REDOX SOLUTIONS:

SOIL MOISTURE MANAGEMENT

THE CHALLENGE:

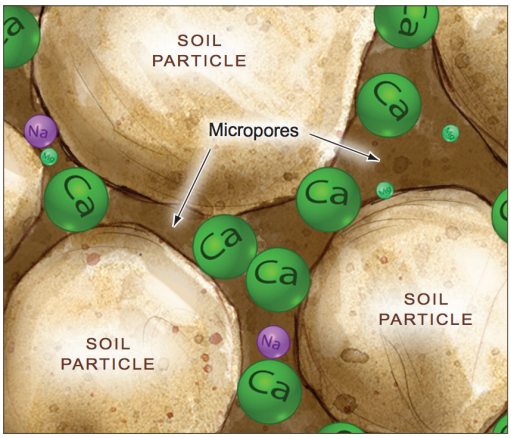
Water chemistry, soil chemistry, and soil physical characteristics all contribute to the difficulty of properly hydrating the crop root zone. Optimum root zone moisture management is fundamental to crop performance.

THE SCIENCE:

This solution will focus on achieving optimum soil structure and efficient water movement.

Soil structure is the relative attraction of the soil particles. Proper calcium content and availability as well as adequate soil humus play key roles in soil structure. Good soil structure allows for hydration of the soil micro pore space. Root absorption of water and nutrient absorption only occurs in the micro pore space.

Water molecules tend to have a greater attraction toward other water molecules rather than the soil micro pore space. Promoting proper movement of water in order to hydrate the micro pore space is key to irrigation efficiency.



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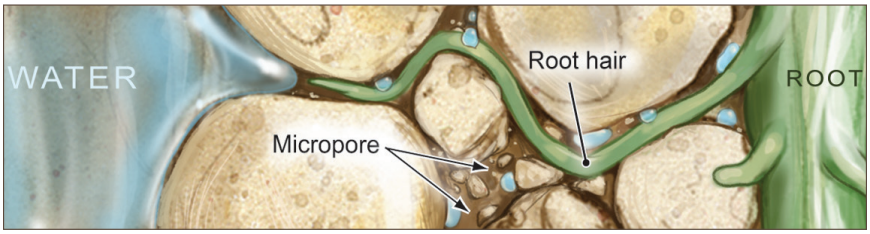
THE REDOX SOLUTION:

Build soil structure and improve water distribution in the root zone. Three Redox products may be beneficial for soil moisture management.



MOISTURE MANAGEMENT

Roots live in a thin film of water on the soil particles in the micro pore space. If water is depleted in this zone, feeder roots die. This is known as permanent wilting point.

PENECAL

A reacted plant nutrient product high in surfactant and calcium. PeneCal reduces water surface tension and delivers calcium to micro pore space due to the reacted calcium and surfactant. Use PeneCal where water penetration and root zone distribution is inadequate. Apply 0.5 to 1 gallon per acre to the soil every 4 to 6 weeks or as required. Follow up application of 0.25 gallons per acre can be added if necessary.

MAINSTAY CALCIUM

A reacted plant nutrient high in calcium. Plants absorb Mainstay Calcium very efficiently. Use Mainstay Calcium where increased plant available calcium is required. Apply 0.25 to 1 gallon per acre to the soil along with PeneCal during periods of critical calcium requirements as needed.

H-85

A reacted plant nutrient product high in potassium and soluble carbon. H-85 improves soil microbial activity due to the short, medium, and long-chain soluble carbon content. Improved soil microbial activity facilitates improved soil structure. Apply 3 to 5 pounds to the soil per acre per crop cycle.