POLK COUNTY GRAZIER

RMCD

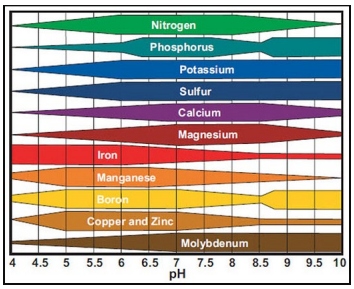
An eNewsletter by the Rich Mountain Conservation District

Liming to adjust soil pH

Adapted from an article in Whitetailstewards.com.

Soil pH is simply a measure of how acidic or basic your soil is. pH is measured on a scale ranging from 0 to 14. Soils with a pH less than 7.0 are considered to be acidic. Soils with a pH greater than 7.0 are considered to be basic (or alkaline). A pH of 7.0 is considered neutral.

The pH of your soil determines how well your forages will be able to absorb nutrients from the soil. As pH rises above 7.5, some nutrients will bind to soil particles and become difficult for your plants to absorb. When soils are too acidic, nutrients also bind to soil particles making them unavailable, but elements such as iron, magnesium, and aluminum can become so easy to absorb that they become toxic to your plants. **Forages grown on soils of the proper pH will absorb soil nutrients properly.** This not only allows your forages to grow to their biggest yields, but will make them more attractive and nutritious to animals.



If you are spending time and money fertilizing your crops, proper soil pH will also allow your plants to absorb fertilizer more efficiently. In general, most forage crops grow best when soil pH is between 5.5 and 7.0. However, each forage crop has its own required range of soil pH within which growth is greatest. If you are planting a mixture of forage species in the same field, be sure to choose forages with similar soil pH requirements.

The most accurate way for you to test your soil pH is to send a soil sample of your soil to the local Cooperative Extension office. The results of your soil test will tell you the current pH of the soil and exactly how much lime and fertilizer is needed to make your soils optimal for the forages you are growing.

In most cases, the soils you will be working with will require the pH to be raised closer to neutral, if any change is needed at all. The most common and practical way to raise soil pH is by adding some form of lime. There are many different kinds of liming materials that you can use to increase soil pH. These materials include, Ag lime (calcium carbonate), dolomitic lime, calcitic lime, oyster shells and wood ash. Some of the basic differences between these materials include their neutralizing value, particle size, and any additional elements. Pelletized and liquid lime are options as well and will be discussed in future newsletter articles.

The neutralizing value compares the liming material to pure calcium carbonate which has a set neutralizing value of 100%. When other materials have neutralizing values near 100% they are comparable to pure lime. Particle size of the lime is important because finer particles react quicker and more completely with the soil than do larger particles. The cost of the liming material will increase as particle size decreases. Some lime materials such as dolomitic lime contain other elements such as magnesium. If your soil test indicates that magnesium levels were low, dolomitic lime might be appropriate for your application. Consult with your local Cooperative Extension agent or agricultural supply store to determine which liming material is right for your application.

Your soil test is the best way to know exactly how much lime you will need to raise your soil pH. Lime application rates are usually given on a tons per acre basis. In some areas with naturally acidic soils and high rainfall, like the Ouachita Mountain region, soil pH can be as low as 4 or 5 and it is not uncommon to see application recommendations calling for two or three tons of lime per acre. Since most types of liming material move slowly through the soil it is best to apply your lime well in advance of planting. This is especially important if your soils are very acidic and soil pH must be increased substantially. **Fall is an excellent time to apply lime.** While lime can be applied at any time of the year, applying it at least three to six months before planting will allow enough time for the lime to react with your soil.

It is also usually best to apply all the lime at once to reduce the time and costs associated with multiple lime applications and having the required pH at the time of planting. For example, if your soil test calls for applying 2 tons of lime per acre, apply 2 tons per acre instead of 1 ton now and 1 ton later. Lime applied at the proper rates can generally be effective at balancing the pH for 5-10 years depending on several factors but consider soil sampling at least every five years to monitor.

