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Sustainable Systems

Reading Response

February 28, 2019

The article title, “ Our best shot at cooling the planet might be right under our feet” by Jason Hickel outlines the processes in farming that have degraded the quality of soil on Earth, and have contributed to the release of carbon dioxide emissions into the atmosphere.

“Soil is the second biggest reservoir of carbon on the planet, next to oceans. It holds more carbon than all the plants and trees in the world.” The soil on Earth has been degraded due to industrial farming techniques. The soil is losing the ability to hold carbon, and this is contributing to global warming.

Scientist and farmers are pointing out that that soil can be regenerated by moving away from industrial farming techniques to more ecological farming. Ecological methods that would help to regenerate the soil include not tiling the soil, composting, and crop rotation.

The US National academy of sciences claims that regenerative farming can reclaim three percent of our global emissions. An article in Science magazine suggests it could be up to fifteen percent, and new research from the Rodale Institute in Pennsylvania, not peer reviewed, but says sequestration rates could be as high as forty percent. The report claims that if the same technique is applied to the world’s pastureland, it could capture one-hundred percent of global emissions.

Carbon reprising is a market based strategy for lowering global warming emissions. The idea is to put a monetary value on the carbon pollution so that companies can make better decisions about the cost of low-carbon energy options.

Carbon pricing can be implemented in two ways including a cap-and-trade program and a carbon tax system. The cap-and-trade program regulates the emissions from particular sectors of the economy and issues allowances to match the cap. A carbon tax program is a law or regulation that charge per ton of carbon emissions from a sector or the whole economy. A hybrid approach includes programs that limit carbon emissions but set bounds on how much the price can vary.

The economy can benefit from both a carbon tax and a cap-and-trade program. The revenues can be used to distribute fairness and economic growth. These funds could offset disproportionate impacts of the higher energy costs, provide transition assistance, invested in renewable energy, etc.