

David Hallauer
District Extension Agent, Crops & Soils

Soil Sampling Tips – Hay/Pasture

When we think about the factors affecting cool season grass production in a given year (weather/harvest timing/grazing height/etc...) one of the more commonly complimented – and cursed – is fertilizer. In our cool season grass systems, it's a big yield driver and fall can be a great time to 'turn the page' to next year's production by addressing fertility needs.

While we can tell a lot by a pasture's production or hay field's yield, or even how they look from afar, the best way to manage fertility starts with a soil sample. Fall is a good time to do so, providing time to get results, formulate a plan, and manage application.

It's not difficult to collect a soil sample, but it does take attention to detail for best results. Start with a sampling plan/pattern. If there are poor areas or trouble spots, sample them separately from the rest of the field. Fertility might *not* be the issue, but an inexpensive soil test is a good way to rule it out. If you want to start teasing out more differences, consider zone sampling, by dividing the acreage into zones of different slope or soil type or management. It doesn't mean you have to apply nutrients in a variable rate manner, but it can provide greater information than a single sample and help you fine tune your nutrient management program.

For greatest accuracy, use a soil probe (available for check one from any District Office). This helps with consistent depth and core size which can be very important for attaining best results (a shovel or spade can be used, but requires a little more work for the same accuracy of results as a probe). Phosphorous and Potassium testing is best done to a six-inch depth. Samples for pH can be pulled to the same depth or for more fine tuning – three to four inches deep. *NOTE: dry soils can make soil sampling more difficult. If you can't maintain a consistent sampling depth, it might be best to wait until better conditions prevail.*

Take 15-20 cores per area sampled. It's easier to do less, but studies have shown a pretty large degree of accuracy once the number of cores per sample drops below a dozen.

Depending on the sample package, soil tests will cost \$10-15/sample plus shipping. Samples can be submitted to the K-State Soil Testing Lab via any District Office. Many ag retailers will also submit samples as well. As you are sampling, note in your mind to repeat the sampling process in two to four years. Getting on a regular soil sampling schedule can help you monitor soil test changes as well as how fields might be responding to your fertility program.

For more information on sampling ideas and procedures, contact me via any of our Meadowlark Extension District Office or e-mail me at dhallaue@ksu.edu.