

# Love the soil

Make it healthier  
with four key  
conservation practices

Whether you farm hundreds of acres of cropland or tend a backyard garden, by following four basic soil health principles you can improve the health, function and productivity of your soil. Applied over time, these soil health principles enhance the soil's ecosystem, allowing it to function naturally.

Like nature, these principles ...

- 1 Keep the soil covered as much as possible;
- 2 Disturb the soil as little as possible;
- 3 Keep plants growing throughout the year to feed soil microbes; and
- 4 Grow a variety of plants to diversify soil biology.



Visit [www.nrcs.usda.gov](http://www.nrcs.usda.gov)  
or call 888-LANDCARE  
to learn more about  
the hope in healthy soil.



Natural Resources  
Conservation Service

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United States  
Department of  
Agriculture

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Natural  
Resources  
Conservation  
Service

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# Unlock the secrets in the soil with these 'fabulous four' conservation practices...

To put these principles to work, growers rely on four key soil-health-related practices.

## 1 — mix it UP

### Crop Rotation

Growing a diverse number of crops in a planned sequence increases soil organic matter and biodiversity in the soil. This increased biodiversity helps reduce plant and disease pressure, too.

## 2 — tap into ROOTS

### Cover Crops

Cover crops are un-harvested crops grown as part of a planned rotation that provide benefits to the soil, principally by feeding soil microbes through their roots. Keeping living roots in the soil (before and after harvest) provides soil microbes with the habitat they need to thrive and provide nutrients and protection for harvested crops.

## 3 — discover THE COVER

### Mulching

Applying or leaving plant residues or other suitable materials on the soil surface reduces evaporation, regulates soil temperature and helps protect the soil from erosion.

## 4 — do not DISTURB

### No-Till

No-till is a way to plant and grow crops without disturbing the soil through tillage (plowing, roto-tilling or hoeing). In the garden, small areas or rows can be cleared and small holes can be dug for transplants (or seeds), which minimizes soil disturbance and protects microbial communities that reside in the soil. On the farm, large-scale no-till planters use rotating coulters (disk-like blades) to slice through plant residues and cut small slits in the soil while seeds are placed in the narrow openings. This no-till technique limits soil disturbance and significantly reduces energy use.

# Harvest the benefits

- Increase organic matter in the soil
- Increase microbiological activity
- Improve pollinator habitat
- Improve nutrient cycling
- Increase soil's capacity to hold water
- Reduce plant stress and disease
- Improve water quality
- Reduce energy use

unlock the  
**SECRETS**  
**IN THE**  
**SOIL**