unlock your farm's potential

dig a little learn a lot

unlock the SECRETS IN THE SOIL

A healthy, fully functioning soil is balanced to provide an environment that sustains and nourishes plants, soil microbes and beneficial insects.

Soil is a living system, and healthy soil should look, smell, and feel alive. Healthy soil can increase production, increase profits, and protect natural resources, such as air and water. Dig in to your soil to discover what your soil can tell you about its health and production potential.

Dig in and see

Healthy soil is darker in color, crumbly, and porous. It is home to worms and other organisms that squirm, creep, hop, or crawl. Healthy soil provides the right amount of air, water, and organic matter for microorganisms to thrive and for plants to grow. Soil that is functioning at its full potential is full of the roots of the healthy and strong plants it supports.

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An unhealthy, poorly functioning soil appears lighter in color, is compacted or has poor structure, and contains limited roots and living things.

Dig in and smell

Healthy soil has a sweet and earthy aroma. This is the scent of geosmin, a byproduct of soil microbes called actinomycetes. These microbes decompose the tough plant and animal residues in and on the soil and bring nitrogen from the air into the soil to feed plants.

An unhealthy, out-of-balance soil smells sour or metallic, or like kitchen cleanser.

Dig in and feel

Healthy soil is easy to dig into. It is soft, moist, and crumbly, and allows plants to grow their roots more freely and unimpeded. This crumbly or granular structure is ideal because porous, healthy soil holds water for plants to use when they need it. Its increased water-holding capacity reduces runoff that can cause flooding, and increases the availability of water to plants during droughts.

An unhealthy, poorly functioning soil feels dry, crusty, and cloddy and does not crumble readily when pulled apart.

Dig a Little. Learn a Lot.

Understanding how healthy soils look, smell, and feel are the first steps towards achieving soil health. Dig a little! If you find soil that is out of balance, NRCS can offer management tips to improve soil health.

Soil Health Management Systems

Implementing Soil Health Management Systems can lead to increased organic matter, more soil organisms, reduced soil compaction and improved nutrient storage and cycling. As an added bonus, fully functioning, healthy soils absorb and retain more water, making them less susceptible to runoff and erosion. This means more water will be available for crops when they need it. Soil Health Management Systems allow farmers to enjoy profits because they spend less on fuel and energy while benefiting from the higher crop yields resulting from improved soil conditions.

Contact your local NRCS office to learn more about Soil Health Management Systems and the technical and financial assistance available to help "Unlock the Secrets in the Soil."

For Additional Information, visit:

USDA NRCS Soil Health Site- http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/soils/health/

http://www.youtube.com/user/usdanrcsentsc

Or Contact Pennsylvania USDA NRCS at (717)237-2100, or www.pa.nrcs.usda.gov

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