King Conservation District

THE LOWDOWN ON LIME

Edited from an article by April LaLande, Horses for Clean Water

Why Use Lime?

Soils in the Northwest are typically acidic because of factors such as the type of rock the soil comes from, topography and rainfall. To grow crops and pasture successfully, low pH (acidic) soils need to be raised to somewhere between 5.8 and 7 throughout the root zone (top 6-8 inches of soil). This can be accomplished through the addition of lime—something all crops and pastures in western Washington require in order to stay productive.

The King CD has a lime spreader available for loan. To make a reservation, contact Jay Mirro : 425-282-1905 or jay.mirro@kingcd.org

DETAILS

What is lime?

Agricultural lime is made from naturally occurring limestone and the main ingredients are calcium and magnesium. Limestone is ground very fine so it can react rapidly with soil acidity to raise pH—the finer lime is ground, the faster it will work.

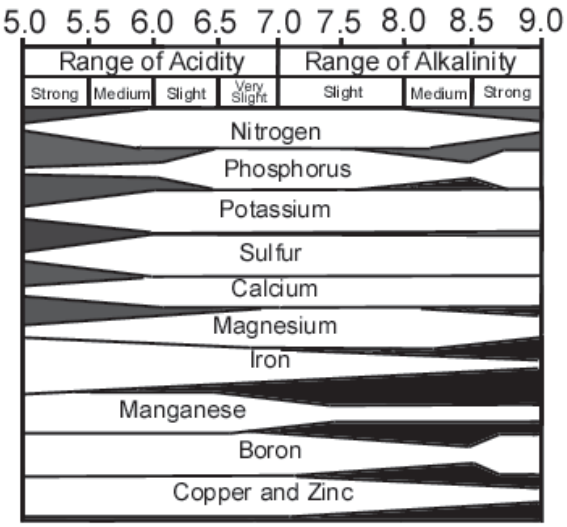
Since limestone becomes very dusty when ground to a beneficial fineness, some manufacturers offer "prilled", "pelletized" or "granulated" lime, meaning the very fine particles are bonded to a carrier such as clay to make the lime less dusty and easier to spread. The main thing to remember is to use an agricultural lime (naturally occurring) vs. a caustic lime (a chemical compound) that can burn plants. Caustic limes are: calcium oxide, hydrated lime and quicklime.

How much should I apply?

To know how much lime to use, you will need to know what the pH of your soil is, what type of soil you have and what the nutrient levels are in your soil. These questions can be answered with a standard soil test. Your test results will tell you: a) pH levels and corresponding lime requirements, b) levels of available plant nutrients, and c) recommendations on nutrients needed to optimize yield. Contact the King Conservation District for information on our free soil testing program.

When do I apply? What results will I see?

Unlike fertilizers (which can actually cause problems when applied at the wrong time) lime can be applied anytime. Optimally, lime should be tilled into the soil before planting. On existing pastures it is best to apply lime during a rainy period so it breaks down faster. Aerating and/or mowing the pasture before applying lime will help the lime work its way into the soil.



Limestone is fairly water insoluble and will take time to break down. When you apply lime, you may see some immediate results. As the pH in the soil changes, nutrients such as nitrogen will become available or "released" to plants, giving them a lush, green appearance. Many nutrients get bound up in acidic soil, while plant-damaging elements like aluminum and hydrogen are more available in acidic soil. It is always more cost effective and healthier to correct pH before you determine your fertilizer needs. Although lime will not kill moss or weeds, as your soil pH becomes healthier, you will notice they will be crowded out, especially if you keep your soil from becoming too compacted.

One last piece of advice is to spread lime on a calm day and to get some moisture on your lime right away!

How much and how often?

Common mistakes people make trying to correct pH are:
1) putting down all the recommended lime at once
2) not getting a soil test
3) over-fertilizing

Your soil test will tell you how much and what type of lime to apply. If your test recommends a high lime quantity, like two tons per acre or more, put it down in two or three batches over the course of a year. Don't spread more than two tons per acre in any one application. Lime should be applied every one to three years, depending on your specific conditions and soil test results.

Three Basic Steps for Applying Lime:

- Test your pH and nutrient levels
- Aerate or mow pastures so lime can have maximum contact with your soil
- Buy and apply an agricultural lime

Where do I purchase lime?

Many feed stores sell lime by the bag under various labels such as "Dolopril" (a prilled calcium/magnesium product), "Calpril" (a calcitic lime if your soil doesn't need magnesium) and "Dolomite" (powdered lime). Anything with a derivative of "dol" in it will have magnesium. It is best to spread lime through some type of broadcast spreader. Drop spreaders will sometimes leave piles of lime because of the fineness of the product.