

# **Soil Health for Vineyards**

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Soil Health- “the continued capacity of soil to function as a **vital living system** within ecosystem and land use boundaries, to sustain biological productivity, promote the quality of air and water, and maintain plant, animal, and human health”

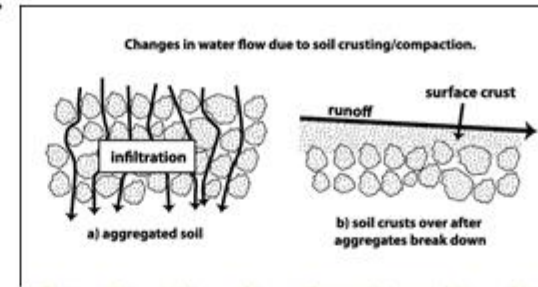
# Soil Health Principles

- Keep soil covered
- Minimize soil disturbance
- Maximize roots
- Plant diversity
- Integrate livestock
- Organic amendments

# What Does a Healthy Surface Soil Provide?



Living organisms  
are the drivers

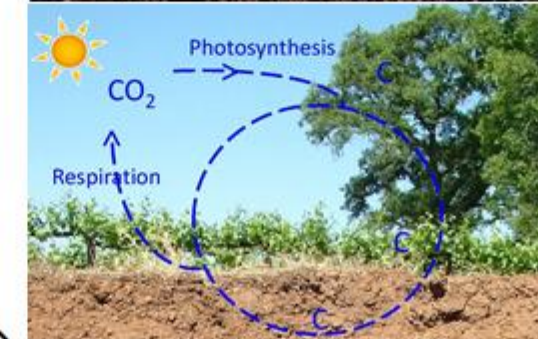


Healthy soils have high water holding capacity



Every **1%** increase in organic matter can result in up to **20,000** gallons of available soil water per acre\*

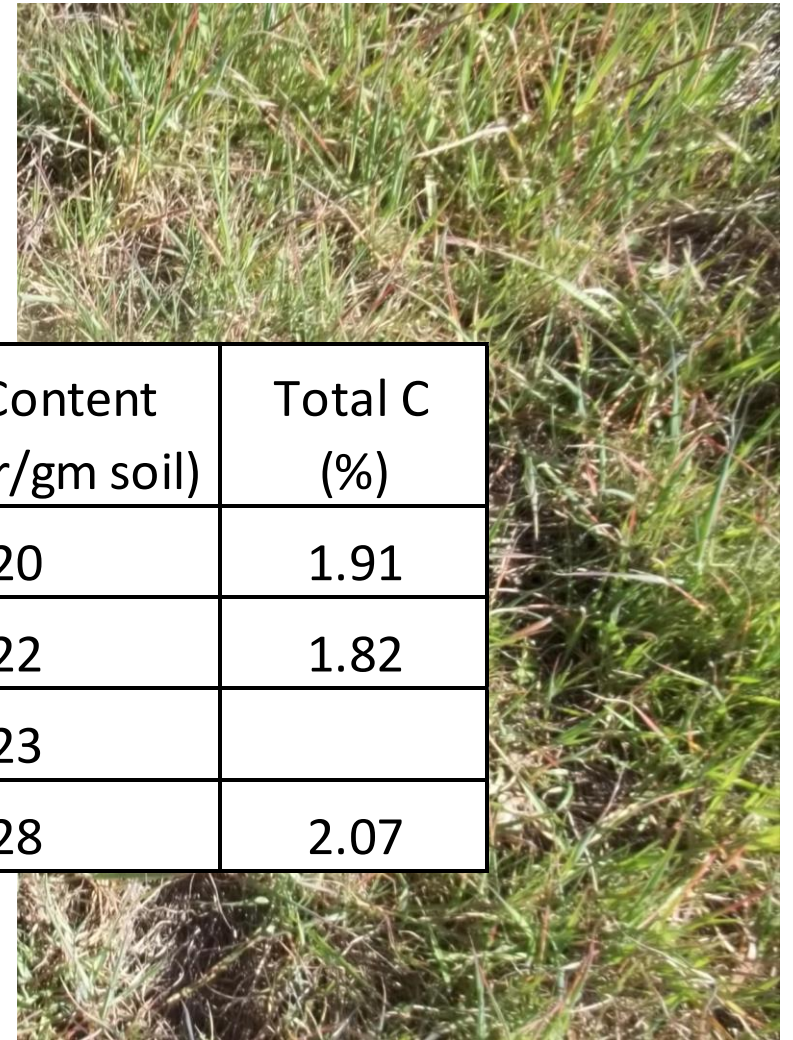
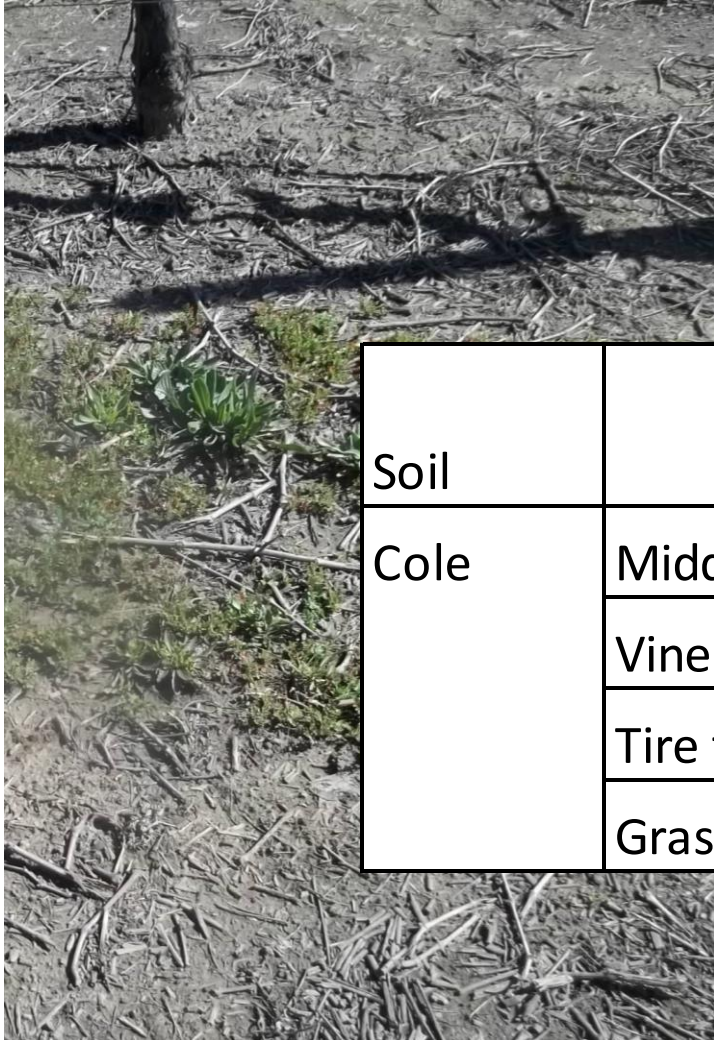
\*USDA-NRCS



