Soil Morphological Indicators of Seasonal High Saturation along a Udult-Aquod Catena

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Abstract

Depth to seasonal high saturation is a critical soil interpretation that requires careful observation and interpretation of often-subtle soil morphologies. In areas where flatwoods and sandhills converge, Alaquods transition to Udults in the better drained areas. The spodic horizon is below the seasonal high saturation in the flatwoods Alaquods and stripping present in the E horizon above the Bh is the only morphological indicator of seasonal high saturation. Toward the better drained areas, the spodic horizon rises in elevation, becomes thinner, chroma and value increases, and the E/Bh boundary becomes more diffuse. In the sandhill Udults, the seasonal high saturation is below the faint, poorly expressed Bh. Stripping and redox concentrations indicate the seasonal high saturation in the E horizon, below the Bh. In the transitional areas where the spodic occurs at the seasonal high saturation, stripping is present however difficult to observe with a soil pit. It is likely that when using a hand auger, this subtle stripping would not be observed, thereby resulting in erroneously high or low seasonal high saturation determinations.