



Soil Health Assessment Approaches and the Cornell Framework

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Soil health constraints beyond nutrient limitations and excesses currently limit agroecosystem productivity and sustainability, resilience to drought and extreme rainfall, and progress in soil and water conservation. With mounting pressure to produce food, feed, fiber, and even fuel for an increasing population, the concept of soil health is gaining national and international attention. Multiple regional, national, and global efforts are now leveraging that work to reach new stakeholder audiences, so that soil health management is expanding into mainstream agriculture. Each grower is generally faced with a unique situation in the choice of management options to address soil health constraints and each system affords its own set of opportunities or limitations to soil management. A more comprehensive understanding of soil health status can better guide farmers' management decisions. Until recently, there has not been a formalized decision making process for implementing a soil health management system that alleviates field-specific constraints identified through standard measurements and then maintains improved soil health. This presentation will discuss current US-based efforts related to soil health assessment, including efforts to build national consensus on appropriate methods for simple (inexpensive) and comprehensive tests. This includes the Cornell Soil Health Management Planning and Implementation Framework. The most relevant components of the framework are 1) measurement of indicators that represent critical soil processes, 2) scoring of measured values that allows for interpretation, and 3) linkage of identified constraints with management practices. Land managers can monitor changes over time through further assessment, and adapt management practices to achieve chosen goals. We will discuss the full tests and approaches for simplification.