

Backgrounder on Soil Health -2024

Resource: Soil Health in Ontario OMAFRA: <https://bmpbooks.com/media/Soil-Health-in-Ontario.pdf>

Soil is a vital natural resource and the foundation of agricultural production. The many benefits of a healthy soil are important – underpinning the long-term sustainability of the farm operation, our agri-food sector, and our environment. What is a healthy agricultural soil? Essentially it refers to a soil's ability to support crop growth without becoming degraded or otherwise harming the environment. While a soil can be degraded through particular practices, the good news is that many best management practices (BMPs) can build back and safeguard soil health.

Healthy Soils:

- provide minimum resistance to root growth, improved crop development, and ultimately high yields and product quality
- provide better returns on crop inputs such as applied nutrients and pesticides
- allow for better infiltration, more water storage and less runoff
- are more resilient during low water conditions because their structure and organic matter content help retain plant-available moisture
- resist degradation, such as compaction, crusting, water and wind erosion, and ponding
- are better equipped to remove pollutants and protect groundwater quality
- reduce greenhouse gas emissions, i.e. carbon dioxide, methane, nitrous oxide. Implementing BMPs for soil health – especially those that add organic matter – will improve the soil's ability to serve as carbon and nitrogen sinks.

The keys to maintaining healthy soils are building organic matter and reducing the impacts of erosion.

For more information consider the: OMAFRA Soils BMP book and extensive resource and video listings housed at the Ontario Soil and Crop Resource pages. Links below.

<https://bmpbooks.com/media/Soil-Health-in-Ontario.pdf>

<https://www.ontariosoilcrop.org/soil-health-resources/>