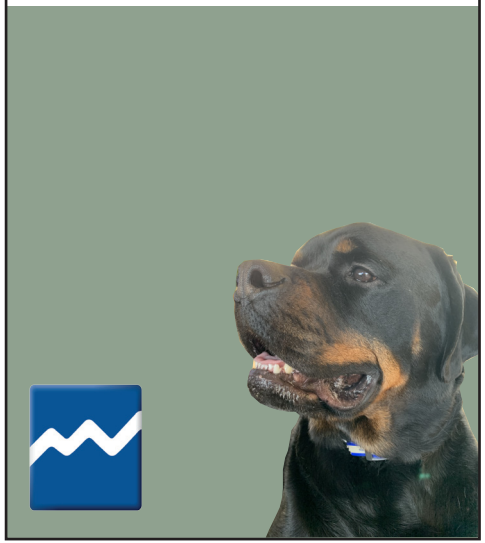
Blue Mountain Minerals

Aglime Quarterly

AG FACT



Aglime: Smaller Is More Effective

Oregon State requires an Aglime Score on the labels of liming material. They have developed calculations to determine an Aglime Score, which is an efficiency rating based on particle size, purity or CCE (Calcium Carbonate Equivalent) and moisture.

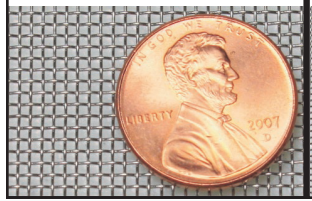
Particle size is measured by standardized U.S. Mesh screens, as seen below. Particle size effects the rate in which aglime goes into solution in the soil. Particles passing through the 20 mesh but are too large to pass through the 40 mesh are considered to be 60% effective within the first year. Those that pass through a 40 mesh screen (roughly the size of table salt) are considered the most effective and are given a solubility rating of 100%. Seventy-five percent of our Aglime and LoMg Dolo pass through a 100 mesh screen, that diameter is smaller than a human hair. Oregon does not rate particles smaller than 60 mesh.

Pure calcium carbonate is given a CCE rating of 100. Our CCE for our Aglime is reported on the label at 95 which is the minimum.

Moisture is required on the label at the maximum level, so if it is reported to be 5%, you can take 5% right off the top of the score.

Typically surface soil conditions are more acidic combined with mildly acidic water (like rainwater in California averages 5.7 pH), will dissolve 100 mesh limestone. Remember Aglime reactivity increases when particle size decreases. Check with your trusted certified crop advisor for more information.

U.S. 20 Mesh



U.S. 40 Mesh

N, P, K and pH

Normally pH is one of the first things people look at on a soil test report. But what is that measuring and what does it tell you? Simple answer, pH measures the amount of Hydrogen (H+) in the soil solution, a paste made of water and soil at a 1:1 ratio, any more water than that, dilutes the soil solution and can give an inaccurate reading. Soil pH affects both the nutrient availability and efficiency of applied fertilizers.

Rising costs of inputs are creating a situation where it is imperative to get the most out of them. When soil pH is below optimum N, P, and K are less effective.

Soil pH	N Efficiency	P Efficiency	K Efficiency
5.5	76%	48%	76%
6.0	89%	52%	100%
6.5	95%	76%	100%

Low pH soils can indicate a lack of calcium. Clay and organic particles in the soil have negatively charged exchange sites. Clay and organic matter attract and hold positively charged cations. The most common cations are: Ca, Mg, K, H, Na and NH4 (ammonium). These cations can be replaced by other cations, they are exchangeable. When the exchange sites are full of acidic cations H, and Al the soil pH is low (acidic) because the base cations Ca, Mg, and K are insufficient. Check with your trusted CCA for more information

Sources: Midwestern Laboratories, Chart. Cation Exchange Capacity and Base Saturation, UC Georgia Extension, Circular 1040. Soil Nutrient Relationships, UC Hawaii. 012022