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Until next time!

-Brad Phillips



SOIL, FERTILIZER AND DEADLY COMPACTION

By Lanse Fullinwider



Aaahh your landscape, a sublime place to enjoy walking, running, and lying on, but darn tough to 'keep pretty' without chemicals per the experts and chemical companies! **Not so fast batman, don't be conditioned into believing that plants need chemical fertilizer for**

proper growth and to keep the weeds out! In the 70s/80s, I was taught that chemicals are the ways and means to create the healthiest landscapes. I fully disagree and will tell you why.

What type of soil do you have, clay, loam or sand? Each has its own quirks, but let's talk clay which is extremely susceptible to compaction due to kids, animals, over-watering, motor vehicles, flooding, and chemicals applied. Compaction is a monster landscape problem, a disruptor of plant life, and the silent landscape killer.

We are told to fertilize 3 times per year, use pre and post emergent herbicides in spring through fall, and use insecticides to kill all those nasty critters inhabiting the soil. Do you realize this protocol causes problems instead of solutions?

A typical fertilizer has a salt-base carrier, 5–7 synthetic nutrients, lasts 6–8 weeks, and is water soluble. It is highly prone to leaching into waterways and volatilizing into the atmosphere, both being major problems for the environment. Per educators **plants need a minimum of 17 elements for healthy growth**. Non-Mineral: Hydrogen, Oxygen and Carbon; Mineral: Nitrogen, Potassium, Phosphorous, Copper, Calcium, Sulfur, Boron, Magnesium, Chlorine, Molybdenum, Iron, Nickel, Zinc and Manganese.

Typical fertilizers fall short of minimum nutrition plus the soil pH may be out of whack, so what does that lead to??? Yes you guessed it, unhealthy, off color plants sending distress signals to bugs to come and eat them, insecticide use to kill bugs, more irrigation applied to help plants recover and perhaps more fertilizer added—**ALL WRONG ACTIONS!!!** IE: a cycle of chemical dependence that debilitates soils, kills needed soil microbiology and bugs above/below ground, thus destroying natural food sources! Do you have songbirds around??? **All this because typical fertilizers destroy soil structure leading to compacted, tight, unhealthy soils!**

To conquer compaction, build a healthy rich soil that is full of life! Build a diverse ecosystem in your soil by using organic products that contain ample minerals, billions of soil friendly mycorrhizae fungi and beneficial microbes.



Fungal Partnerships: Symbiotic Relationships

MYCORRHIZAE—*Mycorrhizae* are a symbiotic relationship with plants

- Fungus transfers minerals to a plant's roots
- Roots supply carbohydrates to the fungus

Lastly, do you smell your soils? You should! Rich soils smell wonderfully fragrant and poor soils have little