Your Growing Environment – Top Down

Rain

+ Hydration
+ Pure Water foliar/soil
+ + Dissolved Oxygen (D.O.) foliar/soil
+ Solubilizes N
+ Might flush Na – if NOT, Toxic following rain and N

Watering

+ Hydration
+ Transports Nutrition if soils are in order
+ Has Nutrients
  Liberates Bound Nutrients – No
  Liberates Sodium – yes, and that's toxic if they don't flush
+ Has nutrients as TDS and Ec
  Nutrients form scale if not consumed
  Has Toxins, Na, B, Na, Cl, S/SO4-S w/ Bacteria
  Rare to have D.O.
  HCO allows minerals to bond
  Cl allows minerals and metals to bond
  Likely to have Bacteria and bio-films/slimes
  With sulfurous acids forms insolubles, cementing soils
  Cementing increases cost per acre significantly

Nutrients

Essentials are highly insoluble, Macro and Micro
Built-up in the soil they can become pollutants (USDA)
Sulfurous and Gypsum form insoluble plaster
Unutilized resources tied up in the soil, hinder vitality and yield
Cementation harbors toxicity and crop vulnerability

Analyses

Soil Paste Extractions

1. Lab Water & Soil - Theoretical need of nutrients
2. Source Water and Soil - More accurate need of nutrients
3. Treated Water and Soil - Even more accurate need of nutrients
   ?? What is the fate of the products used ??

Soil Exchangeables

Reveal "Almost" everything in your soil, BUT NOT ALL OF IT
This is an ammonium acetate digestion. You'll find even more using HCl + H2O2 and Nitric acid

pH is NOT the Answer

Do these challenges occur withing the plant? YES. So why would we add more nutrients of the same elements saturated in our soils, namely calcium and sulfate (gypsum)? And why do we continue to buy even more gypsum and acid year over year with declining results and higher expenses and costs?

Analytically, what about the biology, the iron bacteria, black layer, root rot, Slime, water and soils oxygen content? Why do I use copper sulfate when my soils are plagued with sulfur and sulfate, and the sulfate is food source for anaerobic bacteria, its' toxicity and snails? What does any of this do sustainably versus deteriorating our soils and vegetation? And what about chloride salts (Na, Ca, Fe, Zn & B)?

It's Time to Reverse the Trends
Harvest the Soil Nutrients
You'll Spend Less

WaterSOLV™

See the validations and confirmations online at www.hctllc.com
Products registered with the California Department of Food and Agriculture