K·STATE Research and Extension | Meadowlark District

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Crop and Soils, Horticulture

Soil Sampling

Whether you're talking a small garden, a large lawn, or even larger production agriculture acreages, soil fertility is a huge key in maintaining production levels. Nutrient deficiencies not only reduce production, but in some cases can reduce the effectiveness of nutrients that aren't deficient as well. It makes a good soil sample all the more valuable!

Soil sampling isn't necessarily difficult, but some attention to detail must be paid to collect a sample that can provide you with accurate information via which you can start to make fertilizer application decisions. Start with a probe, auger or spade, and a clean plastic pail as well as soil sample containers and a soil information sheet from your local Extension office or fertilizer dealer.

Samples should be collected from uniform areas, with each area exhibiting the same soil texture, color, slope, and fertilization and cropping history. For gardens, a composite sample of the entire garden is acceptable unless you are trying to monitor soil test levels for a certain crop or area of the garden. Avoid sampling from only the really good areas or really bad areas, as well as places like old fencerows, low spots, feeding areas, or other areas that might give unusual results. If information is desired on unusual areas like those mentioned above, obtain a separate sample from the area for comparison purposes.

How many samples should you take? Good question! For small areas, it can be tough to take the 20-30 cores necessary to get accurate results. When possible, you are strongly encouraged to do so, but if you can't, a minimum of 10-15 cores should be taken per sample. Single core samples are not acceptable! Mix the cores thoroughly in a clean container and fill your soil sample bag. Make sure that each sample bag or container is labelled correctly, with information from the sample container matching the soil test information sheet submitted with the samples.

Soil samples for pH, Phosphorous, Potassium, and Zinc should be pulled from a depth of zero to six inches. Samples being taken to collect information on soil available nitrogen require a 24-inch sampling depth for best results.

Information collected from soil sampling can go a long way towards helping to fine tune your nutrient management program. Fall is a great time to get started! Contact a District Extension Office for further sampling information or to find out about testing procedures, soil probe checkout, and soil test package costs.