Blue Mountain Minerals

Aglime Quarterly

## What's Happening

**CAPCAed OFAC**
**Chico**
July 8

**CAPCAed OFAC**
**Tulare**
August 11

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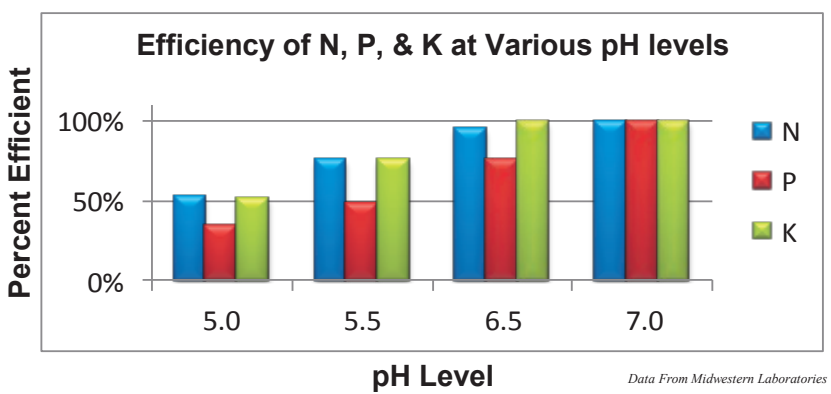
## Balanced Soil pH Aids N, P and K

Three essential nutrients for plant health are: nitrogen (N), phosphorus (P) and potassium (K). These nutrients work better when soil pH levels are near neutral (7.0). N is necessary for chlorophyll synthesis and critical for plant growth. P works to promote healthy root and seedling development, aids in photosynthesis, and can improve crop yield. K helps protein synthesis, photosynthesis and functions that improve yield.*

Nitrification is an important step in the nitrogen cycle. This process occurs when various soil bacteria change ammonium into nitrite or change nitrite into nitrate. Nitrate ions are readily absorbed and usable to plants. When the pH of the soil is too low, many of the soil nitrifying bacteria are absent or inactive.

P can react with iron, aluminum and manganese to form insoluble products in acid soils.

K has a tendency to leach when the soil is too acidic. These are important reasons why acidic soils should be corrected. Contact your soil professional to have your soil tested.

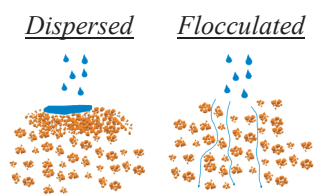



## The Power to Flocculate

When soil clay particles are unattached to each other, they are *Dispersed.* This blocks water infiltration and plugs soil pores restricting water and air movement. Clay particles that are clumped together are *Flocculated* allowing water, air and plant roots to move easily through the larger pores that are created between the clumps.**

Sodium (Na) has a weak charge and does not promote clumping of clay particles. Ca and Mg have a stronger bonding power than the Na to negatively charged clay particles so they bump off excess Na which can then be flushed from the root zone, this promotes Flocculation.

Ca and Mg, while powerful, are not created equal, many Agronomists agree a soil's Ca:Mg ratio that is weighted toward Calcium is ideal for most soil types and crops grown. Always check with your PCA/CCA.




References:
* IPNI Soil Fertility Manual
** *Cations Slide*, UC Arizona, Soil Structure the roles of Sodium and Salts, July 2006