EARTHGEN215, LLC

August 2023 News Letter

Soil that ABSORBS Moisture Usually Produces Better than Soil that ADSORBS Moisture

Fall is rapidly approaching as are final harvests for 2023 and pulling some soil samples from fields being, or to be treated with the EarthGen215 carries would be very helpful to assess and do a soil analysis. By doing a soil analysis of representative soil samples, insights are provided regarding nutrient excesses, or deficiencies that are limiting quantities, and quality of production. Soil analysis should be taken from the same areas/fields within the same month each year - to every two years and when compared, the data will share what is working, or still needs assistance in the fields treated with the products EarthGen215 carries.

Applying the products that EarthGen215 carries as recommended boosts activities of beneficial soil organisms, those visible only with a microscope and those visible in plain sight, as well. Activities of beneficial micro and macro soil organisms improve the structure of soil so that the soil functions more like a sponge that absorbs water, holds it, AND holds essential nutrients, then readily releases both the moisture and nutrients when, and as needed by growing crops. Moisture that is absorbed by soil moves evenly throughout the soil in a field thereby reducing ponding in some areas and simultaneously developing dry areas in the same field. Soil that contains a lot of clay does not absorb water as readily as loamy soil, and loamy soil that contains small quantities of sand.

Water tends to be ADSORBED by soil containing a lot of clay. Water

ADSORBED by soil generally is adhered so tightly to clay particles in the soil that its availability for uptake by growing plants' root hairs is very limited. Soil containing significant quantities of dense silt functions similarly.

Spaces between soil particles is called pore space. The larger the particles in soil, the larger is its pore space. Clay has the smallest particle sizes, and silt usually the second smallest particle sizes. Relative to clay and silt, sand has the largest particle size. Clay, silt and sand quantities define a soil's texture. Loam can be considered a soil texture, however, loam content has more to do with soil structure.

Water ADSORBED by soil tends to remain in pore spaces of clay and dense-silt soils, thus limiting root hairs to that moisture. Water lodged in soil pore space restricts further absorption of water. Water lodged in pore space also hinders water passing through pore spaces, resulting in uneven moisture levels throughout a field, and corresponding uneven crop growth in that field. Permeability of soil is adversely affected by adsorbed water lodged in soil pore spaces. Permeability of soil determines how fast air and water move through soil.

Loamy soil that contains small amounts of sand, instead of clay or silt, usually contains better levels of oxygen. It absorbs moisture and readily releases it when and as needed by growing crops.

The products and their application protocols are designed to enhance activities of beneficial micro-organisms. As activities of those organisms increase, so do activities of beneficial macro-organisms such as earthworms and various arthropods. Again, sandy soil contains much larger particle sizes and pore space than soil containing a lot of clay or dense silt. Loam is essential in soil to hold moisture and nutrients like a good, new sponge can absorb and hold water. Loamy soil and loamy soil containing small quantities of sand allow water to infiltrate and percolate evenly throughout a field's soil. Infiltration is water's entry into soil surfaces. Soil with excellent ability to absorb water limits the amount of run-off over the soil surface during a heavy rain event. Infiltration refers to both the entry and the downward movement of water into soil surfaces and its top four to six inches of soil.

Percolation refers to downward movement of water, deeper than the top six inches of soil, and deeper than most growing plants' roots can reach. Loamy and sandy soils allow gravity to take water to their area's respective water table. Soils containing a lot of clay or dense silt do not allow as much percolation of water. Percolating water recharges ground water. Ground water is essential for areas that use springs and wells fueled by ground water for irrigation. The quantity of irrigation water needed to produce intended crops may decline as soil structure improves, depending on weather events. We here at EarthGen215 encourage producers to check soil in their fields for moisture content when deciding how much irrigation water to apply

Micro-organisms that decompose dead matter that was once living, transform that material into nutrient-dense top soil, amazingly able to absorb moisture.

Applying the products, we represent as recommended does not change the texture of the soil. Parent materials of clay, silt, and sand were created and later deposited by various geological events and weather events. Applying these products as recommended can change soil structure by infusing parent soil materials with oxygen and incorporating into them decomposed dead materials. The raw materials for these products are being assembled for manufacturing now for the 2024 production line. We look forward to working with our EarthGen215 customers now and into 2024 and beyond, to continue improving soil structures and BOOSTING crop production!

We here at EarthGen215 are here to assist you and look forward to INCREASING your yields while REDUCING your costs!!

To your health, and the health of your soil!!

Thank you!!

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