



2015  
International  
Year of Soils



# HEALTHY SOILS ARE THE BASIS FOR HEALTHY FOOD PRODUCTION

Soils supply



essential nutrients



water



oxygen



root support

that our food producing plants need to grow and flourish

## THE IMPORTANCE OF MAINTAINING HEALTHY LIVING SOILS

Soils maintain a diverse community of organisms that:



help control **insect & weed pests and plant disease**

form beneficial **symbiotic associations** with plant roots



recycle essential **plant nutrients**

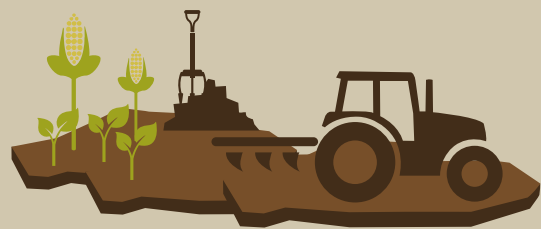
improve **soil structure**



Soils serve as a buffer to **protect delicate plant roots** from drastic fluctuations in temperature.

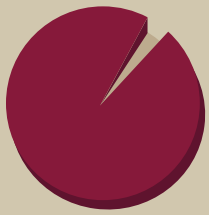


**Healthy soil** contributes to **mitigating climate change** by maintaining or increasing its **carbon content**



it is the foundation of food systems and the medium in which nearly all food-producing plants grow

## SOILS, FOOD SECURITY & NUTRITION



**95%** of our food is directly or indirectly produced on our soils

In the past **50 years**



**advances in agriculture technology** has led to increased food production, but sometimes **with negative impacts on soils and the environment**



In many countries, **intensive crop production** has **depleted the soil**, jeopardizing our ability to maintain production in these areas in the future

It can take up to **1000 years** to form **1 cm** of soil



**Soil health** and its fertility have a direct influence on the **nutrient content of food crops**



## SUSTAINABLE SOIL MANAGEMENT

**diverse farming approaches** promote the sustainable management of soils

### Agroecology

is a systems approach based on a variety of technologies, practices and innovations, including local and traditional knowledge and modern science

### Organic farming

is agricultural production without the use of synthetic chemicals or genetically modified organisms, growth regulators, and livestock feed additives

### Conservation agriculture

follows three principles (minimal soil disturbance, permanent soil cover and crop rotations) to improve soil conditions, reduce land degradation and boost yields

### Agroforestry

includes both traditional and modern land-use systems where trees are managed together with crops and/or animal production systems in agricultural settings

### Zero tillage

is a technique used in conservation agriculture to maintain a permanent or semi-permanent organic soil cover that protects the soil allowing soil microorganisms and fauna to take on the task of "tilling" and soil nutrient balancing

**Sustainable soil management could produce up to 58% more food**



[fao.org/soils-2015](http://fao.org/soils-2015)



Food and Agriculture  
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#IYS2015



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