- Water infiltration
- Ground water recharge
- Increased water storage
- Reduced erosion & sediment
- Improved water quality
- Nutrient cycling & retention
- C sequestration



Cole loam sampled March 15, 2019.

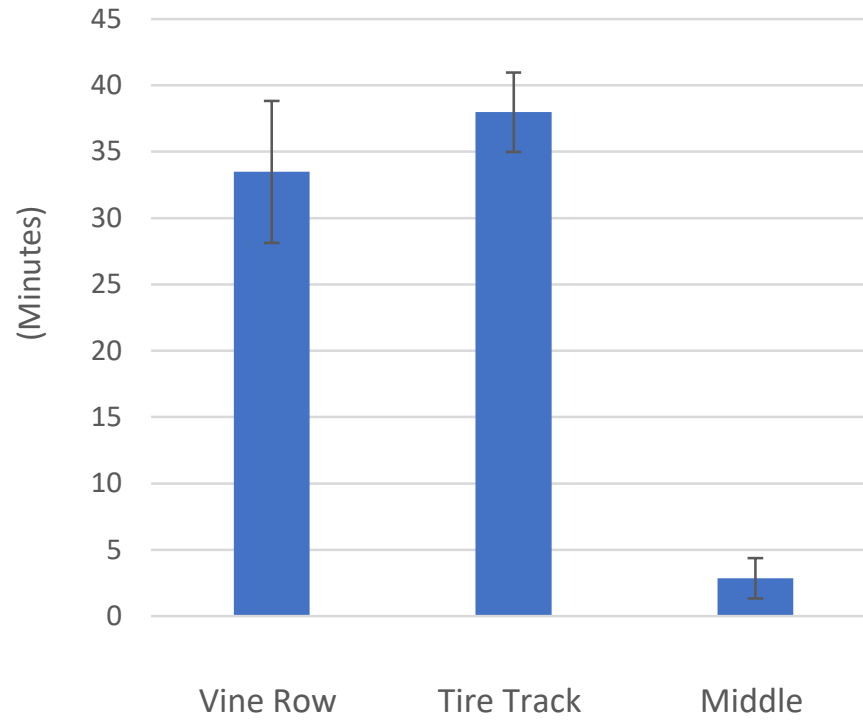


Soil		Bulk Density (gm/cm <sup>3</sup> )	Water Content (gm water/gm soil)	Total C (%)
Cole	Middle	1.36	0.20	1.91
	Vine row	1.34	0.22	1.82
	Tire track	1.35	0.23	
	Grassy field	1.19	0.28	2.07

Cole loam sampled March 15, 2019.



Time for One Inch of Water Infiltration  
March 27, 2017



# Soil Health Assistance

- Planning, technical assistance
- Cover crops
- Reduced tillage
- Compost, biochar

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