

"Hey honey, did you remember to feed the dirt?"

By Steph Jordan, Sierra Club Cimarron Group

It's probably not a major leap for most Sierrans to consider the less immediate but disastrous ripple effects of what has come to be standard practice in modern day agriculture, but it may come as a surprise to even those of us heavily steeped on the subject, that bringing our dirt back to life may be our most hopeful shot at combatting climate change, while also saving farmers money and countering issues of runoff which deny rainwater to crops, and instead carry away topsoil and carry the chemicals of industrial agriculture into our streams, lakes and rivers.

Plants naturally pull carbon from the air to use as currency in exchange for things like nitrogen from the soil. In an undisturbed soil system, there would be lots of bacteria, fungi and rhizomes working together like a little restaurant to give the customer (the plant) the nutrients it can't get on its own, in exchange for the currency the plant pulls from above the ground (carbon, etc.,) that the restaurant needs and can't access from below the ground.

For eons, this system worked in harmony, and when it didn't, all the players had time to change and adapt to the conditions of their microclimate. Plants grew in diverse combinations and at the end of their seasons, they rotted in place and gave their nutrients back to the dirt creating a vast cafeteria of decay and roots and leaves to keep the soil in place. All was right with the world - the dirt world anyway.

There were many steps along the way that upended this natural rhythm and this is not to say that we mustn't disrupt natural rhythms to grow the crops we need to feed a vast population, but if we follow nature's lead, we will all be better for it, produce more food per acre and have a fighting chance against climate change.

In his book, *Growing a revolution: Bringing Our Soil Back to Life* David R Montgomery travels the world to study how Regenerative Agriculture practices are ditching the plow, planting cover-crop cocktails and leaving leftover plant matter on the ground to rebuild soil that is worn out from years of tilling, exposure, and chemical inputs. The idea is to always keep the soil covered and well fed. Also bringing back incorporated grazing onto cropland because the microbes in poop are a big part of the picture.

Montgomery contends that throughout history, "societies that abuse their land withered into poverty or disappeared entirely." He makes a compelling argument that we can significantly reduce the carbon in the air if we invest in healing the soil so it can do its job. It takes about three years of these soil health building practices for farmers to get their land up to performance levels. They measure this by the percentage of organic matter in the soil. The magic starts happening around 3%.

Last month, Sierra Club Cimarron Group sponsored me to go to the Soil Health Conference put on by the Oklahoma Association of Conservation Districts. Since I've become a giant soil nerd, I was super excited to go and listen and learn. But what was even more exciting is that it wasn't packed full of hippy farmers and sustainability champions like me that I usually see at conservation conferences. It was full of people who look, dress and sound like the people who are usually on the opposing side of Sierra Club's legislative agenda, but talking the talk of conservation. This was the most hopeful thing of all. They were there, they were inspired, and they were determined to convince their peers that alternative

agricultural practices were effective, achievable and profitable. It was fascinating to watch. I came away with new inspiration.

But I build soil as part of my job, and statistically speaking, you probably don't, so what can you do to be a part of the Soil Health Revolution? Plenty.

- Read: Montgomery's book. If you do nothing else, give yourself the gift of reading something that will give you hope about a potential solution to our escalating carbon crisis.
- Shop: Attend your local Farmers Market and get to know your farmer and what they are doing (or not doing) to build their soil health, and reward their good choices with your patronage. Be prepared to spend a little more, because food grown responsibly costs more to grow.
- Do no harm: If you are still using chemicals to achieve a perfect lawn (also known as a monoculture) please rethink your system. We can find someone to help you if you would like.
- Compost: Start a compost pile if you can. There are lots of good YouTube videos to help you get started. If that is not practical for you, see if your city has a business that will do it for you. In OKC, contact Fertile Ground, who will supply you with a bucket with a screw-on lid that they will swap out on a regular basis and bring you finished compost. They also mow lawns with electric mowers.
<https://www.fertilegroundok.coop/>

Join me in the soil revolution. The solution for climate change may have been under our feet all along!