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Humic products have been used for years in production agriculture with varying results but have generally not been researched much at U.S. universities. The varying results are likely due to differences among companies in product source, methods used to process the materials, and lack of concise protocols in how humates have been used successfully in the past. There has been little available guidance to growers for structuring cropping systems to use such products. For several years FHR Farms, BRT, and their associates have been successfully formulating humate-based fertilizers and growth-promoting products for use in a cropping systems approach for a network of corn and soybean growers in the upper Midwest. Turf, fruit, and vegetable producers are also involved. In our systems we stress building a multi-step program whereby soil characteristics are first measured, and then microbial activity is boosted with multi-species inoculants if needed. Normal cultural techniques that boost fertilizer efficiency are also utilized. As the corn or soybean crop develops, other foliar products are used at prescribed growth stages to manipulate the physiology and hormone levels of the plants. These products are built around known crop nutrient needs as well as needs of the rhizosphere and phylloplane communities. Humates are used in the formulation of these products, but not as end-all products. Instead we generally use them to magnify the effects of hormones, nutrients, and other products required either by the crop or the microbes operating in association with the crop. One possible explanation for this magnification is that the humates increase uptake and intercellular absorption of those products. Those products are also believed to initiate cellular component replication and growth. Growers who are involved in this system have reported significant increases in crop yields, reduced pest problems, increased soil health, and more nutrient-enriched end products. Yield increases still depend on weather and outside variables and they build as the system components are adopted, often reaching 25% for corn and 25 to 40% for soybeans.

See more of: [Symposium--Microbial and Humic Amendments: Advances in Understanding Their Effects On Soils and Plants: I](#)

[<< Previous Abstract](#) | [Next Abstract >>](#)