



National Soil Health Initiative

Ensuring Sustainable Agriculture for the Future





Words from Former NRCS Chief Dave White

- ❑ **“...soil is one of our most important resources...it is the factory of our food – and without healthy productive soil, life as we know it would no longer exist.”**
- ❑ **“In 1937, President Franklin D Roosevelt wrote...
'The Nation that destroys its soil, destroys itself.'**





Additional Quotes:

- ❑ “Feeding the world by helping farmers and ranchers improve the health of our Nation’s soil is one of the most important endeavors of our time.”
- ❑ “...Soil Health Management Systems can help farmers and ranchers feed the world more **profitably and sustainably**, now and for generations to come.”





Hope in Healthy Soil video



Soil... Important Resource

- ❑ **NRCS – A core objective is Healthy Soils!**
- ❑ Focus on soil health is one of the most effective ways for farmers to **increase crop productivity** and **profitability** *while improving the environment.*



- ❑ Is soil health new?
 - Soil Health versus Soil Quality
- ❑ Soil health is **how well the soil functions**.
 - **Infiltrate** and hold water
 - **Cycle nutrients** to water and feed growing plants
 - **Filtering** of potential pollutants
- ❑ Good soil health results in **optimized inputs, sustainable outputs and increased resiliency**.



- ❑ **Increased Production** - Healthy soils have improved soil structure, aeration, water retention, drainage and nutrient availability.
 - Healthy soils typically have **more organic matter** and **soil organisms**
 - Organic matter holds more nutrients in the soil until the plants need them.



- ❑ **Increased Profits** - Healthy soils can increase farmers' profit margins by reducing labor and expenses for fuel, and optimizing inputs
 - Healthy soils may require less tillage
 - Healthy soils aren't over-reliant on excessive nutrient inputs to grow crops.



☐ Natural Resource Protection –

- Healthy soils hold more available water, increasing **water-holding capacity**.
- **Good infiltration** keeps nutrients and sediment from loading into lakes, rivers, and streams.
- **Groundwater** is also protected because there is less leaching from healthy soils.



Managing for Soil Health...4 Keys

☐ Manage more by **disturbing less**

- Tillage is disruptive – bare ground, compaction, soil organisms
- **Misuse of inputs** can disrupt the function and symbiotic relationship of soil organisms
- Allow natural nutrient cycling to take place



Managing for Soil Health...4 Keys

☐ Diversify with crop **diversity**

- Plants and plant roots feed soil organisms – in turn help feed plants
- Assure food and energy chains contain **multiple species**
- Diversity helps with pest and disease problems



Managing for Soil Health...4 Keys

- ❑ **Grow **living roots** throughout the year**
 - Soil organisms rely on living plants
 - Provide plenty of easily accessible food to soil organisms



Managing for Soil Health...4 Keys

- ❑ Keep the **soil covered** as much as possible with plant residues on soil surface
 - Erosion control
 - Moisture conservation
 - Pest control
 - Nutrient cycle
 - Moisture Infiltration







NRCS Soil Health Initiative

□ Objectives

- Provide technical and financial assistance to producers wanting to improve soil health.
- Increased awareness, both internal and external
- Increase adoption and implementation of **soil health management systems**





Soil Health Management System - Crop

❑ The Key conservation practices are:

Conservation Cropping Rotation

No-till or Strip-till

Cover Crops

Nutrient Management

Integrated Pest Management

Conservation Buffers/Filter Strip



“Think of as an interconnected **SYSTEM!**”



Soil Health Management System – Grazing Lands

❑ Key Practice – Prescribed Grazing

- Management of top growth impacts growth below ground

❑ Reduced root growth diminishes...

- the contribution of the root system to soil organic matter
- plant health & above ground biomass production
- nutrient uptake and cycling
- the soil biological community
- Hydrologic cycle. **A System!**



Soil Health





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