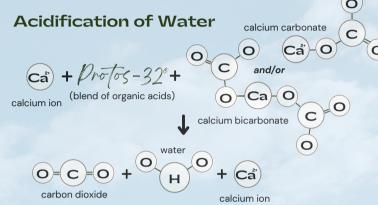
# Protos-320

### Reclaim Calcium & Solve Salinity Problems

Protos-32® is an enriched acidifying agent that is specifically formulated to control and manage conditions in irrigation water and in soil that can lead to sodic deterioration of soil structure. Sulfur and sulfur-based acids can be difficult to handle, increasing sulfates in the soil and may trigger black layer formation. Protos-32® acidifying component is easy to handle and will not add to the sulfate content of the soil. Protos-32® can be used alone, or in conjunction with a calcium source such as gypsum or lime, to reduce salt buildup and improve soil aeration, infiltration, percolation and drainage in sodiumaffected soils. Carbonates and bicarbonates in the water have a high affinity for calcium and magnesium. This chemical attraction results in the formation of insoluble salts and prevents calcium from being available to the soil and the plants. When Protos-32® is injected into an irrigation system or applied via boom spray, it immediately reacts with carbonates and bicarbonates in the water, forming harmless water and carbon dioxide - leaving calcium and magnesium in solution. If you are adding gypsum or lime (CaSO3), Protos-32® will add to their solubility and availability in the water solution.

#### Recycling Calcium in the Soil

Once in soil water, Protos-32® solubilizes calcium carbonate and calcium bicarbonate, with the reaction releasing calcium ions, water and carbon dioxide. This recycled source of calcium is now free to replace sodium on soil particle exchange sites, the key step in reclaiming sodic soils.



#### Calcium Chelation

Protos-32® formulation is enriched with a unique sequestering agent (chelator) that binds" with calcium ions to prevent their involvement with other molecules such as carbonates and bicarbonates. Sequestering of calcium ions adds to the efficiency of applied calcium compounds as well as facilitating root uptake of calcium by the plant.





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