An Act To Promote Healthy Soils

H.3713 (Sponsored by Representative Paul Schmid III)

How can soils mitigate climate change and extreme weather conditions?

Aside from oceans, soils are the largest carbon sink on Earth. Since the advent of industrial agriculture, we have lost much of the soil carbon to the atmosphere. According to some estimates we've already lost ½ - ⅔ of all soil carbon[1]. However, using regenerative agricultural practices, we can restore much of that carbon back into the soil, where it serves multiple ecosystem benefits. A 1% increase in soil organic matter *on just one acre* corresponds to a drawdown of approximately 17 metric tonnes of carbon dioxide, equivalent to eliminating 40,000 miles driven by an average car.

What are the benefits of healthy, carbon-rich soils?

The benefits of healthy soils are not limited to removing carbon dioxide from the atmosphere. Healthy soils also:

Hold more water- Healthy soils essentially act as a sponge, thus providing reserves in times when precipitation is low and a sink to soak up excess when it is high. A 1% increase in soil organic matter on just one acre enables the land to hold an additional 20,000 gallons of water.[2]

Reduce run-off- That same sponge-like quality allows healthy soils to retain most of the fertilizers applied. This reduces downstream pollution, which can lead to dangerous algae blooms, contaminated drinking water, and other biological disruptions.

Require less fertilizer- The abundant soil life in healthy soils provides much of the nutritional needs for crops. Fungi and bacteria have coevolved with plants to provide essential nutrients in exchange for carbon (in the form of sugars).

Result in better, healthier crops- Healthy soils provide a steady drip of fertility and moisture, instead of the deluge and dearth common in today's agricultural systems. Healthy plants are able to photosynthesize more effectively, and are able to produce the necessary metabolites that defend them from disease and pests. In short, healthy soils grow healthier plants, which need less pesticides.

What would the Healthy Soils Program accomplish?

Soil science and the study of regenerative agriculture practices are rapidly evolving. Farmers and landcare managers need guidance in order to make sound and sustainable decisions. The Healthy Soils Program, administered by the Department of Agricultural Resources, would "enhance the education, training, employment, income, productivity and retention of those working or aspiring to work in the field of regenerative agriculture" and pave the way for future incentives.

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[1] http://www.nature.com/articles/ncomms7995

[2] https://www.nrdc.org/sites/default/files/climate-ready-soil-appendix.pdf