Soil Functions that Enable Life on Earth

Plant Nutrient Supply

Organic Matter Inputs



Sulphur Mountain, AB

Lake Winnipegosis, MB

material.

Medium for plant growth: soil provides GtDigging into Canadian Soils, physical support, water, air, and nutrients for plant growth.

Water Supply

Soil Aggregation

Carbon Inputs

Carbon storage: soil holds ~1500-3400

²⁰²¹ of carbon and further contributes to carbon sequestration to mitigate climate change.

SOIL

Carbon Inputs

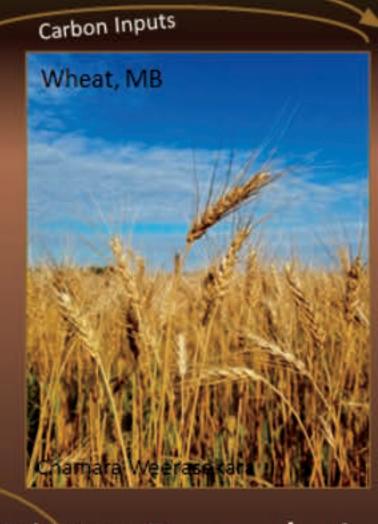
Nutrient Cycling

Soil Aggregation

Water Supply

Soil Aggregation

Biological N fixation



Nutrient recycling: natural and human-made waste products are decomposed, and basic elements are made available for the next generation of life.

Microbial C Stabilization

Soil Priming Effect

Degradation of pollutants for remediation and reclamation of contaminated ecosystems.

Plant Nutrient Supply

Free-living, bacteria-feeding, soil nematode -Rhabditis, 400× MB

Fernando Pereira

Habitat for Organisms: the soil is home to a diverse community of macro and micro-organisms that contribute to the services soil provides.

> Food and Medicine Supply Carbon & Nutrient Exchange

Water filtration and

storage: soil serves as a natural filter, removing impurities and pollutants, and can store and release water.

Water Supply

Flax, MB

Soil Respiration

Provision of food, fiber, fuel, and medicines for the

global population, hence food security and human well-being.

Miscellaneous cultural and recreational use of soils for the well-being of people.

2024 Nutrien Agrologists

Atmospheric modifier: soil

exchanges water and gases

climate regulation. Soil Aeration

Engineering medium and

provision of construction

with the atmosphere for





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National Soil Conservation Week

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