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Crops & Soils/Horticulture

Soil Sampling Challenges

Soil fertility concerns are one of the most often explored reasons for issues with plant growth and development. Knowing those soil fertility levels starts with a *good* soil test. Good can mean a lot of things. When soil sampling, think of a good sample as one representative of the area sampled and providing accurate results.

If you are testing for a specific purpose: nutrient management planning, environmental regulation sampling, or even if you are trying to figure out if you have nutrient stratification, or a specific issue, there may be a specific or defined soil sampling procedure. If you are trying to do some general sampling on your own, consider some of these guidelines.

To help reduce variability, each sample should be a composite of many cores. Based on KSU soil testing research, collect a minimum of 12 to 15 cores. With this number of cores, sampling variability can be reduced significantly versus sampling where only two or three cores make up the composite. This aids in increasing recommendation accuracy as well.

It may not seem like sampling depth would be a big deal, but it can be. Nutrient levels and pH all change with depth, sometimes significantly. We recommend a six-inch depth for routine nutrient tests for P, K, Zn, or pH. *Sampling depth will likely be an issue this fall until adequate moisture returns soil profiles to more consistent levels.*

Don't focus on the really good or really bad spots. If you want to explore why an area might be on the extreme end of the production scale, sample separately. For the rest of the sampling area, sample in a zig-zag pattern to get a good cross section of the field sampled.

If you've done banded fertilizer applications in the past, think you might have nutrient stratification, or if you are considering a grid sampling program, other adjustments might need to be made as well. If you want to discuss any of those considerations, feel free to drop me a line.

These principals can be applied to just about any sampling project: crop, pasture, hay ground, garden, and turfgrass. For additional information on sampling in crop production fields, see the latest KSU Agronomy eUpdate online at: https://eupdate.agronomy.ksu.edu/issue_new/k-state-agronomy-eupdate-issue-923-thu-sep-8-2022 . Information on sampling in gardens can be found at: <https://bookstore.ksre.ksu.edu/pubs/mf2320.pdf> . Both resources are also available upon request from any District Office or e-mailing me at dhallaue@ksu.edu .

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Evaluating the Mouths You Feed

Two topics that seem to continue to pop up in nearly every discussion I've had lately. Hot, dry weather and questions on how we will get ruminant animals through the fall and winter months, with the reduced amount of available forages, are topics on many producers' minds right now. It is not new information that things have been hot and dry in our part of the world, but what you might not have heard is that 7 of top 10 hay producing states have reduced production and/or inventories (*USDA-NASS, August 2022*), compounding forage supply tightening and price increase. As I see harvest crews rolling through crop fields across the area, this seems to be another logical feed option to explore, either on your property or by talking to your neighbors, versus feeding high priced hay. We might dive into that grazing crop residue topic down the road, but for today would like to look at the animal side of the feeding equation.

Paul Beck, Oklahoma State University Extension Beef Nutrition Specialist recently shared some thoughts on reducing stocking rates to adjust to decreased forage availability in Oklahoma. His assessment is very practical for producers in northeast Kansas trying to make it through the rest of the summer and into the fall, although fortunately we aren't experiencing the severe drought our neighbors to the south and west are. Evaluate your individual operation's situation and apply these concepts where practical.

1. If you are an operation that keeps your own calves or purchases stocker calves to utilize extra grass, this may be the time to sell calves early or send calves to a grow yard or feedlot. Many operations in Oklahoma use 30 to 50% of their summer forage for stockers in normal years. When forage production is limited these calves can be marketed, reducing the culling of the cowherd that may need to occur.
2. Selling replacement heifers should also be considered, as these females will not provide a marketable calf for over a year. In this current circumstance, these cattle may be too large of a drain of resources to keep. Currently they have value in the feeder calf market, due to lower feeder supply. If you can't part with valued genetics, cull hard to keep fewer.
3. Cull cowherd to a number that you can afford to winter by getting rid of old cow, less productive cows and/or cows that have higher nutrient requirements. The number of cows remaining may be the actual sustainable long-term carrying capacity for your operation. It is easy to fall into the trap of mature cow size creeping up and keeping a few extra each year. This has a direct effect on forage resources and not in a good way.
4. If you are considering feeding on pasture, cross-fence your farm now before you have to start supplemental feeding. You will be surprised how much forage growth you will have if you allow pastures to rest. Once you have the farm subdivided you can utilize these pastures in a rotational grazing system in the future and may have the additional benefit of increased pasture health and improved harvest efficiency. Keep cows on a smaller area of your farm while you are feeding hay, this sacrifice paddock will allow much of the ranch a rest and concentrate the nutrients from hay feeding.

These steps may not be palatable, because we may have to change the way we do things, it may take more work than what we want to put in, or it may cost more than we want to spend. Our overarching goal should be to have an intact cattle operation when we get through this dry spell. Very rarely does it ever pay to "feed your way out of drought". While the examples shared are cattle, the concepts apply to sheep and goats as well. Now is the time to evaluate which animals are earning their keep and focus resources towards sustaining them.

Teresa Hatfield
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Family and Community Wellness

Vaccinations are Important for Older Adults

We all know that children need to have a specific round of vaccination as they get older. It's also vital for people over age 50 to be up to date on their vaccinations. There has been a lot of talk in the past two years about vaccinations, but it is not just about the COVID-19 vaccination. Others are important as well. Talk to your healthcare provider about which vaccinations they would recommend. Below is a list of some that you might want to consider.

All adults should consider getting the flu vaccination this fall. Vaccinations are essential if you are dealing with a chronic health condition; this puts you at a greater risk of complications. It is preferred that the flu shot be administered by the end of October so that you are protected for the upcoming flu season. The flu virus mutates over time, which means that just because you were vaccinated last year, you will still have to get vaccinated again this year.

The shingles vaccination is recommended for people over age 50. The CDC recommends getting the two-dose Shingrix dosage for anyone aged 50 and older. Shingles are caused by the virus that causes chickenpox. If you have had chickenpox, you could develop shingles. Shingles are painful rash-like blisters that can develop around your torso. Medicare Part D may help cover some or all of the cost of the vaccination.

Pneumonia is an infection that spreads from person to person through the air when someone coughs. Pneumonia can be severe for people over age 65. Pneumonia infects the lungs and may cause coughing, fever, chills, and difficulty breathing. This puts older adults at a greater risk of getting sick and dying. The CDC recommends that all persons over age 65 be vaccinated.

Don't forget about other vaccinations you may not have received a booster for in quite some time; these include tetanus, diphtheria, and pertussis (whooping cough). Tetanus, sometimes called lockjaw, is caused by bacteria that can enter the body through a puncture, cut, or burn. Diphtheria is a severe illness that can affect the tonsil, throat, nose, or skin and can spread from person to person. Pertussis causes uncontrollable coughing fits and makes it hard to breathe.

These vaccines can help protect your new grandchild from getting sick if you are a new grandparent. Newborns are particularly susceptible because they may not yet have received their vaccinations. Vaccines have been proven to be very safe and can help you or a loved one from getting seriously ill. Some vaccines will come with mild side effects. Talk to your healthcare provider about any concerns, your health history, and any allergies you may have. It is also a good idea to keep a record of any vaccinations you have had with the date you received the vaccination and if you experienced any side-effects

For additional information:

Center for Disease Control; www.cdc.gov

Immunize Kansas Coalition; www.immunizekansascoalition.org

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No article this week.