



Blue Mountain Minerals

Aglime Quarterly AG FACT

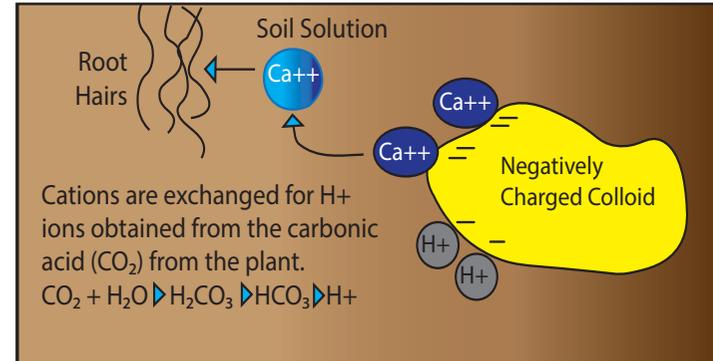
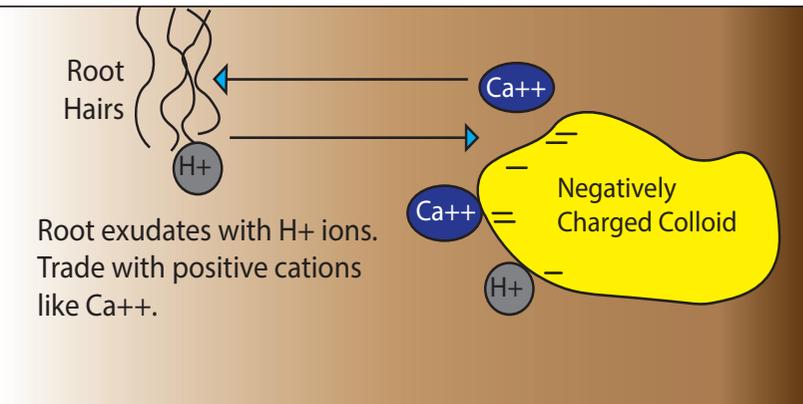
As a soil amendment, calcium helps maintain chemical balance in the soil, reduces soil salinity, and improves water penetration.



Exchangeable Compared To Soluble Calcium

In the Cation Exchange process plant roots are able to absorb many of the nutrients that are essential for growth. The plant root hairs secrete a substance called Exudate. This substance contains positively charged Hydrogen ions. The hydrogen ions are traded, or Exchanged by the plant for other positively charged ions. The positively charged Base ions include, Calcium, Magnesium, Potassium and Ammonium. The Acidic ions that are held on the soil colloid are Hydrogen, Sodium and Aluminum. When there are more acidic ions than base ions, soil pH will be influenced, and show low, or acidic on a lab report. Seventy percent of the cations that plants need are absorbed through the cation exchange process.

On a laboratory soils report the cation exchange capacity lets us know the soils potential to hold and exchange nutrients. When base nutrient levels reflect a healthy and productive soil, with enough calcium the soil will be friable and aerated. Check with your trusted advisor for more information.



The water associated with soils contains both dissolved chemicals and undissolved suspensions of colloidal substances. The portion of water that contains soil solution is comprised of dissolved chemicals. The amount of plant nutrients dissolved in soil solutions are measured and reported as the soluble nutrients on a soil test. Generally this number is much smaller than the exchangeable portion and is typically expressed as parts per million (ppm).

When reviewing a soil report it is important to look at both exchangeable for long term supply of nutrients and soluble for the nutrients that are available in the short term. Test your soil, check with a qualified crop advisor or soils lab for more information.

References: Soil Nutrient Management, University Hawaii. Franklin Soil Fertility, Plant Feeding Cation Exchange 0320