K-STATE Research and Extension | Meadowlark District

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Precision Nutrient Management – Forage Stands

Oklahoma State University Extension Specialist for Precision Nutrient Management Dr. Brian Arnall once stated: *When fertilizer is applied without a recent soil sample, it is done based upon pure guesswork. How many other management decisions are made on a farm or ranch by a guess?* The answer is: not many, and forage fertility isn't an easy thing to guess at to begin with.

Precision nutrient management might be as simple as a composite soil sample or as complex as grid sampling. No method is perfect and requires an evaluation of both field *and* grower needs. Never had a soil sample from your forage stand? A composite sample from across the field (depending on size) can be a place to start and provide some great information.

Grid sampling is on the other end of the spectrum and is simply sampling on a predetermined grid to get a deeper look at variability across a farm. If you don't note any evidence of field variability or if a composite soil sample has already given insight into whether a certain nutrient need addressed, grid sampling may not be necessary. If on the other hand you are trying to determine whether an application truly *is* needed because a composite sample is right on the line, more information via a grid sampling program might be in order.

In the middle is a zone sampling program where we sample based on various zones across the field. It works well when you have a goal in mind such as trying to fine tune what a composite sample might be telling us or where issues might be affected by soil type, etc…. It's also a good option for monitoring how a nutrient management program might be working following a grid sampling exercise.

Whatever type of program you settle on, the important thing is to get a soil test. Forage stand fertility levels have shown consistent declines over time with many hay fields in particular suffering from low nutrient levels. Managing fertility needs are an important part of keeping forage stands in good shape. Appropriate fertilizer levels are an important part of economically producing that forage. Both are helped immensely by a good soil sample. Drop me a line if you want to discuss what type of soil test program might work well for you.