

Dead soil means dead oceans
By Teresa Smith

Somewhere in the Central Valley of California, a commercial farmer is preparing to dump many tons of nitrogen upon her soil. This is because the soil is dead due to sloppy farming practices like direct sun exposure and harsh chemical pesticides. It would take only a few summers to nurse the nitrogen-giving microbial life in the soil back to life, but this farmer is trapped by the system of capital, and she must make fast decisions, thinking only one season at a time. So she dumps chemical nitrogen on her soil, allowing her crops to survive the season, but the nitrogen doesn't stay put: it quickly washes from the field into the creeks and rivers, steadily making its way to the sea.

Once the nitrogen reaches the ocean, a tragic cycle begins: the sudden boost in nitrogen causes the algae population to swell, creating massive algae blooms that soon die and sink, feeding microbes that rapidly suck the oxygen from the water. This creates an oxygen-depleted area of water known as an ocean dead zone. When they enter an ocean dead zone, fish and crabs are knocked unconscious within minutes and die of suffocation. Likewise, slow moving sea creatures like clams, lobsters, muscles, starfish, and anemones all suffocate and die.

There are at least 405 known ocean dead zones in the world—in 1960, there were only 49.

Ocean dead zones are often seasonal, as they are directly related to bad farming practices, but in places with high levels of nutrient pollution like the Baltic Sea, they stay year round. These dead zones kill a staggeringly high amount of marine life. The Chesapeake Bay dead, for example, zone kills an estimated 75,000 metric tons of ocean life each year. In the Gulf of Mexico, 212,000 metrics tons of marine life are killed annually by the massive dead zone that emanates from the mouth of the Mississippi.

Ending ocean dead zones is as simple as changing our farming practices. For example, in the early 1990s, after the collapse of the Soviet Union, chemical nitrogen became too expensive for farmers, and the dead zones in the Black Sea vanished, and marine life there began to recover. Because of this, we know that ocean dead zones can be healed, but only if the bad farming practices are put to an end.

This is one of hundreds of direct ways the ecology of our planet is being assaulted by capitalist practices of producing things only for profit and consumption, rather than in harmony with the beautiful biological systems our planet already has in place. We could grow all the food we need without doing it this way. Market competition is the only thing forcing farmers hands.

Dead soil can be nursed back to life by keeping it covered to prevent sun exposure, by feeding it compost tea, and by avoiding harsh chemicals. Once it is alive again, it will be just as productive as with the nitrogen, in fact, more so.

Farmers and the public must be educated about the relationship between chemical nitrogen dumping and ocean dead zones. There must be a demand for food created without nitrogen dumping—a demand for food grown in healthy soil with thriving microbial life.

All life on this planet is interconnected. Bringing the soil back to life is just one way to help the seas. We also need to reduce carbon emissions and the chemical dumping that leads to ocean acidification. We can do it. We can make these changes. But we have to demand better practices across the board.