

David Hallauer
District Extension Agent, Crops & Soils

Biological Soybean Seed Treatments

The number of biological soybean seed treatments are numerous. Products are typically a fungi, amino acid, bacteria, or combination thereof applied (on seed, in-furrow, or broadcast over the crop) with the hopes of eliciting a yield response. As with any researched products, results can vary significantly, as evidenced in a recent field report from the University of Wisconsin.

Shawn Conley is the University of Wisconsin State Soybean Extension Specialist and part of a multi-state team looking at biological seed treatments in soybeans. His study consisted of evaluation of nine products at 10 sites in Wisconsin during the 2023 growing season. All seeds were pre-treated with a common fungicide/insecticide seed treatment with biological treatments then applied according to product label on top of the base seed treatment. Plant populations were done at the V2 growth stage and yield data was collected at harvest.

Across ten locations, no significant differences were found in either yield or population between treatments. While some sites had more variability than others, the across site analysis showed none of the individual treatments were significantly different from each other, including a non-treated control included in the protocol.

Conley's analysis went one step further looking at the probability of a yield response based on a distribution of yield results rather than single points. This analysis showed similar results with one of the nine treatments having a probability of a positive yield response. *NOTE: this information is from a preliminary report with more data to come when the trial is complete.*

While few significant differences were noted, continued testing will occur to see if different years/conditions make a difference. As is the case with most seed treatment products (even non-biologicals) sometimes they provide a good return on investment and sometimes they do not. Planting conditions plus weather post planting affect efficacy to a great degree. A multiple year look at these products will hopefully provide a better view of the consistency of response. Stay tuned for more research results as they become available.