



It's Not Just Dirt.

Soil health is vital to climate resiliency

Climate change and climate variability present a challenge to Canadian producers from coast to coast. Drought, floods, and extreme temperature fluctuations can have severe impacts on crop production. Indirect impacts of climate change include higher soil erosion rates, increases in invasive species and changes in pest pressures and lifecycles. In the coming decades researchers have predicted that 30 per cent of all land in North America will be impacted by drought, as compared to one per cent today (1). Increases in average temperatures can also lead to more intense and severe precipitation events, as already experienced in regions of Western Canada during the 2020 growing season. Given these predicted and realized increases in the intensity and frequency of extreme weather events the agri-food industry is presented with a challenging question.

How can we build climate resiliency in our production systems to meet the food security needs of a growing population while maintaining and improving environmental quality?

The answer is: Soil Health

One of the greatest opportunities that Canadian producers have to mitigate the negative impacts of climate change and build resiliency to the impacts of extreme precipitation and drought events is to improve the relative health of their soil.

Did you know: Research shows that by increasing soil organic matter (as measured by soil organic carbon) by just one per cent can result in a two- to five per cent increase



Photo credit: Alan Kruszel

in soil's available water-holding capacity (1).

Farming practices such as conservation tillage, increasing ground cover throughout the year and incorporating cover crops into rotations all have been shown to improve soil organic matter over time. Restoring soil's resiliency to extreme weather conditions also minimizes soil erosion, nutrient run-off and provides a season long productive growing environment for plants and beneficial organisms.

Increasing soil organic matter by just one per cent in real terms is equivalent to increasing the top 10 cm of a soil's capacity to hold water by 10,000-50,000 litres per acre, depending on the soil type (2).

What is the Soil Conservation Council of Canada and what does it do?

The Soil Conservation Council of Canada (SCCC) is the only national organization that is exclusively focused on soil health and soil conservation. It works to build a greater understanding of the importance of soil as an essential resource to society by facilitating the exchange of information with industry, government, academic and public stakeholders.

To find out more about soil health in Canada, visit the Soil Conservation Council of Canada's website at www.soilcc.ca

References:

1. Soil Health Institute. 2020. <https://soilhealthinstitute.org/>
2. 4 Per Thousand Initiative. 2020. <https://www.4p1000.org/>

Start talking | Soil Your Undies | Become a member | Support our soil

info@soilcc.ca 204-792-2424 www.soilcc.ca  [@soilcouncil](https://twitter.com/soilcouncil)