Soil Morphologic Characteristics Related to Septic System Performance in Northern Indiana. (S05-stout091831-Oral)

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Abstract:

The utilization of septic systems is continually increasing, however, there has not been a thorough spatial assessment of their performance relative to soil characteristics commonly associated with failure. The objectives of this study were to determine if septic system performance varies within differing soils and to determine septic system longevity. System permits issued within two northern Indiana glaciated counties were evaluated to distinguish numbers of repaired systems during consecutive decades. Using the spatial location of each septic system permit, performance was compared to soil characteristics using SSURGO. Systems installed and repaired since 1965 averaged a 12-year lifespan. Systems that failed within the first ten years after installation decreased from 7.2% during the 1980's to 1.5% in the 1990's. Implementation of more stringent regulations in 1990, contributed to failure reductions and increased system longevity. System performance since 1990, indicates that soil characteristics did not have a significant impact on failure rates, suggesting that utilization of morphological descriptions for site assessment and system type determinations increases longevity.

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