

S7T3**Decoding Soil with Whole Genome Sequencing for scalable & sustainable Ag solutions**

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Abstract

According to the UN Food and Agriculture Organization (UN-FAO) 2022 report, the land and water resources that farmers rely on are stressed to a “breaking point”. Shifting to sustainable agricultural practices will be critical to meet the lofty goal of feeding eleven billion humans by 2050 while minimizing environmental and societal damage. Additionally, 52% of global agricultural soil is already degraded, 34% of which is anthropogenic such as excessive inorganic fertilizer use, livestock grazing and soil compaction. Trace Genomics has developed a comprehensive science-driven Soil Environment Engine - TESS™ - to provide sustainable solutions to agricultural challenges. This engine combines our extensive database of metagenome sequences and soil chemical and physical properties with our proprietary algorithms and processes to decode DNA sequences into actionable information. Powered by TESS™, Trace has developed several scalable solutions for growers by providing them science-backed data for managing fertilizer, chemical and biological applications in the field. TESS™ also offers objective, analytical solutions to track the impacts of different management practices on soil health over time. We will present case studies that demonstrate the solutions provided by TESS™ and the benefits gained by our customers.

