

# The Five Principles Of Soil Health



1.

**SOIL COVER:** *Keep plant residues on the soil surface. Look down, what percentage of your soil is protected by residue? Erosion needs to be minimized before you can start building soil health.*



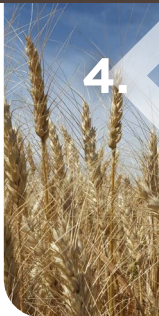
2.

**LIMITED DISTURBANCE:** *Minimize physical, chemical, and biological disturbance as much as possible. You will start building soil aggregates, pore spaces, soil biology, and organic matter.*



3.

**LIVING ROOTS:** *Keep plants growing throughout the year to feed the soil. Cover crops can add carbon to the soil, providing a great food source for micro-organisms. Try to add a perennial to your system. Start small to find the best fit for your operation.*



4.

**DIVERSITY:** *Try to mimic nature. Use cool and warm season grasses and broad leaf plants as much as possible, with three or more crops and cover crops in rotation. Grassland and cropland plant diversity increases soil and animal health.*



5.

**INTEGRATING LIVESTOCK:** *Fall/winter grazing of cover crops and crop residue increases livestock's plane of nutrition at a time when pasture forage quality can be low, increases the soil biological activity on cropland, and improves nutrient cycling. Proper grassland management improves soil health.*

# Soil Health Benefits



Builds organic matter which retains and cycles nitrogen and sequesters carbon; which in turn reduces fertilizer and fuel costs.



Stabilizes soil aggregates which improves resistance to erosion by wind and water.



Improves water infiltration and retention which helps to better manage the effects of flood or drought and improves trafficability.



Enhances wildlife habitat and balances the biological community above and below ground.



Healthy soils filter and clean water that moves through it, for improved water quality.

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South Dakota

Soil Health Coalition



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