FOTC 2015 Fertilizer Outlook & Technology Conference

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International Year of Soils 2015: Soil As A Non- Renewable Resource, Essential For Food Security And Our Sustainable Future

The Fertilizer Institute
Nourish, Replenish, Grow

Fertilizer Industry Round Table

2015

International Year of Soils

healthy soils for a healthy life

PROTECT OUR SOILS

SOIL IS A NON-RENEWABLE RESOURCE

2015 International Year of Soils

It is the **basis** for

food | feed | medicines | ecosystem services | fuel

2050 THE CHALLENGE

global population

will exceed **9 billion**

increased demand for healthier and nutritious food

will only be met if

agricultural production

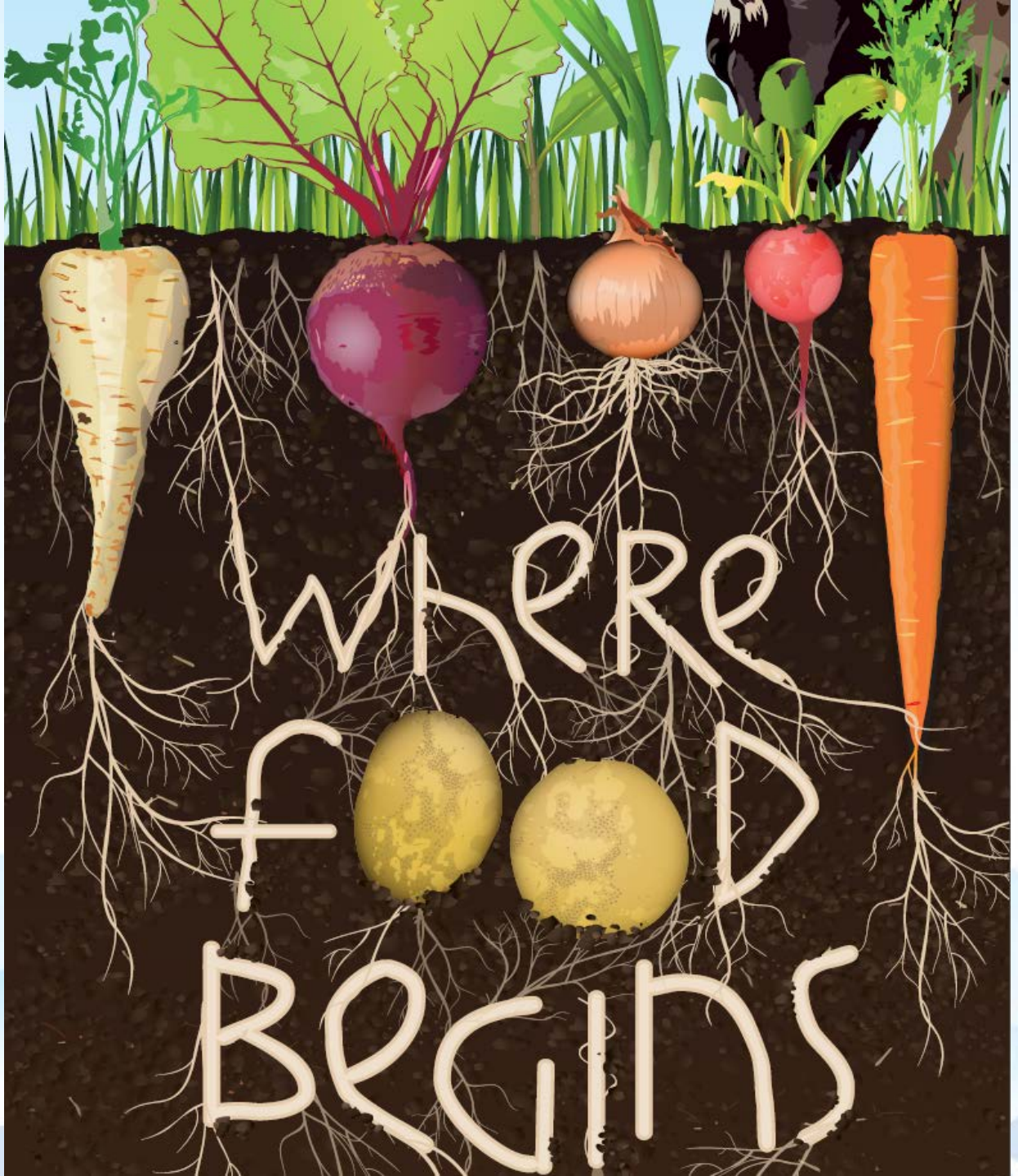
increases

60% globally

~100% developing countries

Soils are under pressure of intensification and competing uses of

forestry, cropping, pasture & urbanization


where
food
begins

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SOILS ARE THE FOUNDATION FOR VEGETATION

Fertile soil supports plant growth by providing plants with nutrients, acting as a water holding tank, and serving as the substrate to which plants anchor their roots.

Vegetation, tree cover and forests prevent soil degradation and desertification by stabilizing the soil, maintaining water and nutrient cycling, and reducing water and wind erosion.

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HEALTHY SOILS
ARE THE BASIS FOR
HEALTHY FOOD PRODUCTION

Soils **supply**

- essential nutrients
- water
- O_2 oxygen
- root support

that our **food producing plants** need to grow and flourish

Soil functions

Soils deliver ecosystem services that enable life on Earth

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fao.org/soils-2015

Food and Agriculture Organization of the United Nations

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Swiss Confederation

Federal Department of Economic Affairs, Education and Research EAER
Federal Office for Agriculture FOAG

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SOILS & BIODIVERSITY

SOILS HOST A QUARTER OF OUR PLANET'S BIODIVERSITY

Soil is one of nature's most complex ecosystems: it contains a myriad of organisms which interact and contribute to the global cycles that make all life possible.

