



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



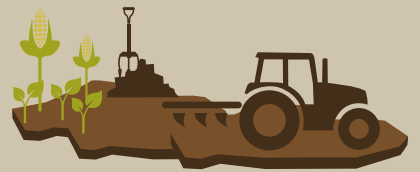
recycle essential **plant nutrients**

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



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 more food 58%



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