

Carbon Sequestration, How it Really Works and the Impacts on Human Health

By Erik Cutter

As climate change rages on and we experience more unpredictable and catastrophic weather, humans are making a huge deal about how much carbon is in the air and how little is in the soil. We should be, and it's the greatest issue of our time, however there is a huge misunderstanding that is being sold regarding the carbon cycle and how it really works.

Via photosynthesis, photons and CO₂ are taken in by plants and converted to sugars (carbon compounds) which in turn, if sufficient macronutrients such as Boron are present, sugars are transported down the plants phloem and exuded into the soil to attract microbes who in turn provide the bioavailable minerals that the plant needs to function properly. Calcium and Phosphorous are super critical minerals that all plants need to metabolize efficiently.

What we are missing here is the fact we are critically compromising the efficiency of the plant's ability to photosynthesize at its optimum levels, thus reducing its ability to store carbon in its tissues. This is a direct result from depleted soils which are imbalanced due to industrial agriculture. Our soils are deficient in not only carbon, but minerals and microbes. In other words, the soil balance has been disrupted and several critical ratios that Nature has determined to "optimize" carbon storage in plant tissues has been critically altered. As a result of this disruption in the soil matrix, plants across the planet are becoming far less efficient at storing carbon in their tissues, in fact, up to 80% less efficient. Translated this means plants carry only 20% of their carbon tissue storage capacity and thus cannot optimize their genetic potential, ie, store optimum amounts of carbon in their tissue. This massive deficiency in plant tissue carbon causes a huge decrease in human health and resilience because we need to consume "optimum" amounts of carbon to drive all our living systems. So in reality, we are receiving only a fraction of the carbon we need from the food we eat, estimated at 20% or less, from plants we consume today. Our bodies are starving and it's no wonder we have hardly any resilience left.

If we recognized this inability for plants to store their optimum carbon load in their tissues and we adopted, "soil first" regenerative agriculture processes all across the planet, we would reverse the cycle and allow plants to optimize their carbon storage capability in their tissues. Simply, we would end the climate crisis very quickly as plants are the only chance we have to drawdown sufficient carbon fast enough to reverse the negative impacts of climate change. AND human health and resilience DIRECTLY BENEFIT because plants would now be far more carbon rich (nutrient-dense) allowing us to provide our bodies sufficient nutrients from whole food to heal and ward off disease.

The REAL TAKEAWAY here is not to worry so much about sequestering carbon in the soil as that is not how Nature works. Sure, we desperately need to improve soil health (the mineral and microbe balance) now. But it is optimizing the plant's photosynthetic efficiency and thus increasing carbon storage capacity (increasing the plant's genetic potential) that can potentially reverse climate change and create healthy, resilient humans at the same time.