

SOIL | THE SOILS RENAISSANCE | FACT SHEET

Soils are ...



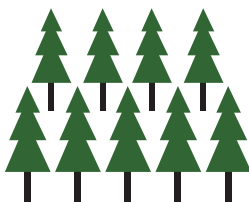
THE **DYNAMIC SKIN** OF THE EARTH, FORMED BY THE INTERACTION OF MINERALS, ORGANIC MATERIAL, ORGANISMS, WATER AND AIR.

A **NONRENEWABLE** RESOURCE. IT CAN TAKE **HUNDREDS TO THOUSANDS OF YEARS** TO CREATE 1 INCH OF TOPSOIL.

Soils provide ...



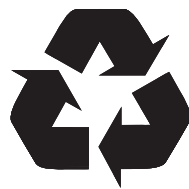
THE SURFACE ON WHICH WE LIVE AND BUILD.



FERTILITY TO GROW THE PLANTS AND FORESTS THAT NURTURE AND SHELTER HUMANS AND ANIMALS.

STORAGE FOR WATER AND CARBON. JUST **1 PERCENT** OF ORGANIC MATTER IN THE TOP 6 INCHES OF SOIL WOULD HOLD APPROXIMATELY

27,000
GALLONS OF WATER PER ACRE.



RECYCLING AND PURIFICATION FOR AIR, WATER AND NUTRIENTS. HEALTHY SOILS CAN REDUCE NUTRIENT LOADING AND SEDIMENT RUNOFF, INCREASE EFFICIENCIES, AND SUSTAIN WILDLIFE HABITAT.

HOUSING FOR A DIVERSITY OF MICROBES, ORGANISMS AND ANIMALS.

Why the need for a Soil Renaissance?



IF THE EARTH WERE AN APPLE, THE ARABLE LAND WOULD BE EQUIVALENT TO THE PEEL FROM ONE/THIRTY-SECOND OF A SLICE OF THAT APPLE.

THE WORLD'S **7 BILLION PEOPLE** TODAY ARE FED BY ARABLE LAND THAT **COMPRISES 10.6%** OF THE WORLD'S LAND AREA.

HALF

OF THE TOPSOIL ON THE PLANET HAS BEEN LOST IN THE LAST 150 YEARS.

EXPERTS FORECAST THE WORLD'S **FOOD DEMAND WILL DOUBLE BY 2050.**

POPULATION IS FORECAST TO INCREASE BY 50%, REDUCING THE RATIO OF ARABLE LAND TO PEOPLE AND PLACING MORE DEMANDS ON SOILS.

SOIL IS BEING LOST AT 10 TO 40 TIMES THE RATE AT WHICH IT CAN BE NATURALLY REPLENISHED.

THE AVERAGE RATE OF SOIL EROSION ON U.S. CROPLAND IS

7 TONS/
ACRE/YEAR.

GLOBALLY, ABOUT **40% OF THE SOIL** USED FOR AGRICULTURE IS CLASSIFIED AS DEGRADED OR SERIOUSLY DEGRADED. AT CURRENT DEGRADATION RATES, **THE WORLD HAS ABOUT 60 YEARS OF TOPSOIL LEFT.**

Why the need for a Soil Renaissance?

LOSS OF SOIL AND WATER FROM U.S. CROPLAND DECREASES PRODUCTIVITY BY ABOUT

\$37.6 BILLION

PER YEAR.

MORE THAN 90%

OF THE **FRUITS AND 78% OF THE VEGETABLES** PRODUCED IN THE U.S. ARE GROWN ON FARMS LOCATED CLOSEST TO CITIES - DIRECTLY IN THE PATH OF DEVELOPMENT.



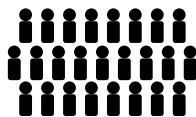
SOIL EROSION GLOBALLY COSTS AN ESTIMATED

\$400 BILLION PER YEAR.

EVERY YEAR, THE U.S. **LOSES MORE THAN 1 MILLION ACRES OF LAND** IDEALLY SUITED TO GROW FOOD TO DEVELOPMENT.

MOST **FARMERS CAN INCREASE SOIL ORGANIC MATTER IN THREE TO 10 YEARS** IF MOTIVATED TO ADOPT CONSERVATION PRACTICES.

Threats to soils include ...



POPULATION GROWTH

KNOWLEDGE GAPS THAT IMPACT PRODUCTION PRACTICES AND PUBLIC POLICIES

SOIL EROSION



URBAN DEVELOPMENT



DEGRADATION AND CONTAMINATION

The Soil Renaissance will ...

- MAKE SOIL HEALTH A PRIORITY AMONG ALL STAKEHOLDERS.
- IDENTIFY A STANDARD APPROACH TO MEASURING SOIL HEALTH.
- DEVELOP TOOLS TO DEMONSTRATE THE RETURN GENERATED BY SOIL HEALTH INVESTMENTS.
- SUPPORT SOIL HEALTH EDUCATION AND OUT-REACH PROGRAMS FOR ALL STAKEHOLDERS.
- IDENTIFY KNOWLEDGE GAPS AND LAY THE GROUNDWORK FOR NEEDED RESEARCH.
- CELEBRATE THE MIRACLE OF SOILS.

How to be a part of the Renaissance ...

Neil Conklin, president, Farm Foundation, NFP, neil@farmfoundation.org

William Buckner, president, Noble Foundation, wbuckner@noble.org

Tim Brennan, Farm Foundation, NFP, tim@farmfoundation.org

“ No civilization has outlived the usefulness of its soils. When the soil is destroyed, the nation is gone. ”

- Lloyd Noble, Nov. 18, 1949



THE SAMUEL ROBERTS
NOBLE
FOUNDATION