



HEALTHY SOILS ARE: *well-structured.*

Newsletter article #12

Tillage destroys soil structure

Soil structure, the arrangement of the solid parts of the soil and the pore space between them, is critical to how the soil functions. However, management practices can reduce soil cover, disrupt continuous pore space, compact soil, or reduce soil organic matter, and negatively impact soil structure.

Since tillage negatively affects all of these properties, it's high on the list of practices damaging to healthy soils.

When tillage loosens the soil, it leaves soil particles exposed to the forces of wind and water. Transported by wind and water, detached soil particles settle into pores, causing surface sealing, compaction and reduced infiltration. When this happens less water is available to plants and runoff and erosion increases.

By contrast, soils that are not tilled and are covered with diverse, high residue crops throughout the year have better soil structure, are highly aggregated, with high levels of organic matter and microorganism activity, high water holding capacity, high infiltration rates, and little compaction.

To learn more about soil health, and to meet some of the farmers who are “Unlocking the Secrets in the Soil,” visit www.nrcs.usda.gov.

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