A typical healthy soil might contain:

- **vertebrate animals**
- **earth worms**
- **nematodes**
- 20-30 species of **mites**
- 50-100 species of **insects**
- hundreds of species of **fungi**
- thousands of species of **bacteria & actinomycetes**

Over **1000 species** of invertebrates may be found in **1 m²** of forest soils.

Biodiversity is essential for **food security and nutrition.**

our Soils under threat

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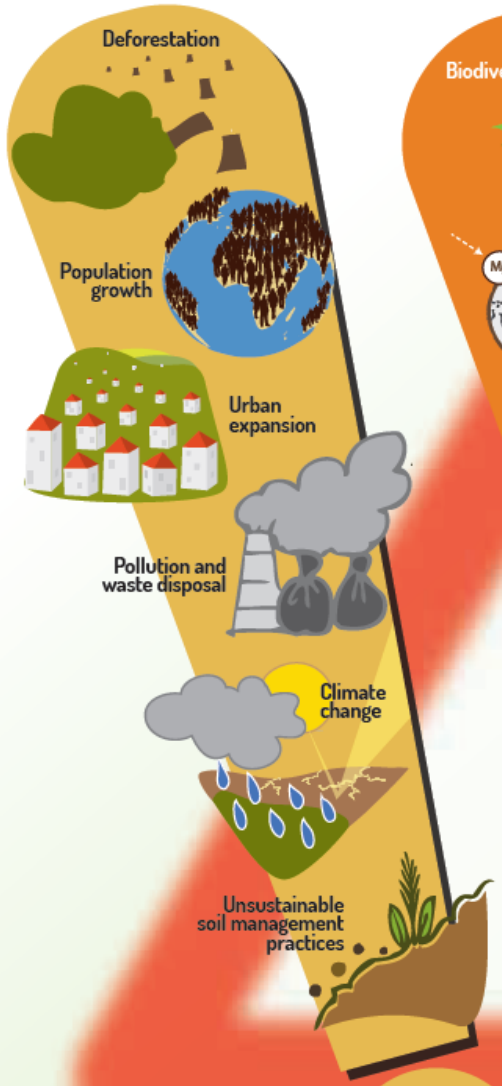
#IYS2015

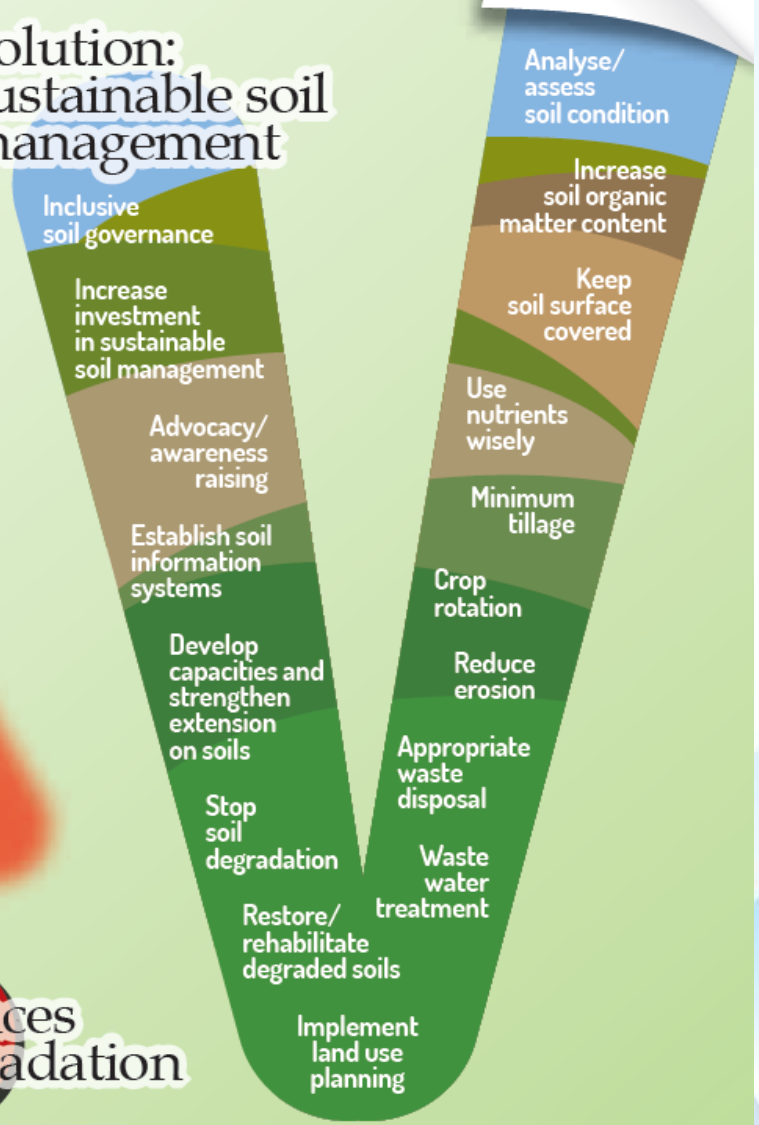


Drivers of soil degradation

Types of soil degradation

Consequences of soil degradation

Solution: sustainable soil management



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