

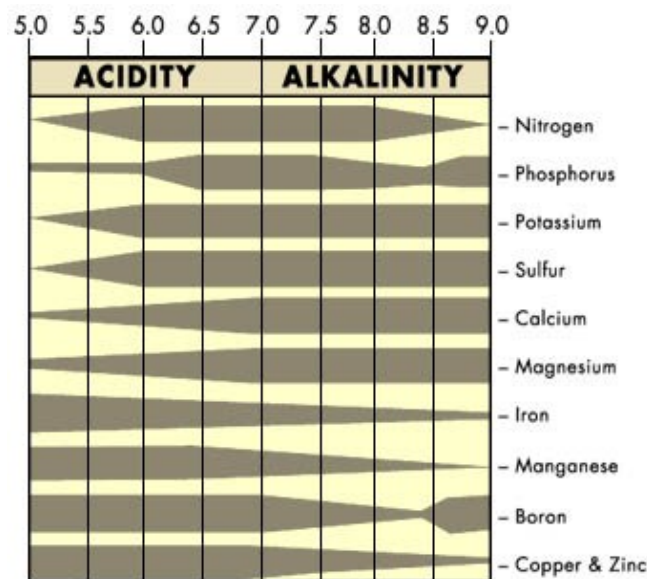
February 9, 2011

LIME

AGRONOMY TOPIC OF THE WEEK

Soil sampling is the start to a highly profitable cropping program. The first step after receiving the results of the soil sample, is to start the process of neutralizing the soil pH. As the soil pH is changed from an acid pH, less than 6.5, to a higher pH, we see major changes in the soil's ability to produce higher yields. Soil pH is increased by adding lime to the soil. As we add lime the soil pH is raised. The optimum pH for raising corn is from 6.7 to 7.5. Soybeans prefer a pH of slightly less than corn. As we lime soils, we provide an environment that:

1. Increases the pH of acid soils.
2. Provides a source of calcium and magnesium for crop growth.
3. Improves soil tilth, allowing better water penetration and better soil granulation.
4. Improves the uptake of major plant nutrients such as, nitrogen, phosphorus, potash and a host of minor nutrients.



The quality of agricultural lime in Minnesota is determined by the effective neutralizing potential (ENP) of the liming material. This value, along with the fineness of the crushed limestone, determines the effectiveness of the lime application, for example: finely ground lime is more effective than coarser lime. The lime used in south central Minnesota comes from quarries and is a byproduct of gravel crushing operations, i.e. pond lime. This product is very fine, therefore has a very high ENP, and is blended with quarried lime to raise the crushed lime's ENP. A general statement regarding lime in our area of Minnesota is that as we move from west to east or south, the lime calcium content increases. With that in mind, and with fineness of grind ENP is higher. We, at Central Valley Coop, use this along with the trucking cost of the lime to determine where the most cost effective lime comes from. We also have access to industrial lime, lime from industrial operations or sewage treatment facilities. However, we rarely use these sources because the lime is too wet and is hard to handle and spread. Contact your local Central Valley Agronomist to discuss the benefits of lime on your farm.