

WE TREAT OUR SOIL LIKE DIRT

Lynn Montgomery
Chair, Coronado Soil and Water Conservation District

"We know more about the movement of celestial bodies than about the soil underfoot."
Leonardo Da Vinci, circa 1500's

It doesn't taste good, except to two-year-olds. Good farmers like the smell, especially if fertile, friable and teeming with life. Their occupation depends on good soil, so they know how magical it is. Things haven't changed much since Leonardo's time. The discovery of microbial life has helped, but knowing the soil has barely entered general consciousness. A gram of decent soil contains 100 million to one billion bacteria, several yards to several miles of fungi, several thousand protozoa, and from ten to several hundred nematodes. And this doesn't begin to count the larger mites, spiders, centipedes, grubs and earthworms who together form a complex called the Soil Food Web. This Soil Food Web provides many essential services to us and the Earth, the lack of which would mean we wouldn't be here. Soil without this life is just dirt, a conglomeration of powdered minerals. It will blow or wash away, not having any stable structure. It cannot build on itself and become more fertile and productive. Soil life takes those particles of minerals and makes them available to plants. It breaks down organic matter, giving structure to the soil, vastly improving its ability to absorb and hold water and preventing erosion. Soil bacteria take nitrogen from the air and make it available, improving fertility. Soil life enables the exchange of gases in the atmosphere. If this didn't happen, we would suffocate. Soil life, along with the photosynthesis plants provide, takes carbon from the atmosphere and sequesters it in the soil, potentially contributing to solving the global warming problem. Crops are much healthier and nutritious grown in living soil.

The soils of the Las Huertas Watershed are surprisingly fertile. Just cover them with organic material and add water. The Soil Food Web then explodes with a riot of fecundity, waiting for a lucky seed. As a farmer on Las Huertas Creek for nearly fifty years, I can attest to this. The key is establishing a cover. Exposed soil is in agony. It loses its moisture almost immediately, along with the life within it. Covering the soil is like putting a band-aid on it, letting it heal and come alive, establishing plant growth—the ultimate cover.

Erosion is rampant in the Watershed, as bare, lifeless soil blows and washes away with every rain. Unpermitted roads snake through our hills turning into gullies and then arroyos, dumping tons of sediment into Las Huertas Creek. The EPA has declared the Creek impaired because of this. Headcuts start to form, channeling water away from the land and sending it down the arroyos, never to soak in. When this occurs, it doesn't matter how much precipitation is received, the land remains in drought. Erosion will eventually threaten many foundations, roads and culverts in Placitas. Our wildlife diversity has been reduced significantly because of drought and depredations of feral horses. We used to have over 200 species of plants where now we have a snakeweed monoculture. If Placitas is to continue to be a beautiful and secure place to live, we must start to take better care of our soil.

Good soil with a lot of plant life is a form of flood control. In fact, it is the primary flood control option for the Las Huertas Watershed. Bernalillo and Algodones are protected by

retention dams which slowly release flood waters, robbing them of their force. Coronado SWCD owns and operates the Piedra Lisa Dam in partnership with Sandoval County and the Town of Bernalillo. This large dam was built in 1955 to protect the then-agricultural lands of North Bernalillo. ESCAFCA has recently constructed works that protect South Bernalillo and part of Algodones. These kinds of structures would be useless in Placitas unless they were very small. The main option remaining is soil regeneration. Bernalillo is in a flood plain and Placitas is precipitous. Water can run fast and hard and can best be slowed down and retained locally through community participation.

Coronado is applying for another grant to continue its ongoing watershed restoration project in the Placitas Open Space. The area is particularly dry and erosive. This project is designed as a research effort, where participants explore procedures under the guidance of a permaculture expert to find best practices for this unique area. The idea is to build a local knowledge base that future generations can use to continue to steward the land. All work is done by hand to minimize disturbance. All work is done by volunteers.

Let's hope that some of us can reach down and pick up a handful of our soil and feel the magic and power within.