

DOES IMPROVED SOIL HEALTH ALWAYS RESULT IN BETTER WATER QUALITY?

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The hydrologic cycle is closely associated with soil. Soil purifies and stores water. These are important functions that soils provide for plants and are essential components of soil health. Soil health is defined as "The capacity of a soil to function within ecosystem boundaries to sustain biological productivity, maintain environmental quality, and promote plant and animal health" (Soil Science Society of America, 2008). Although the relationship between soil health and water quality is known, often it is difficult to observe their direct connections. For example, cover crops can enhance soil health by increasing soil organic matter, improve aggregation, increase water infiltration, cycle nutrients, reduce evaporative losses, and reduce erosion, among others. The value of cover crops for improving soil health and water quality is obvious, but the benefits of other practices are not as clear. Manure applications to soil can help improve soil quality by increasing soil organic matter and providing nutrients, but manure application on the landscape has the potential to impair water quality when not done properly. Therefore, it is important to understand that crop and soil management decisions can have an impact on other parts of the environment. The concept of soil health recognizes these connections and provides a framework that can be used to build upon. However, soil health and water quality might not always be compatible. During this talk links between soil health and water quality as they relate to agricultural production will be reviewed

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