Lime can be applied to small areas like food plots, gardens, and yards using bagged lime but if you are needing to lime a pasture or hay field you will need to use bulk ag lime. The nearest lime quarry for our area is near Idabel, Oklahoma so trucking can be a large part of the expense of liming. The other major part of liming is spreading the lime once it is hauled to the farm and this part can be done by a lime service or done by the producer. If you want to spread the lime yourself:

The Polk County Cooperative Extensive Service office in Mena has a lime spreader for rent to Polk/Montgomery county producers. It is available on a reservation basis and requires a $75 deposit and $75 per day. Call the Extension office at (479)394-6018 or visit their office at 211 DeQueen Street in Mena for more information on the lime spreader.

Here are a couple of Ag lime haulers/spreaders for the area:

- J&B Feed & Fertilizer @ Mena - Jerry Hansbrough (479)243-5608
- VanVoast Lime Service @ DeQueen - Richard VanVoast (870)584-6587
- Garland County Farmers Co-Op @ Mt Ida (870)867-2137

Plant your winter annual pastures now! **IT'S NOT TOO LATE**

No-till Pasture Seed Drills for Rent

The Rich Mountain Conservation District has two drills that are available to Polk County landowners for rent. The rental rate is $10/acre with a $50 deposit and a 5 acre minimum. The drills are available for use on established pasture or hay fields only since rough or newly cleared land damages the drills. Only use quality seed that has been screened for rocks or other debris that will also damage the drills. A 75 hp tractor is recommended and a 50 hp is minimum size needed.

Advantages of using a no-till seed drill

The main advantage is that you control nearly every aspect of the planting such as seeding rate seed depth. The drill opens a small furrow in the soil, drops the seed, and then covers/packs it to protect it from the sun, wind, and birds. Placing the seeds below the surface also gives them access to soil moisture so they can germinate and begin growth. Not enough seed to soil contact is one of the most common problems with poor germination in seeding projects. No-till planting does not disturb the plants/soil or cause erosion like disking does and planting can usually be made with one pass over the field. No-till planting also provides for a more uniform stand of forage across the field.

Please contact the Rich Mountain Conservation District office at 479-437-6054 or come by the office at 508 7th Street, Mena to make a reservation for using the drills.

Upcoming Grazing Meetings and Seminars:

- **TODAY! October 19, 2021— Tall Fescue and Clover Facts and Establishment (1PM—online seminar)** you are invited to attend the weekly grazing training sessions by Jeremy Huff, the USDA/NRCS state grazing specialist. He offers these training sessions as a Zoom meeting and the instructions for logging in are included in attached flyer. If you have the Zoom app on your phone you can just scan the QR code on the flyer. If you want to see it on your computer there is a link included in the attachment. There are sessions normally every Tuesday at 1pm so see the attached flyer.

- **October 26, 2021— What do Plants tell you about your soils? (1PM—online seminar)**the next week's online grazing seminar.

- **October 28, 2021 – Pesticide Applicator Training (10am or 5pm at the Polk County Ext. Education Building -211 DeQueen St, Mena)** Please call (479)394-6018 to register. This training is required to purchase and apply restricted use pesticides in Arkansas.

UofA
DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Pesticide Applicator Training

October 28, 2021
at 10:00 a.m.
&
5:00 p.m.
Cost: $20/person

Extension Education Building
211 DeQueen St.
Mena, AR71953
Call (479)394-6018 for more information

Rich Mountain Conservation District Email: richmountainconservation@gmail.com *Web: www.rmcd.org*
Phone: (479)437-6054
Mail: 508 7th Street, Mena, AR 71953

Take a picture with your cell phone to visit the RMCD website —> SCAN ME

DID YOU KNOW?

The pH scale is logarithmic; this means that a full number change on the scale is actually a ten-fold change in soil pH. So, a pH of 5 is 10 times more acidic than a pH of 6, and 100 times more acidic than a pH of 7. A pH of 4 is 1000 times more acidic than a pH of 7.

Sent on behalf of the Rich Mtn Conservation District. Thanks for your interest in grazing management and conservation,

Steve Swall
District Conservationist
USDA-Natural Resources Conservation Service
Mena Service Center (Polk & Montgomery Counties)
(479)437-6054