



REBUILD. RESTORE. RENEW.

**News Release:**

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**Reduce the Risk of Runoff during Heavy Rains:**  
Bio S.I.'s Agriculture Formulas Improve Water Penetration

**November 19, 2013, Justin, TX** — In late October and early November, much-needed rains have brought some relief to an ongoing drought throughout most of Texas. The drought—most severe in the southern and central regions—led to crop failure, reduced production, and reduced income for the state's many independent farmers and agricultural workers. While recent rains were welcome, they also presented some additional challenges to farmers: runoff from fields, erosion, standing water, and loss of inputs.

Even after a period of time with little moisture, soil can quickly reach its water-retention threshold if rains are heavy. The soil forms a crust, which doesn't allow water to penetrate and leads instead to runoff, soil erosion, and loss of nutrients. Bio S.I. Technology—producer of natural soil inoculants—has a line of products that can help reduce crusting, improve water penetration, and build carbon in the soil from plant debris. Humus (carbon) comes from the breakdown of plant debris (stubble) left behind after harvest. Stubble is loaded with nutrients, which are recycled by the microbes present in the soil. The humus fraction of the soil retains water and nutrients, preventing them from washing away.

In several different areas of Texas, farmers who had applied Bio S.I.'s line of agriculture-focused products—Agriculture + Humus and Ag Select—in previous seasons saw their soil retain more moisture than their neighbors' soil, with little standing water or runoff. In fact, one grower was able to start plowing as soon as six days after the rain let up—a vast improvement over previous years, when standing groundwater prevented him from conducting any field work for weeks after a storm.

Bio S.I. Founder and CEO Wayne Tucker, born and raised in an agricultural community in Texas, understands the particular water-management challenges farmers face here. While nothing can control Mother Nature, he advocates for taking steps to improve water efficiency by building the humus fraction of the soil and reducing the crusting issues that lead to runoff and loss of rain water.



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Wayne launched his line of natural microbial soil inoculants nearly 20 years ago to help rebuild soils so that these issues are reduced. “Where farmers once used fifty pounds per acre of nitrogen on their fields, they now need 450 pounds,” Tucker says. “That’s because soil humus (carbon) has been neglected and overlooked as a means to make water-holding capacity better in our fields over our lifetimes.” The USDA considers the lack of carbon in US soil to be a leading contributor to severe issues threatening the future of agriculture. Bio S.I. Technology aims to address these issues by planning soil-rebuilding programs to recycle nutrients from plant debris and also by using soil amendments to help reestablish the complexity of life within soil at levels suitable to growing conditions.

“We’ll never eliminate the need for chemicals” Tucker says. “But we can certainly use them more efficiently by recycling the nutrients in plant debris and rebuilding our soil humus at the same time.”

Bio S.I.’s Agriculture + Humus and Agriculture Select formulas contain beneficial soil-borne microbes and fungi that work with the roots to give the plant better access to water and nutrients outside the rhizosphere (the soil directly surrounding the roots of a plant). Both are liquid formulas that come ready to use. Please see the product pages (Ag + Humus and Ag Select) for details on application rates.

### **About Bio S.I. Technology**

Bio S.I. Technology, LLC, is a USDA BioPreferred™ member and includes a team of experts that have more than 20 years of experience producing microbial products. Bio S.I. produces a variety of microbial products including Bio S.I. Turf Formula, Turf Select, Lawn & Garden Formula, Lawn & Garden Select, Agriculture Formula, Water Doctor, Septic Cleanser Formula, Remediation Formula, Floor-Mate for animal corrals/pens, and JACKPOT, a new probiotic product which brings the beneficial soil-borne microbes found in nature to animals. For more information about Bio S.I. Technology or to purchase any of their cutting-edge formulas, please visit [www.biositechnology.com](http://www.biositechnology.com).