Reversing Global Warming

Fossil fuel reductions must be implemented in order to reduce our rate of warming. We may also reduce greenhouse gases through carbon sequestration (drawdown) in the soil. World wild managed grazing could offset current greenhouse gas emissions 100%. Reducing greenhouse gases to the point where warming has reversed to cooling will take 30-100 years. The latest IPCC report states we must reverse warming trends within 10-20 years to prevent irreversible damage. This leads us to the knowledge that we must also focus on cooling practices that can have short-term effects on temperatures while reducing greenhouse gasses levels for the long term. No cooling from CO2 levels will take place until levels are back to pre industrial levels. Reducing emissions will only slow the rate of warming.

How to get cooling now

* Bare soil radiates heat more powerfully than the radiation from actively growing green plants. Any process that grows plants and trees in bare places contributes to global cooling.

*As much as 50% of the energy captured by plants photosynthesizing is injected directly into the soil, which absorbs heat, feeds biological activity, and sequesters carbon dioxide. More importantly the organic matter created holds more water, which improves resilience to flooding and drought and increases the availability of water to drive more plant growth and the rain-water cycle.

*Heat is thrown off when raindrops form at cloud height let more of that heat rescape back into space, thus cooling the planet. The more times the water is cycled from earth to cloud, the more cooling takes place. The cycling of rain makes more plants grow and further drives this positive feedback loop.

*High humidity in the air many times does not cause rain because rain drops require a hygroscopic nuclei to form around. Hygroscopic nuclei come from many sources, but their action is enhanced bacteria coming off of living plants. This bacteria is lofted up into the high atmosphere and enhanses raindrop formation. The science of what bacteria are best is ongoing, but introducing bacteria that are both beneficial to the plant and to raindrop formation could be transformational.

*Overall, covering soil and enhancing the rain cycle will lead to increased cooling of the earth now. These short-term cooling practices, coupled with longer term removal of greenhouse gases from the atmosphere will augment each other to mitigate the effects of global climate change.

Henry Swayze for the Vermont Healthy Soil Coalition 11/2018

For in-depth information watch:

Walter Jehne https://youtu.be/123y7jDdbfY

https://youtu.be/K4ygsdHJjdI

Didi Pershouse https://youtu.be/oZVcNq56MDs

Visit: https://soilcarboncoalition.org/

https://www.soil4climate.org/