



Aglime Quarterly

What's Happening

WPHA Conference
Sacramento
July 16-17

CAPCA/OFAC
Tulare
August 15



Get The Most From Your Fertilizer Dollar

“Liming is one of the best ways for growers to get the most from their fertilizer dollar,” states Kent Yarborough, University of North Carolina, regional agronomist. When soil is limed to the optimum pH, physical, chemical and biological conditions are improved. This can promote increased crop growth and improved nutrient and water uptake. These improvements help protect against wind and water erosion.

Several plant nutrients, including N, P and K, are affected by soil pH. For most plants the best fertilizer efficiency occurs when the soil pH is near neutral. Many ammonium forms of nitrogen acidify the soil, requiring up to 225 lbs of agricultural limestone for every 100 lbs of N.* This acidifying process depends on the amount of free lime, organic matter and clay content in the soil. This is referred to as the soils buffering capacity, or the soils ability to neutralize the H⁺ ions from the nitrogen without lowering soil pH. Keeping your soil pH in check can help maximize the benefits of many fertilizers.

Fertilizer Efficiency at Different Soil pH

Soil Acidity	N%	P%	K%
5.0	53%	34%	52%
6.0	89%	52%	100%
7.0	100%	100%	100%

CCE Isn't Even Half Of It

Calcium Carbonate Equivalent (CCE) tells us the quality, or the acid neutralizing value, of a liming material. The particle size, or fineness, tells us how effective the agricultural limestone will neutralize soil pH. If we use crushed limestone with a CCE of 100 that is the size of gravel, it will do nothing to change soil pH.

Oregon requires the use of a lime scoring method that takes into account the CCE, fineness, and moisture. This lime score is a numerical expression of quality. The fineness of aglime is what determines how quickly it will dissolve and neutralize soil acidity.** If half of the aglime purchased is coarser than 20 mesh, roughly the size of table salt, that portion is only about 30% effective. Make sure you get the quality you are paying for, not just a high CCE.

Aglime	CCE	Fineness	Moisture	Score
A	100%	55%	3%	53
B	100%	95%	3%	94

References:

*Plant Nutrition Today, IPNI 2008, No. 4

**Oregon State University, J. Hart, Fertilizer Guide 52