one-year demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this

Figure 2. Average soybean yield response to seed treatment.



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